OhioEPA
State of Ohio Environmental Protection Agency

STREET ADDRESS:
1800 WaterMark Drive
Columbus, OH 43215-1099

TELE: (614) 644-3020 FAX: (614) 644-2329

MAILING ADDRESS:
P.O. Box 1049
Columbus, OH 43216-1049

May 5, 1999 CERTIFIED MAIL

Re: Time extension for Permit to Install No. 02-1423
Ashtabula County

Elco Corporation
Charles Guy
P.O. Box 1398
Ashtabula, OH 44005

Dear Sir:

Your request for an extension of time for the Permit to Install issued to you is hereby granted.

Pursuant to rule 3745-31-06(C) of the Ohio Administrative Code, a permit to install can be extended on a one-time basis by twelve (12) months from the date upon which it would have otherwise expired **April 22, 1999**. Therefore, this Permit to Install will now terminate on **April 22, 2000**.

You are hereby notified that this action of the Director is final and may be appealed to the Environmental Board of Review pursuant to Section 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 with the Environmental Board of Review within thirty (30) days after notice of the Director's 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 Board. An appeal may be filed with the Environmental Board of Review at the following address: Environmental Board of Review, 236 East Town Street, Room 300, Columbus, OH 43215.

Very truly yours,

Director

cc: US EPA
NORTHEAST DISTRICT OFFICE, DAPC

RECEIVED
MAY 11 1999
OHIO EPA NEDO

OhioEPA
State of Ohio Environmental Protection Agency

STREET ADDRESS:
1800 WaterMark Drive
Columbus, OH 43215-1099

TELE: (614) 644-3020 FAX: (614) 644-2329

MAILING ADDRESS:
P.O. Box 1049
Columbus, OH 43216-1049

Re: Permit to Install
Ashtabula County
Application No: 02-1423
NSPS

CERTIFIED MAIL

October 22, 1997

ELCO CORPORATION
CHARLES GUY
P O BOX 1398
ASHTABULA, OH 44005

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 with the Environmental Review Appeals Commission within thirty (30) days after notice of the Director's 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 & Permit Section
Division of Air Pollution Control

RECEIVED
OCT 30 1997
OHIO EPA NEDO

cc: US EPA
NORTHEAST DISTRICT OFFICE, DAPC

George V. Voinovich, Governor
Nancy P. Hollister, Lt. Governor
Donald R. Schregardus, Director

State of Ohio Environmental Protection Agency

Permit to Install
Terms and Conditions

Application No. 02-1423
APS Premise No. 0204000417
Permit Fee: $700.00

Name of Facility: ELCO CORPORATION

Person to Contact: CHARLES GUY

Address: P O BOX 1398
ASHTABULA, OH 44005

Location of proposed source(s): 1100 NORTH STATE ROAD
ASHTABULA, OHIO

Description of proposed source(s):
LUBRICANT ADDITIVE PRODUCTION-SDP & ZDP MODIFICATION & INSTA
LLATION OF 6 ALCOHOL STORAGE TANKS.

Date of Issuance: October 22, 1997

Effective Date: October 22, 1997

The above named entity is hereby granted a permit to install for the above described source(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 source(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described source(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

TERMINATION OF PERMIT TO INSTALL

Substantial construction for installation must take place within 18 months of the effective date of this permit. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

NOTICE OF INSPECTION

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

CONSTRUCTION OF NEW SOURCES

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

If the construction of the proposed source(s) has already begun or has been completed prior to the date the Director of the Environmental Protection Agency approves the permit application and plans, the approval does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the approved plans. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of Ohio Administrative Code (OAC) Rule 3745-31-02. Furthermore, issuance of the Permit to Install does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Approval of the plans in any case is not to be construed as an approval of the facility as constructed and/or completed. Moreover, issuance of the Permit to Install is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons)

may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet applicable standards.

PERMIT TO INSTALL FEE

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

PUBLIC DISCLOSURE

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC Rule 3745-49-03.

APPLICABILITY

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

BEST AVAILABLE TECHNOLOGY

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

PERMIT TO OPERATE APPLICATION

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

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.

AIR EMISSION SUMMARY

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

Ohio EPA Source Number	Source Identification Description	BAT Determination	Applicable Federal & OAC Rules	Permit Allowable Mass Emissions and/or Control/Usage Requirements
P001	Production of sodium and zinc dialkyldi-thio-phosphates; Reactor Vessels R-1 and R-2	Use of a condenser at each reactor vessel. Use of primary, secondary and tertiary scrubber systems to control H_2S emissions from the combined exhaust stream of both reactor vessels	3745-31-05	5.14 pounds/day and 0.94 TPY of OC emissions; 0.02 pound/hour and 0.09 TPY of H_2S emissions.
T001	19,256 gallon storage tank for isooctanol; storage tank 1-B	Use of submerged fill, such that loading operations occur below the liquid level line	40 CFR Part 60 Subpart Kb 3745-31-05	0.15 lb/day and 0.027 TPY of OC emissions
T002	19,256 gallon storage tank for isobutanol; storage tank 2-A	Use of submerged fill, such that loading operations occur below the liquid level line	40 CFR Part 60 Subpart Kb 3745-31-05	0.60 lb/day and 0.11 TPY of OC emissions

Ohio EPA Source Number	Source Identification Description	BAT Determination	Applicable Federal & OAC Rules	Permit Allowable Mass Emissions and/or Control/Usage Requirements
T003	19,256 gallon storage tank for 2-ethyl hexanol; storage tank 2-B	Use of submerged fill, such that loading operations occur below the liquid level line	40 CFR Part 60 Subpart Kb 3745-31-05	0.21 lb/day and 0.038 TPY of OC emissions
T004	19,256 gallon storage tank for 2-methyl-1-butanol; storage tank 3-A	Use of submerged fill, such that loading operations occur below the liquid level line	40 CFR Part 60 Subpart Kb 3745-31-05	0.17 lb/day and 0.031 TPY of OC emissions
T005	19,256 gallon storage tank for isopropanol; storage tank 3-B	Use of submerged fill, such that loading operations occur below the liquid level line	40 CFR Part 60 Subpart Kb 3745-31-05	0.93 lb/day and 0.17 TPY of OC emissions
T006	19,256 gallon storage tank for n-butanol; storage tank 4-A	Use of submerged fill, such that loading operations occur below the liquid level line	40 CFR Part 60 Subpart Kb 3745-31-05	0.38 lb/day and 0.069 TPY of OC emissions

SUMMARY
TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

Pollutant	Tons/Year	Net Change Tons/Year
OC	1.23	0.44
H_2S	0.09	0

NSPS REQUIREMENTS

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

Source No.	Source Description	NSPS Regulation (Subpart)
T001-T006	Six 19,256 gallon storage tanks for various alcohols	Kb

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

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

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

Reports are to be sent to:

Ohio Environmental Protection Agency
DAPC - Permit Management Unit
P.O. Box 163669
Columbus, OH 43216-3669

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

PERFORMANCE TEST REQUIREMENTS

The permittee shall conduct, or have conducted, performance testing on the air contaminant source(s) in accordance with procedures approved by the Agency. 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 appropriate Ohio EPA District Office or Local Air Pollution

Control Agency 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 pollutants(s):

Source	Pollutants
P001	OC's and H_2S

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

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

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.

NINETY DAY OPERATING PERIOD

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

NEW SOURCE PERFORMANCE STANDARD SUBPART Kb

The application and enforcement of the provisions of the New Source Performance Standards (NSPS), as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60, are delegated to the Ohio Environmental Protection Agency. The requirements of 40 CFR Part 60 are also federally enforceable.

In accordance with 40 CFR 60.116b(a) and (b), the owner and operator of the following storage vessel(s) shall keep readily accessible records showing the dimension of each storage vessel and an analysis showing the capacity of each storage vessel for the life of each source.

Source Number(s):	Tank Size:
T001-T006	19,256 gallons each

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. Introduction

The company manufactures sodium and zinc dialkyldithiophosphates, lubricant additives. This permit is for the modification of sodium and zinc dialkyldithiophosphates production (P001) to increase production capacity. However, this permit requires the installation of additional control equipment, such that the (controlled) allowable emissions at (P001) will not increase. For P001, each reactor vessel is controlled by a condenser. The exhaust gases from each condenser are combined and controlled by primary and secondary wet scrubbers in series, and then vented to a tertiary packed tower scrubber. Six (6) storage tanks (T001-T006) for various alcohols are new emissions units.

B. Emission Limitations

1. The emissions from emissions unit P001 shall not exceed the following limits:

   a. 5.14 pounds/day and 0.94 TPY of organic compound (OC) emissions; and,

   b. 0.002 pound/hour and 0.09 TPY of hydrogen sulfide (H_2S) emissions.

2. OC emissions from emissions unit T001 shall not exceed 0.15 pound/day and 0.027 TPY of OC emissions.

3. OC emissions from emissions unit T002 shall not exceed 0.60 pound/day and 0.11 TPY of OC emissions.

4. OC emissions from emissions unit T003 shall not exceed 0.21 pound/day and 0.038 TPY of OC emissions.

5. OC emissions from emissions unit T004 shall not exceed 0.17 pound/day and 0.031 TPY of OC emissions.

6. OC emissions from emissions unit T005 shall not exceed 0.93 pound/day and 0.17 TPY of OC emissions.

7. OC emissions from emissions unit T006 shall not exceed 0.38 pound/day and 0.069 TPY of OC emissions.

C. Operational Restrictions

1. The average temperature of the exhaust gases from each condenser, installed at each reactor vessel, for any 3-hour block of time, shall not be more than 11 degrees

Fahrenheit above the average baseline temperature, established during the most recent performance test, at all times while the emissions unit is in operation.

Na2S/ NaOH determine

2. The pH of the primary and secondary scrubber liquor shall be maintained at or above 12 during any time the emissions unit is in operation.

3. The pressure drop across the tertiary scrubber shall be continuously maintained at a value of not less than ±1 inch of water column from the baseline pressure drop value, established during the most recent performance test, at all times while the emissions unit is in operation.

4. The tertiary scrubber water flow rate shall be continuously maintained at a value of not less than ±10 percent from the average baseline scrubber water flow value, established during the most recent performance test, at all times while the emissions unit is in operation.

5. Each of the storage tanks (T001-T006) shall employ a submerged fill system, such that loading operations shall occur below the liquid level line.

6. This permit allows for the use of the materials specified by the permittee in the application for a Permit to Install. In conjunction with the best available technology requirements of OAC rule 3745-31-005, the H_2S and OC emission limitations specified in this permit are based on both the formulation data of the materials and the design parameters of the emissions units' exhaust system(s), as specified in the application.

   Any of the following changes may be deemed a "modification" to the emissions unit(s) and, as such, prior notification to and approval from the Ohio EPA are required:

   a. 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.

D. Monitoring and/or Recordkeeping Requirements

1. The permittee shall operate and maintain a temperature monitor and recorder which measures and records the temperature of the exhaust gases from each condenser, installed at each reactor vessel, when P001 is in operation at least once per hour. 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.

2. The permittee shall properly install, operate and maintain equipment to monitor and record the pH of the scrubber liquor(s) of the primary and secondary scrubbers while P001 is in operation at least once per hour. The pH monitor(s) and recorder(s) shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

3. The permittee shall properly install, operate and maintain equipment to monitor the static pressure drop across the tertiary scrubber and the scrubber water flow rate while P001 is in operation at least once per hour. The monitoring devices and any recorders shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

4. The permittee shall collect and record the following information for each day for P001:

   a. the average temperature of the exhaust gases from each condenser during each of the eight 3-hour blocks of time during the day;

   b. the pH of the primary scrubber liquor at least once per hour;

   c. the pH of the secondary scrubber liquor at least once per hour;

   d. the temperature of the primary scrubber liquor and of the secondary scrubber liquor at least once per hour;

   e. the primary scrubber liquor level at least once per hour;

   f. the pump pressure of the water supply for the secondary scrubber at least once per hour;

   g. for each addition of sodium hydroxide to the primary scrubber liquor, the weight of sodium hydroxide in pounds and the volume of water in gallons shall be recorded;

   h. for each addition of sodium hydroxide to the secondary scrubber liquor, the weight of sodium

hydroxide in pounds and the volume of water in gallons shall be recorded;

i. the pressure drop across the tertiary scrubber, in inches of water, on a once/shift basis;

j. the tertiary scrubber water flow rate, in gallons per minute, on an hourly basis; and,

k. a log or record of operating time for the capture (collection) system(s), control device(s), monitoring equipment, and the associated emissions unit.

5. The permittee shall keep readily accessible records showing the dimensions of each storage vessel (T001-T006) and analysis showing the capacity of each vessel for the life of each emissions unit.

E. <u>Reporting Requirements</u>

1. The permittee shall submit deviation (excursion) reports to the Ohio EPA Northeast District Office which identify any exceedances at P001. The reports shall include the following information:

a. statement(s) noting the allowable limit(s) as specified in Additional Special Terms and Conditions B.1.a. and b.; and,

b. for each period where any of the requirement(s) noted in term(s) C.1., C.2., C.3., or C.4. are exceeded, the following parameters shall be reported:

i. the date and duration of occurrence;

ii. the estimated OC emissions and H_2S emissions in pounds, along with supporting calculations;

iii. the average temperature of the exhaust gases from each condenser during each of the eight 3-hour blocks of time during the day;

iv. the pH of the primary and secondary scrubber liquors;

v. the temperature of the primary and secondary scrubber liquors;

vi. the pump pressure of the secondary scrubber liquor supply;

vii. the total quantity of the sodium hydroxide added to the primary and secondary scrubber liquors;

viii. the static pressure drop across the tertiary scrubber;

ix. the tertiary scrubber water flow rate;

x. a description of any corrective actions taken to address any exceedances of requirements as noted in term(s) C.1., C.2., C.3., or C.4.; and,

xi. should no exceedances of the requirements noted in term(s) C.1., C.2., C.3. or C.4. occur, then the report should state that no exceedances occurred.

The excursion 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.)

2. The permittee shall submit biennial (every two years) fee emission reports to the Ohio EPA Northeast District Office which include the following information:

a. the total criteria pollutants (i.e., particulate matter, sulfur dioxide, nitrogen oxides, organic compounds, carbon monoxide and lead) emissions from the combination of all applicable emissions units for the previous calendar year in tons per year.

These reports shall be submitted by April 15 of each year.

F. <u>Testing Requirements</u>

1. The permittee shall conduct, or have conducted, performance testing of P001 in accordance with the following requirements:

a. the emission testing shall be conducted within 3 months after issuance of the permit and within 6 months prior to permit renewal;

b. the emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate(s) of 5.14 pounds/day of OC emissions and 0.02 pounds/hour of H_2S emissions;

c. the following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): U.S. EPA Method 18 for OC emissions and U.S. EPA Method 15 for H_2S emissions per 40 CFR Part 60, Appendix A or an equivalent, alternative method(s), as approved by 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;

e. a completed Intent to Test form shall be submitted to the Ohio EPA Northeast District Office within 30 days of start-up operations of the emissions unit and control system(s). This notice shall be made at least thirty (30) days in advance and shall specify the emission unit operation parameters, the proposed test procedures and the time, date, place and person(s) conducting such tests;

f. 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; and,

g. a comprehensive written report on the results of the emissions test(s) shall be signed by the person responsible for the test(s) and submitted to Ohio EPA Northeast District Office within 30 days following completion of the test(s).