



State of Ohio Environmental Protection Agency

**RE: FINAL PERMIT TO INSTALL  
LAKE 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: 02-13621**

**DATE: 1/19/00**

ELTECH Systems Fairport Facility  
Denise Dolce  
100 Seventh Ave Suite 300  
Chardon, OH 44024

Enclosed please find an Ohio EPA Permit to Install which will allow you to install the described source(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions, I urge you to read it carefully.

The Ohio EPA is urging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Pollution Prevention at (614) 644-3469.

You are hereby notified that this action by the Director is final and may be appealed to the Ohio Environmental Review Appeals Commission pursuant to Chapter 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. It must be filed within thirty (30) days after the notice of the Directors action. A copy of the appeal must be served on the Director of the Ohio Environmental Protection Agency within three (3) days of filing with the Commission. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission  
236 East Town Street, Room 300  
Columbus, Ohio 43215

Very truly yours,

Thomas G. Rigo, Manager  
Field Operations and Permit Section  
Division of Air Pollution Control

CC: USEPA

NEDO



STATE OF OHIO ENVIRONMENTAL PROTECTION AGENCY

**Permit To Install  
Terms and Conditions**

**Issue Date: 1/19/00  
Effective Date: 1/19/00**

**FINAL PERMIT TO INSTALL 02-13621**

Application Number: 02-13621  
APS Premise Number: 0243031220  
Permit Fee: **\$200**  
Name of Facility: ELTECH Systems Fairport Facility  
Person to Contact: Denise Dolce  
Address: 100 Seventh Ave Suite 300  
Chardon, OH 44024

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

**625 East St  
Fairport Harbor, Ohio**

Description of proposed emissions unit(s):

**Acid Etching system for titanium structures.**

The above named entity is hereby granted a Permit to Install for the above described emissions unit(s) pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the above described emissions unit(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency



Director

**Part I - GENERAL TERMS AND CONDITIONS****A. Permit to Install General Terms and Conditions****1. Compliance Requirements**

The emissions unit(s) identified in this Permit to Install shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.

**2. Reporting Requirements Related to Monitoring and Recordkeeping Requirements**

The permittee shall submit required reports in the following manner:

- a. Reports of any required monitoring and/or recordkeeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
- b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

**3. Records Retention Requirements**

Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.

**4. Inspections and Information Requests**

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon the premises of this source at any reasonable time for purposes of making inspections, conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. The permittee shall furnish to the Director of the Ohio EPA, or an authorized

representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

#### **5. Scheduled Maintenance/Malfunction Reporting**

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s).

#### **6. Permit Transfers**

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

#### **7. Air Pollution Nuisance**

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

#### **8. Termination of Permit to Install**

This Permit to Install shall terminate within eighteen months of the effective date of the Permit to Install if the owner or operator has not undertaken a continuing program of installation or modification or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation or modification. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

#### **9. Construction of New Sources(s)**

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

Environmental Protection Agency if the proposed sources are inadequate 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 prove to be inadequate 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**

**ELTECH Systems Fairport Facility**

PTI Application: **02-13621**

**1/19/00**

Facility ID: **0243031220**

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

**15. Fees**

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

**B. Permit to Install Summary of Allowable Emissions**

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

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

| <u>Pollutant</u> | <u>Tons Per Year</u> |
|------------------|----------------------|
| HCL Acid         | 0.37                 |
| H2SO4            | 0.29                 |

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

**A. Applicable Emissions Limitations and/or Control Requirements**

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

| <u>Operations, Property, and/or Equipment</u>                             | <u>Applicable Rules/Requirements</u> | <u>Applicable Emissions Limitations/Control Measures</u>   |
|---|--------------------------------------|--|
| Acid Etching System with venturi (wet) scrubber/acid fume control system. | OAC rule 3745-31-05                  | <p>Hydrochloric acid fume emissions from this emissions unit shall not exceed 0.0845 lb/hr and 0.37 TPY (when using hydrochloric acid for etching).</p> <p>Sulfuric acid fume emissions from this emissions unit shall not exceed 0.067 lb/hr and 0.29 TPY (when using sulfuric acid for etching).</p> |

**2. Additional Terms and Conditions**

- 2.a The permittee shall operate and maintain a fume hood and wet (venturi) scrubber/acid fume control system to reduce/eliminate the emissions of either hydrochloric acid fume or sulfuric acid fumes from this emissions unit. This wet scrubber/fume control system shall have a control efficiency of at least ninety (90) percent and shall operate at all times that this emissions unit is operating (i.e., tanks are being employed to etch metal structures with either hydrochloric acid or sulfuric acid).

**B. Operational Restrictions**

- 1. The permittee shall operate the venturi (wet) scrubber/acid fume emissions control system at all times during acid etching production operations in such a manner as to maintain the following system control parameter values:
  - a. The pressure drop across the scrubber (the differential static pressure between the scrubber inlet and outlet measured in inches of water) shall be maintained at a value not

less than that recommended by the manufacturer (about 6 inches psig) or a value established for this control device during the initial emissions compliance tests that is representative of effective scrubber operations at a minimum 90 percent control efficiency.

- b. The water flow rate within this scrubber shall be continuously maintained at a level not less than that recommended by the manufacturer (75 gallons per minute at an air flow rate of 2500 acfm) or a value established for this control device during the initial emissions compliance tests that is representative of effective scrubber operations at a minimum 90 percent control efficiency.
2. The permittee shall maintain a record of all scheduled (and unscheduled) maintenance performed on this scrubber/control system in a log kept at the site of this emissions unit.

### **C. Monitoring and/or Record Keeping Requirements**

1. The permittee shall properly install, operate, and maintain equipment to continuously monitor the static pressure drop (pressure differential) across this scrubber, as well as the scrubber water flow rate within the scrubber, while this emissions unit is in operation. The monitoring devices, and any recorders which might be employed to automatically capture the required data, shall be installed, calibrated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals. The permittee shall collect and record the following information each day:
  - a. The pressure drop across the scrubber, in inches of water, on an hourly basis during each batch production operation (run);
  - b. The scrubber water flow rate, in gallons per minute, on an hourly basis during each batch production operation (run);
  - c. The operating times (hours of operation) for the scrubber, monitoring system, and emissions unit during the day; and
  - d. The type of acid employed in the etching tank during each batch production run.
2. The permittee shall maintain records indicating, on a monthly basis, the number of batch production runs, the amount (number) of titanium structures etched, the total weight of either hydrochloric or sulfuric acid used in the etching tanks, and the total batch production time for this emissions unit.
3. The permittee shall determine and record, on a monthly basis, the amount of hydrochloric acid

Emissions Unit ID: P001

and/or sulfuric acid emissions emanating from the etching tank and emitted to the atmosphere using data collected as indicated above, mass balance calculations, and the emissions compliance determination methods listed in section E. of these terms and conditions.

#### **D. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports that identify all periods during which the following scrubber operation parameters are not maintained at or above the required levels:
  - a. The static pressure drop across the scrubber; and
  - b. The scrubber water flow rate.
2. The permittee shall submit an annual report which summarizes the following information:
  - a. The total number of etching batch operating runs during the year;
  - b. The total weight of both hydrochloric and sulfuric acids utilized during the year;
  - c. The total time of operation of this emissions unit during the year; and
  - d. The total annual emissions of both hydrochloric and sulfuric emissions from this emissions unit.

This report shall be submitted the Ohio EPA Northeast District Office by January 31 of each year for data covering emissions unit operations for the previous calendar year.

#### **E. Testing Requirements**

1. Compliance with the emission limitations in section A.1. of these terms and conditions shall be determined in accordance with the following methods:
  - a. Emissions Limitation: Hydrochloric acid fume emissions from this emissions unit shall not exceed 0.0845 lb/hr and 0.37 TPY

Applicable Compliance Method: Compliance with this emissions limitation shall be determined based on the operational data and other information recorded as required in section C of these terms and conditions. If required pursuant to OAC rule 3745-15-04, the permittee shall demonstrate compliance with the hydrochloric acid emissions limits of this permit by means of physical testing of the effluent of this emissions unit in accordance with testing procedures listed in 40 CFR Part 60, "Standards of Performance for New

Stationary Sources", Appendix A, Method 26.

- b. Emissions Limitation: Sulfuric acid fume emissions from this emissions unit shall not exceed 0.067 lb/hr and 0.29 TPY

Applicable Compliance Method: Compliance with this emissions limitation shall be determined based on the operational data and other information recorded as required in section C of these terms and conditions. If required pursuant to OAC rule 3745-15-04, the permittee shall demonstrate compliance with the sulfuric acid emissions limits of this permit by means of physical testing of the effluent of this emissions unit in accordance with testing procedures listed in 40 CFR Part 60, "Standards of Performance for New Stationary Sources", Appendix A, Method 8.

2. Initial Emissions Compliance Testing Requirements:

Within 60 days of initial startup of this emissions unit, the permittee shall conduct, or have conducted, initial performance/emissions compliance testing for this emissions unit in accordance with the following requirements:

- a. The emission testing shall be conducted prior to the issuance of a Permit to Operate for this emissions unit (P001), and within 60 days of the initial startup of this acid etching system.
- b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rates for both hydrochloric acid and sulfuric acid.
- c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): for hydrochloric acid fumes/mists, Method 26 of 40 CFR Part 60, Appendix A; for sulfuric acid mists/fumes, Method 8 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.
- d. The test(s) shall be conducted while the etching tank is in full working mode and while full capacity batches of titanium structures are being processed. Separate tests shall be conducted on successive (or different) days using hydrochloric acid during one set of tests and sulfuric acid during the other.
- e. Each test for acid emissions concentrations shall be conducted at both the inlet and outlet of the scrubber in order to determine not only the overall controlled emissions rate of each acid fume but also the control efficiency of the scrubber for each acid employed.
- f. During each test, specific records shall be made of the pressure drop across the scrubber and the scrubber water flow rate in order to establish the appropriate level of these parameters for insertion into the "Operational Requirements" section of the permit to operate for this emissions unit.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA Northeast District Office. 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 Ohio EPA Northeast District Office's refusal to accept the results of the emission test(s).

**ELTECH Systems Fairport Facility**

PTI Application: **02-13621**

**1/19/0**

Facility ID: **0243031220**

Emissions Unit ID: **P001**

Personnel from the Ohio EPA Northeast District Office 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.

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 Ohio EPA Northeast District Office within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA Northeast District Office.

**F. Miscellaneous Requirements**

None.