



State of Ohio Environmental Protection Agency

**RE: FINAL PERMIT TO INSTALL
CUYAHOGA 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: 13-04543

Fac ID: 1318365229

DATE: 1/24/2006

McGean-Rohco, Incorporated
Jitendra Gandhi
2910 Harvard Avenue
Cleveland, OH 44105

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
309 South Fourth Street, Room 222
Columbus, Ohio 43215

Sincerely,

Michael W. Ahern, Manager
Permit Issuance and Data Management Section
Division of Air Pollution Control

CC: USEPA

CLAA



**Permit To Install
Terms and Conditions**

**Issue Date: 1/24/2006
Effective Date: 1/24/2006**

FINAL PERMIT TO INSTALL 13-04543

Application Number: 13-04543
Facility ID: 1318365229
Permit Fee: **\$500**
Name of Facility: McGean-Rohco, Incorporated
Person to Contact: Jitendra Gandhi
Address: 2910 Harvard Avenue
Cleveland, OH 44105

Location of proposed air contaminant source(s) [emissions unit(s)]:
**2910 Harvard Avenue
Cleveland, Ohio**

Description of proposed emissions unit(s):
Chapter 31 modification to modify emissions unit P026 to add reaction capability.

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

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

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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)

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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 Permit To Install for the installation or modification of any other emissions unit(s) are required for any emissions unit for which a Permit To Install is required.

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.

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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 ninety (90) 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.

McGean-Rohco, Incorporated
PTI Application: 12-04512
Issue

Facility ID: 1318365229

Emissions Unit ID: P026

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

<u>Pollutant</u>	<u>Tons Per Year</u>
PE	9.64
PM10	9.64
VOC	1.88
NOx	6.57

McGe

PTI A

Issued: 1/24/2006

Emissions Unit ID: P026

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>
<p>P026 - Chromium chemical manufacturing process consisting of two glass lined reactors, two reflux condensers, and spray dryer equipped with cyclone collector to add reaction capability equipped with two wet scrubbers, one wet scrubber controls emissions generated by the two reactors and the second wet scrubber controls emissions generated by the spray dryer-cyclone collector.</p>	OAC rule 3745-31-05(A)(3)
<p>MODIFIED</p>	OAC rule 3745-17-07(A)
<p>The terms and conditions of this permit supercede the terms and conditions in PTI #13-0195 issued on 1/15/1976 and became effective on 3/1/1976 and in PTI #13-2484 issued on 6/24/1992.</p>	OAC rule 3745-17-11(B)

OAC rule 3745-21-07(G)(2)

Applicable Emissions
Limitations/Control Measures

Visible emissions from any stack serving this emissions unit shall not exceed 10% opacity, as a six minute average.

2.20 lbs/hr and 9.64 tons/year
PE/PM10 emissions

0.43 lb/hr and 1.88 tons/year
VOC emissions

1.50 lbs/hr and 6.57 tons/year
NOx emissions

See Section A.2.a below.

The visible emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

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The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

2. Additional Terms and Conditions

- 2.a The short-term (lb/hr) emissions limitations for PE, PM10, VOC and NOx emissions were established based on the emissions unit's potential to emit (PTE), therefore no record keeping or reporting is required for these limitations.

B. Operational Restrictions

1. The permittee shall operate the reactor Venturi scrubber to control emissions while either one of the two reactors is in operation or both of the reactors are in operation.
2. The permittee shall operate the dryer-cyclone Venturi scrubber to control emissions while the spray dryer-cyclone collector is in operation.
3. During the operation of the reactor Venturi scrubber, the pH of the reactor Venturi basic scrubbing liquor or solution shall be maintained at an hourly average of 6.0 or greater. During the operation of the scrubber, the pH system shall be calibrated monthly.
4. During the operation of the reactor Venturi scrubber, the scrubbing liquor or solution recirculation flow rate to the reactor Venturi scrubber shall be maintained at twenty (20) gallons per minute or greater. This parameter data will be averaged in 1-hour blocks of time (for a total of 24 blocks per day) while either one of the two reactor are in operation or both of the reactors are in operation.
5. During the operation of the dryer-cyclone Venturi scrubber, a scrubbing liquor or solution recirculation flow rate to the dryer-cyclone Venturi scrubber shall be maintained at fifteen (15) gallons per minute or greater. This parameter data will be averaged in 1-hour blocks of time (for a total of 24 blocks per day) while the spray dryer-cyclone collector is in operation.
6. The pressure drop across the dryer-cyclone Venturi scrubber shall not be less than 10 and not more than 20 inches of water column.

C. Monitoring and/or Recordkeeping Requirements

1. Reactor Venturi Wet Scrubber Monitoring and Recordkeeping Requirements
The permittee shall properly install, calibrate, operate, and maintain, in good working condition, system of monitors, in accordance with the manufacturers' recommendations, instructions and operating manuals with any modifications deemed necessary by the permittee. The monitoring devices shall be capable of accurately measuring the desired parameters. The permittee shall monitor and record the pH of the scrubber liquor or solution, and scrubbing solution recirculation flow rate while the emissions unit

is in operation.

The permittee shall collect and record the following information each day while the reactor Venturi scrubber is in operation:

- a. the pH of the scrubbing liquor or solution, on a once a day basis;
- b. the scrubbing liquor or solution recirculation flow rate, in gallons per minute, on a once a day basis, in averaged 1-hour blocks; and
- c. the permittee shall record, for each day, all periods of time during which the reactor Venturi scrubber or the monitoring equipment were not in service when any or both of the reactors were in operation and the corrective actions that were taken to resume operation of the control device.

2. Dryer-Cyclone Venturi Wet Scrubber Monitoring and Recordkeeping Requirements

The permittee shall properly install, calibrate, operate, and maintain, in good working condition, system of monitors, in accordance with the manufacturers' recommendations, instructions and operating manuals with any modifications deemed necessary by the permittee. The monitoring devices shall be capable of accurately measuring the desired parameters. The permittee shall monitor and record the pressure drop across the wet scrubber and the scrubbing liquor or solution recirculation rate while the emissions unit is in operation.

The permittee shall collect and record the following information each day while the dryer-cyclone Venturi scrubber is in operation:

- a. the pressure drop across the dryer-cyclone Venturi scrubber, inches of water, on a once a day basis;
- b. the scrubbing liquor or solution recirculation rate, in gallons per minute, on a once a day basis, in averaged 1-hour blocks; and
- c. the permittee shall record, for each day, all periods of time during which the dryer-cyclone Venturi scrubber or the monitoring equipment were not in service when spray dryer-cyclone collector was in operation and the corrective actions that were taken to resume operation of the control device.

D. Reporting Requirements

1. The permittee shall notify the Cleveland Division of Air Quality (Cleveland DAQ) in

writing of any record showing that the reactor Venturi scrubber was not in service when any or both of the reactors were 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 Cleveland DAQ within 30 days after the event occurs.

2. The permittee shall notify the Cleveland DAQ in writing of any record showing that the dryer-cylcone Venturi scrubber was not in service when spray dryer-cyclone collector 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 Cleveland DAQ within 30 days after the event occurs.

3. Reactor Venturi Wet Scrubber Reporting Requirements
The permittee shall submit annual deviation (excursion) reports that identify the following:
 - a. all periods of time during which the scrubber liquor or solution pH was less than 6.0 when the reactor Venturi scrubber was operating; and
 - b. all scrubbing liquor or solution recirculation flow rate 1-hour block averages* less than 20 gallons per minute when the reactor Venturi scrubber was operating .

The reports shall also document the cause of each deviation (excursion) and an explanation of any corrective actions which have been taken or will be taken to prevent a similar deviation (excursion) in the future. These reports shall be submitted by April 30 of each year to the Cleveland DAQ and shall address the data obtained during the previous calendar year.

If no deviations (excursions) have occurred, the permittee shall submit a annual report which states that no deviations (excursions) have occurred during the previous calendar year. These reports shall be submitted by April 30 of each year to the Cleveland DAQ and shall address the data obtained during the previous calendar year.

*Any 1-hour block average containing 15 minutes or less of operating time (when either one of the two reactors is in operation or both of the reactors are in operation) for the entire hour will not be reported as a deviation.

4. Dryer-Cyclone Venturi Wet Scrubber Reporting Requirements
The permittee shall submit annual deviation (excursion) reports that identify the following:
 - a. all periods of time during which the pressure drop across the dryer-cyclone Venturi scrubber was less than 10 or greater than 20 inches of water column when the dryer-cyclone Venturi scrubber was operating; and

- b. all scrubbing liquor or solution recirculation flow rate 1-hour block averages* less than 15 gallons per minute when the dryer-cyclone Venturi scrubber was operating .

The reports shall also document the cause of each deviation (excursion) and an explanation of any corrective actions which have been taken or will be taken to prevent a similar deviation (excursion) in the future. These reports shall be submitted by April 30 of each year to the Cleveland DAQ and shall address the data obtained during the previous calendar year.

If no deviations (excursions) have occurred, the permittee shall submit a annual report which states that no deviations (excursions) have occurred during the previous calendar year. These reports shall be submitted by April 30 of each year to the Cleveland DAQ and shall address the data obtained during the previous calendar year.

*Any 1-hour block average containing 15 minutes or less of operating time (when the spray dryer-cyclone collector is in operation) for the entire hour will not be reported as a deviation.

E. Testing Requirements

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

- a. Emission Limitation:
Visible emissions from any stack shall not exceed 10% opacity, as a 6-minute average.

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Test Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

- b. Emission Limitation:
2.20 lbs/hr PE/PM10 emissions

Applicable Compliance Method:

Compliance with the mass emissions limitation shall be determined by using the following one-time calculation for a product at the worst case scenario for potential to emit:

$$\begin{array}{rcl}
 0.0282 \text{ Lbs of PE/PM10} & & 650 \text{ Lbs of batch} & & 2 \text{ reactors} \\
 \text{emissions} & & \text{material} & & \\
 \hline
 \text{Lb of batch material} & \times & \hline & \times & \hline \\
 & & 16.667 \text{ operating hrs} & & \\
 \\
 = & 2.20 \text{ lbs PE/PM10/hr}
 \end{array}$$

If required, compliance shall be demonstrated based on emission testing in accordance with Test Methods 1 through 5 of 40 CFR Part 60, Appendix A and the procedures specified in OAC rule 3745-17-03(B)(9).

- c. Emission Limitation:
9.64 tons/year PE/PM10 emissions

Applicable Compliance Method:

The annual emission limitation was established by multiplying the hourly emission rate by 8,760 hours of operation per year and dividing by 2,000 pounds per ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the pounds per hour limitation.

- d. Emission Limitation:
0.43 lb/hr VOC emissions

Applicable Compliance Method:

Compliance with the mass emissions limitation shall be determined by using the following one-time calculation for a product at the worst case scenario for potential to emit:

$$\begin{array}{rcl}
 0.00551 \text{ Lbs of VOC} & & 650 \text{ Lbs of batch} & & 2 \text{ reactors} \\
 \text{emissions} & & \text{material} & & \\
 \hline
 \text{Lb of batch material} & \times & \hline & \times & \hline \\
 & & 16.667 \text{ operating hrs} & & \\
 \\
 = & 0.43 \text{ lb VOC emissions/hr}
 \end{array}$$

If required, compliance shall be demonstrated based on emission testing in accordance with Test Methods 1 through 4 and 25, 25A, or 25B of 40 CFR Part 60, Appendix A.

- e. Emission Limitation:

1.88 tons/year VOC emissions

Applicable Compliance Method:

The annual emission limitation was established by multiplying the hourly emission rate by 8,760 hours of operation per year and dividing by 2,000 pounds per ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the pounds per hour limitation.

- f. **Emission Limitation:**
1.50 lbs/hr NOx emissions

Applicable Compliance Method:

Compliance with the mass emissions limitation shall be determined by using the following one-time calculation for a product at the worst case scenario for potential to emit:

0.01923 Lbs of NOx emissions -----	X	650 Lbs of batch material -----	X	2 reactors -----
Lb of batch material		16.667 operating hrs		
= 1.50 lbs NOx/hr				

If required, compliance shall be demonstrated based on emission testing in accordance with Test Methods 1 through 4 for gas flow characteristics, Test Methods 7, 7A, 7B, 7C, 7D, or 7E for nitrogen oxide emissions, of 40 CFR Part 60, Appendix A.

- g. **Emission Limitation:**
6.57 tons/year NOx emissions

Applicable Compliance Method:

The annual emission limitation was established by multiplying the hourly emission rate by 8,760 hours of operation per year and dividing by 2,000 pounds per ton. Therefore, compliance with the annual emission limitation shall be assumed provided compliance is maintained with the pounds per hour limitation.

F. Miscellaneous Requirements

None.

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PTI A

Issued: 1/24/2006

Emissions Unit ID: **P026**