



State of Ohio Environmental Protection Agency

Street Address:

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

Lazarus Gov.
Center

RE: PERMIT TO INSTALL MODIFICATION
ASHTABULA COUNTY
Application No: 02-07218

CERTIFIED MAIL

DATE: 6/21/00

Millennium Inorganic Chemicals Inc Plant 2
Dianna L. Henslee
PO Box 160
Ashtabula, OH 440050160

Enclosed Please find a modification to the Ohio EPA Permit To Install referenced above which will modify the terms and conditions.

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

NEDO



**Permit To Install
Terms and Conditions**

**Issue Date: 6/21/00
Effective Date: 6/21/00**

ADMINISTRATIVE MODIFICATION OF PERMIT TO INSTALL 02-07218

Application Number: **02-07218**
APS Premise Number: **0204010193**
Permit Fee: **\$100**
Name of Facility: **Millennium Inorganic Chemicals Inc Plant 2**
Person to Contact: **Dianna L. Henslee**
Address: **PO Box 160
Ashtabula, OH 440050160**

Location of proposed air contaminant source(s) [emissions unit(s)]:
**2426 Middle Rd
Ashtabula, OHIO**

Description of modification:
95 mmBtu/hr natural gas fired boiler modification and TIO2 slurry production

The above named entity is hereby granted a modification to the permit to install described above pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this modification 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 source(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 included in the application, the above described source(s) of pollutants will be granted the necessary operating permits.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency


Director

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GENERAL PERMIT CONDITIONS

TERMINATION OF PERMIT TO INSTALL

Substantial construction for installation must take place within 18 months of the effective date of this permit. 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.

NOTICE OF INSPECTION

The Director of the Ohio Environmental Protection Agency, or his authorized representatives, may enter upon the premises of the above-named applicant during construction and operation at any reasonable time for the purpose of making inspections, conducting tests, or to examine records or reports pertaining to the construction, modification or installation of the source(s) of environmental pollutants identified within this permit.

CONSTRUCTION OF NEW SOURCES

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

If the construction of the proposed source(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 Ohio Administrative Code (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 applicable standards.

PERMIT TO INSTALL FEE

In accordance with Ohio Revised Code 3745.11, the specified Permit to Install fee must be remitted within 30 days of the effective date of this permit to install.

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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.

APPLICABILITY

This Permit to Install is applicable only to the contaminant sources identified. Separate application must be made to the Director for the installation or modification of any other contaminant sources.

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.

PERMIT TO OPERATE APPLICATION

A Permit to Operate application must be submitted to the appropriate field office for each air contaminant source in this Permit to Install. In accordance with OAC Rule 3745-35-02, the application shall be filed no later than thirty days after commencement of operation.

NINETY DAY OPERATING PERIOD

The permittee will be permitted to operate during a 90-day period in accordance with OAC Rule 3745-35-02(C)(4)(b). The purpose of this period of operation is to fulfill the performance tests conditions used in the determination of compliance with the provisions of this Permit to Install or other applicable Ohio EPA rules.

SOURCE OPERATION 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 and regulations.

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| <u>Ohio EPA Source Number</u> | <u>Source Identification Number</u> | <u>BAT Determination</u> | <u>Applicable Federal & OAC Rules</u> | <u>Permit Allowable Mass Emissions and/or Control/Usage Requirements</u> |
|-------------------------------|-------------------------------------|--------------------------|---|--|
|-------------------------------|-------------------------------------|--------------------------|---|--|

AIR EMISSION SUMMARY

The air contaminant sources listed below comprise the Permit to Install for **Millennium Inorganic Chemicals Inc Plant 2** located in **ASHTABULA** County. The sources listed below shall not exceed the emission limits/control requirements contained in the table. This condition in no way limits the applicability of any other state or federal regulations. Additionally, this condition does not limit the applicability of additional special terms and conditions of this permit.

| <u>Ohio EPA Source Number</u> | <u>Source Identification Description</u> | <u>BAT Determination</u> | <u>Applicable Federal & OAC Rules</u> | <u>Permit Allowable Mass Emissions and/or Control/Usage Requirements</u> |
|-------------------------------|---|--|---|--|
| B012 | 95 mmBtu/hr natural gas fired boiler (modification) | Use of natural gas as the fuel, use of Low NO _x burners to minimize NO _x emissions; an opacity of 0% from the exhaust stack(s); also see Permit Allowable Mass Emissions | 3745-31-05 (A)(3) 3745-17-07(A) 3745-17-10 (B)(1) 3745-21-08 3745-23-06 40 CFR 60.40c - 60.48c | No more than 0.0062 lb/mmBtu and 2.56 tons/yr of TSP/PM ₁₀ emissions; No more than 6.70 lbs/hr and 29.3 tons/yr of CO emissions. No more than 3.90 lbs/hr and 17.1 tons/yr of NO _x emissions. |
| P901 | TiO ₂ Slurry Production | An opacity of 0% from the exhaust stacks listed below: FG-950, FG-951, FG-952, FA-537A and FA-537B | 3745-31-05 3745-17-11 | No more than 0.015 gr TSP/dscf of exhaust gases for units FG-950, FG-951 and FG-952; No more than 0.010 gr TSP/dscf of exhaust gases for units FA-537A and |

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FA-537
 B; TSP
 emissions from
 all above
 named
 five
 emission
 points
 shall be
 limited
 to 0.97
 lb/hr and
 4.25
 tons/yr;
 total
 source
 emissions
 shall be
 limited
 to 12.17
 lbs/hr
 and 53.3
 tons/yr

**SUMMARY
 TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS**

| <u>Pollutant</u> | <u>Tons/Year</u> | <u>Tons/Year Increase</u> |
|-------------------------|-------------------------|----------------------------------|
| TSP/PM ₁₀ | 55.86 | 6.81 |
| CO | 29.3 | 29.3 |
| NO _x | 17.1 | 17.1 |

NSPS REQUIREMENTS

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

| <u>Source Number</u> | <u>Source Description</u> | <u>NSPS Regulation (Subpart)</u> |
|----------------------|------------------------------|----------------------------------|
| B012 | 95 mmBtu/hr gas-fired boiler | Dc |

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

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

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

Reports are to be sent to:

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

and

Ohio EPA Northeast District Office - DAPC
2110 East Aurora Road
Twinsburg, Ohio 44087

PERFORMANCE TEST REQUIREMENTS

The permittee shall conduct, or have conducted, performance testing on the air contaminant source(s) in accordance with procedures approved by the Agency. One copy of the written report describing the test procedures followed and the results of such tests shall be submitted and signed by the person responsible for the test. The Director, or an Ohio EPA representative, shall be allowed to witness the test, examine testing

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equipment, and require the acquisition or submission of data and information necessary to assure that the source operation and testing procedures provide a valid characterization of the emissions from the source and/or the performance of the control equipment.

- A. A completed Intent to Test form shall be submitted to the Ohio EPA Northeast District Office. This notice shall be made 30 days in advance and shall specify the source operating parameters, the proposed test procedures, and the time, date, place and person(s) conducting such tests.
- B. One copy of the test results shall be submitted within 30 days after the completion of the performance test.
- C. Tests shall be performed for the following source(s) and pollutant(s):

| <u>Source</u> | <u>Pollutant(s)</u> |
|---------------|-----------------------|
| B012 | NO_x |

RECORD(S) RETENTION AND AVAILABILITY

All records required by this Permit to Install shall be 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 representative of the Director, for review during normal business hours.

REPORTING REQUIREMENTS

Unless otherwise specified, reports required by the Permit to Install need only be submitted to Northeast District Office.

MAINTENANCE OF EQUIPMENT

This source and its associated air pollution control system(s) shall be maintained regularly in accordance with good engineering practices and the recommendations of the respective manufacturers in order to minimize air contaminant emissions.

MALFUNCTION/ABATEMENT

In accordance with OAC RULE 3745-15-06, any malfunction of the source(s) or associated air pollution control system(s) shall be reported immediately to the **NEDO**.

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Except as provided by OAC Rule 3745-15-06(A)(3), scheduled maintenance of air pollution control equipment that requires the shutdown or bypassing of air pollution control system(s) must be accompanied by the shutdown of the associated air pollution sources.

AIR POLLUTION NUISANCES PROHIBITED

The air contaminant source(s) identified in this permit may not cause a public nuisance in violation of OAC Rule 3745-15-07.

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.

ADDITIONAL SPECIAL TERMS AND CONDITIONS

(B012) 95 MMBtu/hr Natural Gas-fired Boiler

1. The permittee shall burn only natural gas in this emissions unit.
2. The permittee shall install, operate and maintain a flow regulator on the inlet natural gas flow upstream of a flow nozzle, sized for a maximum flow of 92,000 scf/hour with an inlet pressure of 58 psig at 60 degrees Fahrenheit.

(Note: The flow nozzle will be welded into the natural gas inlet pipe. The flow regulator will be internally set to the aforementioned specifications. These are permanent, physical changes that cannot be easily undone, without a system shutdown.)

3. Compliance with the 6.70 pounds/hour limit for carbon monoxide was determined by multiplying the emission factor of 0.0026 pound CO/mmBtu (derived from a Method 10 stack test, conducted on November 14, 1995) by the maximum heat input capacity, 95 mmBtu/hour. If required, the permittee shall demonstrate compliance with this emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1-4 and 10.
4. Compliance with the 3.90 pounds/hour limit for nitrogen oxides shall be determined by multiplying an emission factor, in pounds NO_x/mmBtu (derived from a Method 7E stack test) by the maximum heat input capacity, 95 mmBtu/hour.
5. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

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- a. the emission testing shall be conducted with 6 months after the installation of the proposed nozzle and natural gas inlet flow regulator;
 - b. the emission testing shall be conducted to demonstrate compliance with the hourly, allowable mass emission rate(s) for NO_x;
 - c. the following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): U.S. EPA Method 7E of 40 CFR Part 60, Appendix A for NO_x. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA; and,
 - d. the test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved the Ohio EPA Northeast District Office.
6. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
7. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
8. The application and enforcement of the provisions of the New Source Performance Standards (NSPS), as promulgated by the U.S. EPA, 40 CFR Part 60, are delegated to the Ohio EPA. The requirements of 40 CFR Part 60 are also federally enforceable.

Modification of (P901) TiO₂ Slurry Production

9. Recordkeeping Requirements
- a. This facility shall maintain daily records of the number of hours of operation for source P901 and its associated control equipment.
 - b. All maintenance and repair work made on the process and/or control equipment shall be recorded within a week of completion of the work performed.
 - c. Calculation(s) and any supporting analysis used to estimate air emission shall be kept for at least 2 years.
10. Reporting Requirements
- a. An annual report shall be submitted to the Ohio EPA, Northeast District Office, which summarizes

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the following data for the year:

- i. the number of hours of operation;
- ii. the annual TSP/PM₁₀ emissions; and,
- iii. a statement noting the following allowable limits:
 - aa. a limit of 0.030 gr TSP/dscf of exhaust gases from each exhaust point for units FD-921A, FD-921B, FD-926, FD-44A-D, FG44A-D, FD-3D, FD-44E, FG-8, FG-51 and FG-52;
 - ab. a limit of 0.015 gr TSP/dscf of exhaust gases from each exhaust point for units FD-950, FG-951 and FG-952;
 - ac. a limit of 0.010 gr TSP/dscf of exhaust gases from each exhaust point for units FA-537A and FA-537B; and,
 - ad. a TSP limit of 12.17 pounds/hour and 53.3 tons/year from all emission points at source P901.