



State of Ohio Environmental Protection Agency

**RE: FINAL PERMIT TO INSTALL
BUTLER 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: 14-05167

DATE: 7/17/2001

Shepherd Color Company
Gary Strassell
PO Box 465627
Cincinnati, OH 45246

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

HCDES



**Permit To Install
Terms and Conditions**

**Issue Date: 7/17/2001
Effective Date: 7/17/2001**

FINAL PERMIT TO INSTALL 14-05167

Application Number: 14-05167
APS Premise Number: 1409000411
Permit Fee: **\$200**
Name of Facility: Shepherd Color Company
Person to Contact: Gary Strassell
Address: PO Box 465627
Cincinnati, OH 45246

Location of proposed air contaminant source(s) [emissions unit(s)]:
**4539 Dues Drive
Cincinnati, Ohio**

Description of proposed emissions unit(s):
Pilot plant drier system for inorganic pigments.

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.

Shepherd Color Company
 PTI Application: 14-05167
 Issued: 7/17/2001

Facility ID: 1409000411

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

<u>Pollutant</u>	<u>Tons Per Year</u>
PM/PM10	0.06
NOx	3.62

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>
P045 - Pilot plant drier system	OAC rule 3745-31-05(A)(3)	0.1 lb. PM-PM10/hr.* 0.06 TPY PM-PM10 6.03 lbs. NOx/hr.* 3.62 TPY NOx
		* The hourly emission limitation(s) outlined are based upon the emission unit's Potential to Emit (PTE). Therefore, no hourly records are required to demonstrate compliance with these limits.
		The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A)(1).
	OAC rule 3745-17-07(A)(1)	See term A.2.a
	OAC rule 3745-17-11(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

8

Sheph

PTI A

Issued: 7/17/2001

Emissions Unit ID: **P045**

2. Additional Terms and Conditions

- 2.a Visible particulate emissions from any stack associated with this emissions unit shall not exceed 20% percent opacity, as a six-minute average, except as specified by rule.
- 2. b Compliance with OAC rule 3745-31-05 (A)(3) shall be demonstrated by the use of a wet scrubber and compliance with the usage and emission limitations.

B. Operational Restrictions

- 1. The maximum annual raw materials usage (metal oxides, nitrates and carbonates) shall not exceed 31.8 tons per year.

C. Monitoring and/or Recordkeeping Requirements

- 1. The permittee shall collect and record the following information each month for this emissions unit:
 - a. The total amount of raw materials (metal oxides, nitrates and carbonates) employed, in pounds.
 - b. The NO_x emission rate calculated by multiplying the raw material usage rate (a) by the emission factor of 0.11377 lb NO per pound raw material used or 0.0585 lb NO₂ per pound raw material used.
 - c. The PM/PM₁₀ emission rate calculated by multiplying the raw material usage rate (a) by the emission factor of 0.095 lb PM/PM₁₀ per pound raw material used and then by .02 to reflect the 98% efficiency of the wet scrubber.

D. Reporting Requirements

- 1. The facility shall submit annual reports to the Hamilton County Department of Environmental Services which specify the amount of raw materials employed for the previous calendar year. The reports shall be submitted by January 31 of each year..

E. Testing Requirements

- 1. Compliance with the visible particulate limitation shall be demonstrated by the methods outlined in 40 CFR Part 60, Appendix A, method 9.

2. Compliance with the usage limitation specified in term B.1. shall be based upon the recordkeeping requirements as specified in term C.1.

11

Sheph

PTI A

Issued: 7/17/2001

Emissions Unit ID: **P045**

F. Miscellaneous Requirements

- 1. None**

NEW SOURCE REVIEW FORM B

PTI Number: 14-05167 Facility ID: 1409000411

FACILITY NAME Shepherd Color Company

FACILITY DESCRIPTION Pilot plant drier system for inorganic pigments CITY/TWP Cincinnati

SIC CODE 2816 SCC CODE 3-01-035-53 EMISSIONS UNIT ID P045

EMISSIONS UNIT DESCRIPTION Pilot plant drier system

DATE INSTALLED NA

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter	attainment	0.05 lb/hr	0.01	0.1 lb/hr	0.06
PM ₁₀	attainment	0.05 lb/hr	0.01	0.1lb/hr	0.06
Sulfur Dioxide					
Organic Compounds					
Nitrogen Oxides	attainment	3.01 lbs/hr	.60	6.03 lbs/hr	3.62
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? NESHAP? PSD? OFFSET POLICY?

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination BAT is determined to be use of wet scrubber and compliance with the usage and emission limitations.

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? No

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? NA

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? _____ YES X NO

IDENTIFY THE AIR CONTAMINANTS: NA

NEW SOURCE REVIEW FORM B

PTI Number: 14-05167 Facility ID: 1409000411

FACILITY NAME Shepherd Color Company

FACILITY DESCRIPTION Pilot plant drier system for inorganic pigments CITY/TWP Cincinnati

Ohio EPA Permit to Install Information Form Please describe below any documentation which is being submitted with this recommendation (must be sent the same day). Electronic items should be submitted with the e-mail transmitting the PTI terms, and in software that CO can utilize. If mailing any hard copy, this section must be printed as a cover page. All items must be clearly labeled indicating the PTI name and number. Submit **hard copy items to Pam McGraner**, AQM&P, DAPC, Central Office, and electronic files to airpti@epa.state.oh.us

Please fill out the following. If the checkbox does not work, replace it with an 'X'

	<u>Electronic</u>	<u>Additional information File Name Convention (your PTI # plus this letter)</u>	<u>Hard Copy</u>	<u>None</u>
<u>Calculations (required)</u>	<input type="checkbox"/>	0000000c.wpd	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<u>Modeling form/results</u>	<input type="checkbox"/>	0000000s.wpd	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<u>PTI Application (complete or partial)*</u>	<input type="checkbox"/>	0000000a.wpd	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<u>BAT Study</u>	<input type="checkbox"/>	0000000b.wpd	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<u>Other/misc.</u>	<input type="checkbox"/>	0000000t.wpd	<input type="checkbox"/>	<input checked="" type="checkbox"/>

* Mandatory for netting, PSD, nonattainment NSR, 112(g), 21-07(G)(9)(g) and 21-09(U)(2)(f) - 2 complete copies.

Please complete (see comment bubble to the left for additional instructions):

NSR Discussion

Permit Review Narrative

14-05167

The Shepherd Color Company
4539 Dues Drive
West Chester, Ohio 45246
PN 1409000411

The Shepherd Color Company has ordered a Pilot Plant Drier System for manufacturing inorganic pigments. The system mixes and dries metal compounds with a .95 mmbtu natural gas fired burner. From the reactor chamber are exhausted particulate, NOx and products of combustion. These emissions are directed through a wet scrubber which is 98-99% effective in control of particulates, 90 % effective in control of NO2 but 0% effective in control of NO.

Applicable Ohio Administrative Code (OAC) rules are 3745-31-05(A)(3), 3745-15-07, 3745-17-07(A)(1) and 3745-17-11(B)(1)

This emissions unit, P045, is a small system capable of producing normally 5 pounds per hour with a maximum output of just 10 lb per hour of pigment. The Shepherd Chemical Company wants to operate this system as a pilot or a trial unit as they consider the purchase of a larger unit using the same technology. As it is a pilot unit Shepherd Color is uncertain as to the volume of emissions to expect and has submitted their PTI application based on what they consider worse case scenarios for particulates and NOx. The process will emit either nitrogen dioxide, which the scrubber controls, or nitric oxide, which the scrubber does not control. The emissions from the .95 mmbtu natural gas fired burner were determined to be de minimus and are not included with process emissions in the permit limitations.

Best Available Technology (BAT) is satisfied by use of a wet scrubber which controls particulates and NO2.

NEW SOURCE REVIEW FORM B

PTI Number: 14-05167 Facility ID: 1409000411

FACILITY NAME Shepherd Color Company

FACILITY DESCRIPTION	<u>Pilot plant drier system for inorganic pigments</u>	CITY/TWP	<u>Cincinnati</u>
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The Shepherd Color Company has provided predicted emissions based on their engineering calculations and technical input from the manufacturer of the system.

The Shepherd Color Company will have usage and emissions limits. The short term limits are based upon maximum potential usages and emissions so no hourly recordkeeping is required. Annual recordkeeping of raw material use will be used to determine compliance with these limits.

A final Permit to Install should be issued as the emissions unit will be in compliance with the applicable regulations.

Permit Fee for P045: based on PWR \$200

Prepared by: Michael Ploetz

Date prepared: June 27 , 2001

Please complete for these type permits (For PSD/NSR Permit, place mouse over this text):

Synthetic Minor Determination and/or **Netting Determination**
Permit To Install **ENTER PTI NUMBER HERE**

- A. Source Description
- B. Facility Emissions and Attainment Status
- C. Source Emissions
- D. Conclusion

PLEASE PROVIDE ADDITIONAL NOTES OR COMMENTS AS NECESSARY:

NONE

Please complete:

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

<u>Pollutant</u>	<u>Tons Per Year</u>
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NEW SOURCE REVIEW FORM B

PTI Number: 14-05167

Facility ID: 1409000411

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Pilot plant drier system for inorganic pigments	Cincinnati
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NOx	3.62