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Facility Name: **CHC INDUSTRIES INC**

Application Number: **16-1835**

Date: **January 21, 1999**

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

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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.

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.

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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.

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 emissions units listed below comprise the Permit to Install for **CHC INDUSTRIES INC** located in **Medina** County. The emissions units 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.

T002

Concentrated sulfuric acid storage tank.

| <u>Ohio EPA Source Number</u> | <u>Source Identification Description</u> | <u>BAT Determination</u> |
|-------------------------------|--|--|
| P001 | Sulfuric acid pickling line. | Wet scrubber with mist eliminator. Compliance with Ohio EPA "Air Toxics Policy" |
| T001 | Pickling liquor storage tank. | Compliance with all terms and conditions of this permit. Wet scrubber with mist eliminator. Compliance with Ohio EPA "Air Toxics Policy" |

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| Compliance with all terms and conditions of this permit. | Applicable Federal & <u>OAC Rules</u> | Permit Allowable Mass Emissions and/or Control/Usage <u>Requirements</u> |
|--|---------------------------------------|---|
| Wet scrubber with mist eliminator. | 3745-31-05 | Stack emissions of sulfuric acid from P001, T001, and T002 combined shall not exceed 0.92 lb/hr and 4.0 TPY |
| Compliance with Ohio EPA "Air Toxics Policy" | 3745-31-05 | Stack emissions of sulfuric acid from P001, T001, and T002 combined shall not exceed 0.92 lb/hr and 4.0 TPY |
| Compliance with all terms and conditions of this permit. | 3745-31-05 | Stack emission of sulfuric acid from P001, T001, and T002 combined shall not exceed 0.92 lb/hr and 4.0 TPY |

SUMMARY

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TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

| <u>Pollutant</u> | <u>Tons/Year</u> |
|------------------|------------------|
| Sulfuric Acid | 4.0* |

* Combined emissions from P001, T001 and T002.

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. Two copies 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 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 Akron Air Pollution Control where the original permit application was filed. 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. Two copies 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):

Source

**P001, T001,
T002 combined**

Pollutant(s)

Sulfuric Acid

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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 three 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 **Akron Regional Air Quality, Management District, 146 South High Street, Room 904, Akron, Ohio 44308.**

WASTE DISPOSAL

The owner/operator shall comply with any applicable state and federal requirements governing the storage, treatment, transport and disposal of any waste material generated by the operation of the sources.

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 **Akron Regional Air Quality, Management District, 146 South High Street, Room 904, Akron, Ohio 44308.**

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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

A. Operations/Equipment/Emissions/Controls

1. All of the following statements in this section are based upon application data and other information made available by the permittee.
2. CHC Industries, Inc. is applying for a Permit-to-Install (PTI) for a sulfuric acid pickling/coating line (P001) composed of two 7101 gallon dip tanks containing 15% sulfuric acid, an 8000 gallon pickle liquor storage tank (T001), and an 8000 gallon concentrated (93% commercial grade acid) sulfuric acid storage tank (T002) located at the Medina County, OH facility. The pickling/coating line is used to clean and coat raw material carbon steel rods used to manufacture garment hangers. The liquor storage tank is used only as a temporary holding tank for the acid liquor while maintenance is performed on the pickling tanks. Maximum uncontrolled emissions of sulfuric acid are expected to be significant from P001 and T002 (41.7 lbs/hr from P001 and 13.3 lbs/hr from T002 for a total of 55.0 lbs/hr), but negligible from T001. A common wet scrubber, having according to the

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permittee an overall control efficiency of 99%, is planned to control emissions of sulfuric acid from all three emissions units, resulting in maximum controlled emissions of sulfuric acid of 0.55 lb/hr.

B. Emission Limits

1. The hourly and annual sulfuric acid emission limits are based upon the combined potential to emit from P001, T001, and T002. Therefore, no recordkeeping, deviation reporting, or emissions calculations are required to demonstrate compliance with these limits.

C. Additional Terms and Conditions

1. Pursuant to the BAT requirements for new sources, as covered under OAC rule 3745-31-05, the permittee shall perform the following procedures to minimize or eliminate emissions of sulfuric acid from this emissions unit:
 - a. the proper installation, employment, and operation and maintenance of a wet scrubber system with a mist eliminator, as described in the application, in accordance with the manufacturer's recommendations, instructions, and operating manual(s), to adequately control sulfuric acid emissions from the pickling tanks, the pickling liquor storage tank, and the concentrated sulfuric acid storage tank;
 - b. the proper installation, employment, and operation and maintenance of hoods, ducts, fans, and other equipment, as described in the application, in accordance with the manufacturer's recommendations, instructions, and operating manual(s), to adequately enclose, contain, capture, and vent sulfuric acid emissions to the wet scrubber; and,
 - c. the installation, employment, and operation and maintenance of all the emissions units covered under this permit in accordance with the manufacturer's recommendations, instructions, and

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operating manual(s);

- i. Compliance with the OEPA "Air Toxics Policy";
and
- ii. Compliance with all the terms and conditions
of this permit.

D. Operational Restrictions

1. All sulfuric acid emissions shall be vented to the scrubber at all times while the emissions units are operating.
2. The pressure drop across the scrubber shall be continuously maintained at a value of not less than 1 inch of water at all times while the emissions units are in operation.
3. The scrubber water flow rate shall be continuously maintained at a value of not less than 100 gallons per minute at all times while the emissions units are in operation.

E. Monitoring and/or Recordkeeping Requirements

1. The permittee shall properly install, operate and maintain equipment to continuously monitor the static pressure drop across the scrubber and the scrubber water flow rate while the emissions unit is in operation. The monitoring devices and any recorders shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.
 - a. the permittee shall collect and record the following information each day;
 - b. the static pressure drop across the scrubber, in inches of water, on a once per shift basis; and,
 - c. the scrubber water flow rate, in gallons per minute, on a once per shift basis.

F. Reporting requirements

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1. 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 Akron Air Pollution Control;
 - 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 Akron Air Pollution Control. 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.); and,
 - c. the permittee shall submit deviation (excursion) reports that identify all periods of time during which the following scrubber parameters were not maintained at or above the required levels:
 - i. the static pressure drop across the scrubber; and,
 - ii. the scrubber water flow rate.

G. Testing Requirements

1. The permittee shall conduct, or have conducted,

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emission testing for this emissions unit in accordance with the following requirements:

- a. the emission testing shall be conducted no later than six months following the issuance of this permit;
- b. the emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for sulfuric acid;
- c. the following test method shall be employed to demonstrate compliance with the allowable mass emission rate for sulfuric acid: Method 8 of 40 CFR Part 60, Appendix A;
- d. the test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Akron Air Pollution Control.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Akron Air Pollution Control. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Akron Air Pollution Control's refusal to accept the results of the emission test(s).

Personnel from the Akron Air Pollution Control shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

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A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Akron Air Pollution Control within 30 days following completion of the test(s);

- e. On-going compliance with the allowable sulfuric acid mass emission limitation of this permit shall be based upon the potential to emit of this emissions unit as demonstrated below:
 - i. Multiply the emission rate factor of 0.2562 pound of sulfuric acid per square foot of storage tank surface area per hour by the total surface area (in square feet) of the storage tanks included in this emission unit, resulting in the hourly potential mass emission rate of sulfuric acid from this emissions unit, in pounds per hour;
 - ii. The yearly potential mass emission rate of sulfuric acid from this emissions unit, in tons per year, is calculated by multiplying the hourly potential mass emission rate of sulfuric acid from this emissions unit by 8760 hours per year and dividing by 2000 pounds per ton.; and,
 - iii. The above sulfuric acid emission rate factor was derived from information supplied by the permittee.

H. Miscellaneous Requirements

1. This permit allows the use of the pickling agent specified by the permittee in the application for PTI 16-1835. In conjunction with the best available technology requirements of OAC rule 3745-31-05, pollutant ground-level concentrations were derived in accordance with the Ohio EPA's "Air Toxics Policy" based on the emissions units' equipment design and

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operational parameters, pickling agent formulation data, and the design and operational parameters of the wet scrubber collection, control, and exhaust system, as specified in the permit application. Compliance with the Ohio EPA's "Air Toxics Policy" was demonstrated for sulfuric acid based on the Screen3 model and a comparison of the predicted 1-hour maximum ground-level concentration to the MAGLC. The following summarizes the results of the modeling for sulfuric acid:

Pollutant: sulfuric acid (CAS 7664-93-9)

TWA (ug/m3): 1,000

Maximum Average Hourly Emission Rate (lbs/hr): 0.55

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 3.5

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m3): 23.8

2. As long as the application of the "Air Toxics Policy" continues to show compliance with the applicable MAGLC, the permittee may implement any of the following changes with prior notification to and approval from the Akron Air Pollution Control:
 - a. any changes in the composition of the pickling agent, or the use of a new pickling agent, that would result in the emission of a compound with a lower TWA threshold limit value, as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)", than the lowest TWA value specified in the above table;
 - b. any change to the emissions unit(s) or its exhaust parameters (e.g., increased emission rate, reduction of exhaust gas flow rate, and decreased stack height) that would result in an exceedance of any MAGLC specified in the above table;
 - c. any change in the composition of the pickling agent, or use of a new pickling agent, that would result in an increase in emissions of any HAPS as

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defined in OAC rule 3745-77-01(V); and,

- d. for any change to the emissions unit(s) or its method of operation that would either require an increase in the emission limitation(s) established by this permit or would otherwise be considered a "modification" as defined in OAC rule 3745-31-01, the permittee shall obtain a permit to install prior to the change.