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
Portage County
Application No: 16-1124
TOXIC REVIEW

CERTIFIED MAIL

May 13, 1998

CORRECTED COPY

GENERAL ELECTRIC - RAVENNA LAMP PLANT
SCOTT DANNA
6800 N CHESTNUT STREET
RAVENNA, OH 44266

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

cc: US EPA
AKRON AIR POLLUTION CONTROL

State of Ohio Environmental Protection Agency

Permit to Install
Terms and Conditions

Application No. 16-1124
APS Premise No. 1667060009
Permit Fee: $800.00

Name of Facility: GENERAL ELECTRIC - RAVENNA LAMP PLANT

Person to Contact: SCOTT DANNA

Address: 6800 N CHESTNUT STREET
RAVENNA, OH 44266

Location of proposed source(s): 6800 N CHESTNUT STREET
RAVENNA, OHIO

Description of proposed source(s):
H I D BULB COATING, MULTIVAPOR DIP COATING, AND PARTS DEGREA
SER.

Date of Issuance: May 13, 1998

Effective Date: May 13, 1998

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

Donald R Schregardus

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 GENERAL ELECTRIC - RAVENNA LAMP PLANT located in Portage 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
L001	Parts degreaser.	A cover which is easily operated with one hand, a device for draining the cleaned parts, solid fluid stream at a pressure not less than 10 p.s.i. Compliance with Ohio EPA Air Toxics Policy.	3745-31-05 3745-21-09 (o)	1.92 lbs/hr VOC 8.41 TPY VOC
R001	H.I.D. bulb coating and solvent storage.	Use of non-photochemically reactive solvents. Compliance with Ohio EPA Air Toxics Policy.	3745-31-05 3745-21-07 (G) (coating booth) 3745-21-07 (G)(1) (oven)	4.41 lbs/hr VOC 19.29 TPY VOC
R002	Dip coaters.	Use of non-photochemically reactive solvents.	3745-31-05 3745-21-07 (G)	4.51 lbs/hr VOC 19.75 TPY VOC 0.35 TPY NH_3 0.08 lb/hr Ammonia

Ohio EPA Source Number	Source Identification Description	BAT Determination	Applicable Federal & OAC Rules	Permit Allowable Mass Emissions and/or Control/Usage Requirements
R002 cont		Compliance with Ohio EPA Air Toxics Policy.		

SUMMARY
TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

Pollutant	Tons/Year
VOC	47.45
Ammonia	0.35

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 Air Pollution Control, 146 South High St., Room 904, Akron, Ohio 44308.

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.

BAT FOR COLD CLEANERS

In accordance with OAC Rule 3745-21-09(0)(2), each owner or operator of a cold cleaner shall:

a. equip the cold cleaner with either:

   1. a cover - if the solvent has a vapor pressure greater than 0.3 pound per square inch absolute measured at 100°F or the solvent is heated or agitated, the cover shall be signed and constructed so that it can be easily operated with one hand; or

   2. a remote solvent reservoir from which solvent is pumped through a nozzle suspended over a sink-like work area which drains back to the reservoir, provided a sink-like work area has an open drain area of less than 16 square inches and provided the solvent is neither heated above 120°F nor has a vapor pressure greater than 0.6 pound per square inch absolute, measured at 100°F;

b. equip the cold cleaner with a device for draining the cleaned parts - if the solvent has a vapor pressure greater than 0.6 pound per square inch absolute measured at 100°F, the drainage facility shall be constructed internally so that parts are enclosed under the cover during draining, unless an internal type drainage device cannot fit into the cleaning system;

c. install one of the following devices if the solvent vapor pressure is greater than 0.6 pound per square inch absolute measured at 100°F, or if the solvent is heated above 120°F;

   1. freeboard that gives a freeboard ratio greater than or equal to 0.7;

   2. water cover (solvent must be insoluble in and heavier than water); or

   3. other systems of equivalent control, such as refrigerated chiller or carbon adsorption, approved by the Director; and

d. operate and maintain the cold cleaner in a manner which is consistent with good engineering practice and which minimizes solvent evaporation from the unit.

ADDITIONAL SPECIAL TERMS AND CONDITIONS

A. Control Equipment Requirements

1. L001

a. The cold cleaner shall be operated with a cover, and if the solvent has a vapor pressure greater than 0.3 pound per square inch absolute, measured at 100 degrees Fahrenheit or, if the solvent is heated or agitated, the cover shall be designed and constructed so that it can be easily operated with one hand.

B. Operational Restrictions

1. L001

a. The cold cleaner shall be operated and maintained in accordance with the following practices to minimize solvent evaporation from the unit:

i. provide a permanent, legible, conspicuous label, summarizing the operating requirements;

ii. store waste solvent in covered containers;

iii. close the cover whenever parts are not being handled in the cleaner;

iv. drain the cleaned parts until dripping ceases;

v. if used, supply a solvent spray that is a solid fluid steam (not a fine, atomized, or shower-type spray) at a pressure that does not exceed 10 pounds per square inch gauge; and,

vi. clean only materials that are neither porous nor absorbent.

C. Monitoring and/or Recordkeeping Requirements

1. L001

a. Any owner or operator of a solvent metal cleaning operation shall maintain records of the following information in a readily accessible location for at least five years and shall make these records available to the director upon verbal or written request:

i. for cold cleaners, the types of solvents employed and the vapor pressure of each solvent (pounds per square inch absolute) measured at one hundred degrees Fahrenheit.

D. Reporting Requirements

None.

E. Testing Requirements

1. L001

a. Compliance with the emission limitation(s) in the Emission Summary of this permit shall be determined in accordance with the following method(s):

i. Emission Limitation

1.92 pounds of VOC per hour and 8.41 tons of VOC per year.

Applicable Compliance Method

Compliance shall be determined by multiplying the volatile organic compound emissions factor of 0.08 pound of volatile organic compound per square foot by the area of liquid surface. The emissions factor was developed using information provided by General Electric Ravenna Lamp Plant emissions calculation sheet for maintenance parts washers and AP-42 January 1995 edition. To comply with the ton per year limitation, multiply the pound per hour limit by maximum operating hours of 8760 hours per year and divide by 2000 pounds per ton.

2. R001

a. Compliance with the emission limitation(s) in the Emission Summary of this permit shall be determined in accordance with the following method(s):

i. Emission Limitation

4.41 pounds of VOC per hour and 19.29 tons of VOC per year.

Applicable Compliance Method

Compliance shall be determined by adding hourly emissions from coating of 3.49 pounds to the hourly emissions from clean-up materials of 0.92 pound.

aa. The hourly emission rate from the H.I.D. bulb coating process is calculated by multiplying the volatile organic compound emissions factor of 3.99 pounds of volatile organic compound per gallon of

coating material by the hourly coating material usage rate. The emissions factor was developed using material safety data sheet values provided by General Electric Ravenna Lamp Plant.

ab. The hourly emission rate from clean-up materials is calculated by multiplying the volatile organic compound emissions factor of 7.33 pounds of volatile organic compound per gallon of cleanup material by the amount of clean-up material used and not collected per day, divided by the number of hours of operation per day. The emissions factor was developed using material safety data sheet values provided by General Electric Ravenna Lamp Plant.

ac. Multiply hourly emission rate by maximum operating hours of 8760 hours per year and divide by 2000 pounds per ton.

3. R002

a. Compliance with the emission limitation(s) in the Emission Summary of this permit shall be determined in accordance with the following method(s):

i. <u>Emission Limitation</u>

4.51 of pounds of VOC per hour and 19.75 tons of VOC per year.

<u>Applicable Compliance Method</u>

Compliance shall be determined by adding hourly emissions from the pre coat of 4.05 pounds to the hourly emissions from the final coat of 0.46 pound.

aa. The hourly emission rate from the pre coat process is calculated by multiplying the volatile organic compound emissions factor of 6.53 pounds of volatile organic compound per gallon of pre coat material by the hourly pre coat usage rate. The emissions factor was developed using information provided by General Electric Ravenna Lamp Plant.

ab. The hourly emission rate from the final coat process is calculated by multiplying the volatile organic compound emissions factor of 0.92 pound of volatile organic compound per gallon of final coat material by the hourly final coat usage rate. The emissions factor was developed using information provided by General Electric Ravenna Lamp Plant.

ac. Multiply hourly emissions rate by maximum operating hours of 8760 hours per year and divide by 2000 pounds per ton.

ii. Emission Limitation

0.08 pound of ammonia per hour and 0.35 ton of ammonia per year.

Applicable Compliance Method

Compliance shall be determined by multiplying the ammonia emissions factor of 0.16 pound of ammonia per gallon final coat material by the hourly final coat usage rate. The emissions factor was developed using information provided by General Electric Ravenna Lamp Plant. Multiply hourly emission rate by maximum operating hours of 8760 hours per year and divide by 2000 pounds per ton to comply with ton per year limitation.

F. Miscellaneous Requirements

1. This permit allows the use of the coatings and cleanup materials specified by the permittee in the application for PTI number 16-1124. In conjunction with the best available technology requirements of OAC rule 3745-31-05, the butyl acetate, naptha, methanol, cellosolve acetate, aluminum oxide, mineral spirits, and toluene emission limitation(s) specified in the permit was (were) established in accordance with the Ohio EPA's "Air Toxics Policy" and is (are) based on both the coating and cleanup material formulation data and the design parameters of the emissions unit's exhaust system, as specified in the application. Compliance with the Ohio EPA's "Air Toxics Policy" was demonstrated for each pollutant based on the Screen2 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 each pollutant:

Pollutant: butyl acetate

TLV (ug/m^3): 950
Maximum Hourly Emission Rate (pounds/hour): 2.47
Predicted 1 Hour Maximum Ground-Level Concentration at the Fenceline (ug/m^3): 848.2
Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m^3): 22,619

Pollutant: naptha

TLV (ug/m^3): 1350
Maximum Hourly Emission Rate (pounds/hour): 0.99
Predicted 1 Hour Maximum Ground-Level Concentration at the Fenceline (ug/m^3): 97.64
Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m^3): 32,143

Pollutant: methanol

TLV (ug/m^3): 262
Maximum Hourly Emission Rate (pounds/hour): 3.91
Predicted 1 Hour Maximum Ground-Level Concentration at the Fenceline (ug/m^3): 25.33
Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m^3): 6,238

Pollutant: cellosolve acetate (2-ethoxyethl acetate)

TLV (ug/m^3): 27
Maximum Hourly Emission Rate (pounds/hour): 0.13
Predicted 1 Hour Maximum Ground-Level Concentration at the Fenceline (ug/m^3): 0.86
Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m^3): 624.8

Pollutant: aluminum oxide

TLV (ug/m^3): 10
Maximum Hourly Emission Rate (pounds/hour): 0.59
Predicted 1 Hour Maximum Ground-Level Concentration at the Fenceline (ug/m^3): 3.81
Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m^3): 238.09

Pollutant: mineral spirits

TLV (ug/m^3): 525
Maximum Hourly Emission Rate (pounds/hour): 1.63
Predicted 1 Hour Maximum Ground-Level Concentration at the Fenceline (ug/m^3): 53.04
Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m^3): 12,500

Pollutant: toluene

TLV (ug/m^3): 188
Maximum Hourly Emission Rate (pounds/hour): 0.01
Predicted 1 Hour Maximum Ground-Level Concentration at the Fenceline (ug/m^3): 0.31
Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m^3): 4,476

2. Any of the following changes may be deemed a "modification" to the emissions unit and, as such, prior notification to and approval from the Akron Air Pollution Control Agency is required, including the possible issuance of modifications to PTI number 16-1124 and the operating permit:

   a. any changes in the composition of the coatings or cleanup materials, or the use of new coatings or cleanup 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 specified in the above table;

   b. any change to the emissions unit 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 to the emissions unit 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. any change in the composition of the coatings or cleanup materials, or use of new coatings or cleanup materials, that would result in the emission of any of the exempted organic compounds included in the definition of "VOC" [OAC rule 3745-21-01(B)(6)]; and,

e. any change in the composition of the coatings or cleanup materials, or use of new coatings or cleanup materials, that would result in an increase in emissions of any "Hazardous Air Pollutants" (HAPs) as defined in OAC rule 3745-77-01(V).