OhioEPA

State of Ohio Environmental Protection Agency

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Street Address:
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P.O. Box 1049
Columbus, OH 43216-1049

RE: FINAL PERMIT TO INSTALL
ASHTABULA COUNTY
Application No: 02-15609

CERTIFIED MAIL

Y	TOXIC REVIEW
	PSD
	SYNTHETIC MINOR
	CEMS
	MACT
	NSPS
	NESHAPS
	NETTING
	MAJOR NON-ATTAINMENT
Y	MODELING SUBMITTED
	GASOLINE DISPENSING FACILITY

DATE: 11/20/2001

The Elco Corporation
Tom Steib
1100 State Road
Ashtabula, OH 44004

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

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	**Issue Date: 11/20/2001**
Terms and Conditions	**Effective Date: 11/20/2001**

FINAL PERMIT TO INSTALL 02-15609

Application Number: 02-15609

APS Premise Number: 0204000417

Permit Fee: **$800**

Name of Facility: The Elco Corporation

Person to Contact: Tom Steib

Address: 1100 State Road
Ashtabula, OH 44004

Location of proposed air contaminant source(s) [emissions unit(s)]:
1100 State Road
Ashtabula, Ohio

Description of proposed emissions unit(s):
Chapter 31 Modification of PTI 02-11423, issued 10/22/97 to change the control system and increase OC emissions.

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 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	Tons Per Year Increase
OC	14.1	13.16
H_2S	0.09	0.00

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	Applicable Emissions Limitations/Control Measures
P001 - Sodium dialkyldithiophosphate and zinc dialkyldithiophosphate process: including reactor R11 with a condenser and reactor R12 with a condenser with a primary scrubber/condenser system followed by a secondary scrubber/condenser system to control H_2S and OC emissions	OAC rule 3745-31-05(A)(3)	The organic compound (OC) emissions shall not exceed 77.3 lbs/day and 14.1 tons/year. The hydrogen sulfide (H_2S) emissions shall not exceed 0.02 lb/hr and 0.09 ton/year. Compliance with the Air Toxic Policy as specified in sections C.7.-C.9.

2. **Additional Terms and Conditions**

   2.a None.

B. Operational Restrictions

1. The temperature of the R11 reactor condenser exhaust shall be continuously maintained at a value no greater than 14 degrees Fahrenheit above the average temperature during the most recent emission test that demonstrated compliance.

2. The temperature of the R12 reactor condenser exhaust shall be continuously maintained at a value no greater than 16 degrees Fahrenheit above the average temperature during the most recent emission test that demonstrated compliance.

3. Prior to the start of each batch process, the sodium hydroxide concentration of the primary scrubber liquor shall be maintained at a sufficient concentration needed to neutralize the estimated H_2S content.

4. Prior to the start of each batch process, the sodium hydroxide concentration of the secondary scrubber liquor shall be maintained at or above 20%.

5. The temperature of the primary scrubber liquor shall be continuously maintained at a value no greater than 11 degrees Fahrenheit above the average temperature during the most recent emission test that demonstrated compliance.

6. The temperature of the secondary scrubber liquor shall be continuously maintained at a value no greater than 11 degrees Fahrenheit above the average temperature during the most recent emission test that demonstrated compliance.

7. The secondary scrubber inlet vacuum pressure shall be continuously maintained in inches of water gauge in accordance with the manufacturer's recommendations, instructions and operating manuals at all times while the emissions unit is in operation.

C. Monitoring and/or Record Keeping Requirements

1. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the temperature from the R11 condenser exhaust, from the R12 condenser exhaust, from the primary scrubber liquor and from the secondary scrubber liquor when the emissions unit is in operation. Units shall be in degrees Fahrenheit. The accuracy for each thermocouple, monitor, and recorder shall be guaranteed by the manufacturer to be within + 1 percent of the temperature being measured or + 5 degrees Fahrenheit, whichever is greater. The temperature monitor and recorder shall be installed, calibrated, operated 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 temperature of the R11 reactor condenser exhaust.

   b. The temperature of the R12 reactor condenser exhaust.

   c. The temperature of the primary scrubber liquor.

   d. The temperature of the secondary scrubber liquor.

2. Prior to the start of each batch process, the permittee shall collect and record the following information each day for the primary scrubber liquor:

   a. the original sodium hydroxide concentration;

   b. the concentration, in percent, and the gallons of caustic solution (sodium hydroxide) to be added to the scrubber liquor; and

   c. the scrubber liquor level within the holding tank, in inches.

3. Prior to the start of each batch process, the permittee shall collect and record the following information each day for the secondary scrubber liquor:

   a. the original sodium hydroxide concentration;

   b. the concentration, in percent, and the gallons of caustic solution (sodium hydroxide) to be added to the scrubber liquor; and

   c. the scrubber liquor level within the holding tank, in inches.

4 The permittee shall collect and record the secondary scrubber inlet gas vacuum pressure in inches of water gauge, on a once per eight hour period basis, each day:

5. The permittee shall collect and record the operating time for the capture (collection) system, control device(s), monitoring equipment, and the associated emissions unit each day.

6. The permittee shall collect and record the following information each week for this emissions unit:

   a. the dates of the weekly period;

   a. the total number of hours the emissions unit was in operation during the week;

   b. the total raw materials throughput , in pounds per week;

   c. the average, daily raw materials throughput, i. e., b/a, in pounds per day; and

   d. the average daily OC emission rate for all raw materials employed.

7. The permit to install for this emissions unit 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 (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

   Pollutant: 4-methyl-2-pentanol

   TLV (μg/m3): 104,496

   Maximum Hourly Emission Rate (lbs/hr): 3.0067

   Predicted 1-Hour Maximum Ground-Level Concentration (μg/m3): 71

MAGLC (μg/m3): 2,488

8. 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 (typically for coatings or cleanup materials), 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.).

9. 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.

D. Reporting Requirements

1. The permittee shall submit temperature deviation (excursion) reports that identify all consecutive 24 -hour blocks of time during which the temperature of from the R11 condenser exhaust, R12 condenser exhaust, primary scrubber liquor or secondary scrubber liquor exceeded the temperature limitation specified in sections B.1., B.2., B.5. or B.6., respectively.

2. The permittee shall submit sodium hydroxide concentration deviation (excursion) reports that identify all periods of time during which resulting sodium hydroxide concentration of the primary scrubber liquor or of the secondary scrubber liquor did not comply with the requirements specified in sections B.3. and B4., respectively.

3. The permittee shall submit vacuum pressure deviation (excursion) reports that identify all periods of time during which the secondary scrubber inlet gas vacuum pressure did not comply with the requirement specified in section B.7.

E. Testing Requirements

1. Compliance with the allowable emission limitations in section A.1. of these terms and conditions shall be determined in accordance with the following methods:

   a. Emission Limitation: 77.3 lbs OC/day.

      Applicable Compliance Method: Compliance shall be demonstrated in accordance with the record keeping requirements specified in section C.5. Compliance may be determined based upon the following equation:

      E(OC) = [summation of (Wi)]/DAY x EF(OC).

      where:
      E(OC) = OC emissions, in pounds per day, average.

      Wi = the weight of raw material "i" processed, in pounds per week.

      EF(OC) = the emission factor for OC emissions, which is 0.00137 pound OC emissions per lb raw material, as developed from data collected during a U.S. EPA Method 25A stack test conducted on October 25 & 26, 2000 on this emissions unit.

   b. Emission Limitation: 14.1 TPY OC.

      Applicable Compliance Method: Compliance shall be based on the sum of the daily OC emission rates, E(OC), as specified in section E.1.a. of this permit for the calendar year, and shall be divided by 2000 pounds/ton.

c. Emission Limitation: 0.02 lb H_2S/hr.

Applicable Compliance Method: Compliance was demonstrated by an average emissions rate of 0.0000027 lbs H_2S/hr as determined from a U.S. EPA Method 15 test conducted on November 3, 1999 on this emissions unit.

d. Emission Limitation: 0.09 TPY H_2S.

Applicable Compliance Method: Compliance shall be based on the product of the hourly H_2S emission rates, as specified in section E.1.c. of this permit, and the sum of the daily operating hours, as required by section C.4. for the calendar year, which shall be divided by 2000 pounds/ton.

2. Any determination of sodium hydroxide (NaOH) content (percent by weight) of the scrubber liquor shall be made prior to the addition of any concentrated caustic solution to the scrubber liquor holding tank. The permittee shall determine the NaOH content, prior to caustic solution addition, by the hydrochloric acid titration procedure for NaOH determination in sodium sulfhydrate (NaSH) method, as submitted with the permit application. An equivalent, alternative method (as approved by Ohio EPA) may be performed on the scrubber liquor(s).

3. The permittee shall conduct, or have conducted, emission testing for this emissions unit, if a revised OC emissions factor or a revised control equipment operating parameter restriction, other than the ones developed from Method 25A stack test data, collected during October 25 & 26, 2000, is desired, in accordance with the following requirements:

a. The emission testing shall be conducted within 6 months after issuance of this permit.

b. The emission testing shall be conducted to demonstrate compliance with the allowable OC emission rate(s), or to develop a revised OC emissions factor, or to develop revised operating parameter ranges for control equipment.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): U.S. EPA Method 25A 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 emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Ohio EPA Northeast District Office.

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

5. Personnel from the appropriate Ohio EPA District Office or local air agency 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.

6. 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 appropriate Ohio EPA District Office or local air agency 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 appropriate Ohio EPA District Office or local air agency.

F. Miscellaneous Requirements

None