



State of Ohio Environmental Protection Agency

**RE: FINAL PERMIT TO INSTALL MODIFICATION
SANDUSKY 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: 03-13832

DATE: 3/25/2004

Synsil Products, Inc.
Dale Traupman
P.O. Box 114 659 Anderson Rd
Woodville, OH 43469

Enclosed Please find a modification to the Ohio EPA Permit To Install referenced above which will modify the terms and conditions.

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
309 South Fourth Street, Room 222
Columbus, Ohio 43215

Sincerely,

Michael W. Ahern, Supervisor
Field Operations and Permit Section
Division of Air Pollution Control

CC: USEPA

NWDO



Permit To Install
Terms and Conditions

Issue Date: 3/25/2004
Effective Date: 3/25/2004

FINAL ADMINISTRATIVE MODIFICATION OF PERMIT TO INSTALL 03-13832

Application Number: 03-13832
APS Premise Number: 0372000242
Permit Fee: **\$500**
Name of Facility: Synsil Products, Inc.
Person to Contact: Dale Traupman
Address: P.O. Box 114 659 Anderson Rd
Woodville, OH 43469

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

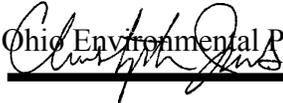
**659 Anderson Road
Woodville, Ohio**

Description of proposed emissions unit(s):

Modification to PTI 03-13832 to change monitoring/recordkeeping requirements for P025 and remove a baghouse that was never installed and adjust PE emissions to reflect this change.

The above named entity is hereby granted a modification to the permit to install described above pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this modification 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 included in the application, the above described source(s) of pollutants will be granted the necessary operating permits.

This permit is granted subject to the conditions attached hereto.


Ohio Environmental Protection Agency

Director

Synsil Products, Inc.
PTI Application: 03-13832
Modification Issued: 3/25/2004

Facility ID: 0372000242

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

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

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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 Permit To Install for the installation or modification of any other emissions unit(s) are required for any emissions unit for which a Permit To Install is required.

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

a. If the permittee is required to apply for a Title V permit pursuant to OAC Chapter

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3745-77, the permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if the proposed new or modified source(s) would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification must be obtained before the operation of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d).

- b. If the permittee is required to apply for permit(s) pursuant to OAC Chapter 3745-35, the source(s) identified in this Permit To Install is (are) permitted to operate for a period of up to one year from the date the source(s) commenced operation. 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 ninety (90) days after commencing operation of the source(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

<u>Pollutant</u>	<u>Tons Per Year</u>
PE	12.00
NOx	3.94
CO	3.33

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>
P024 - Synsil production with ribbon blender and combustion chamber.	OAC Rule 3745-31-05 (A)(3)	2.56 lbs particulate emissions (PE)/hr 11.21 tons PE/year
		0.90 lb nitrogen oxides (NOx)/hr 3.94 tons NOx/year
		0.76 lb carbon monoxide (CO)/hr 3.33 tons CO/yr
		0% Opacity as a 6-minute average
		See A.I.2.a. - A.I.2.c.
	OAC Rule 3745-17-11 (B)	See A.I.2.d.
	OAC Rule 3745-17-07 (A)	See A.I.2.d.

2. Additional Terms and Conditions

- 2.a Best Available Technology (BAT) for this emissions unit has been determined to be the use of baghouses capable of achieving an outlet concentration of 0.007 gr/dscf.
- 2.b All particulate emissions from the baghouses are assumed to be PM10 (particulate emissions less than 10 microns in size).
- 2.c The total PE limitation is comprised of three emission points, two dust collectors (BVN and BVD) and natural gas combustion emissions from the combustion chamber. The

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Synsil

PTI A

Modification Issued: 3/25/2004

Emissions Unit ID: **P024**

emission limitation of 2.56 lbs PE/hr is a summation of the emissions from all three emission points and was established in accordance with the following:

$$2.56 \text{ lbs PE/hr} = \text{BVN} + \text{BVD} + \text{NGE}$$

$$\begin{aligned} \text{BVN} &= \text{PE from baghouse BVN} \\ &= (0.007 \text{ gr/dscf})(6500 \text{ dscfm})(60 \text{ min/hr})(\text{lb}/7000\text{gr}) \\ &= 0.39 \text{ lb PE/hr} \end{aligned}$$

$$\begin{aligned} \text{BVD} &= \text{PE from baghouse BVD} \\ &= (0.007 \text{ gr/dscf})(35000 \text{ dscfm})(60 \text{ min/hr})(\text{lb}/7000\text{gr}) \\ &= 2.10 \text{ lbs PE/hr} \end{aligned}$$

$$\begin{aligned} \text{NGE} &= \text{PE from natural gas combustion from process oven} \\ &= (0.009 \text{ mmCF of NG/hr})(7.6 \text{ lbs PE/mmCF of NG}) = 0.07 \end{aligned}$$

$$\begin{aligned} 2.56 \text{ lbs PE/hr} &= 0.39 \text{ lb PE/hr} + 2.10 \text{ lb PE/hr} + 0.07 \text{ lb PE/hr} \\ 2.56 \text{ lb/hr (8760 hrs/year)} &(1 \text{ ton}/2000 \text{ lbs}) = 11.21 \text{ tons/year} \end{aligned}$$

- 2.d** The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC Rule 3745-31-05(A)(3).

B. Operational Restrictions

1. The pressure drop across the dust collectors (BVN and BVD) shall be maintained within the range of 1 - 4 inches of water while the emissions unit is in operation.
2. The permittee shall burn only natural gas in the oven for this emissions unit.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall properly install, operate, and maintain equipment to monitor the pressure drops across the dust collectors (BVN and BVD). The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual. The permittee shall record the pressure drops across the dust collectors (BVN and BVD) for this emissions unit on a daily basis.
2. Each day the permittee burns a fuel other than natural gas in the oven of this emissions unit, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

D. Reporting Requirements

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1. The permittee shall submit pressure drop deviation (excursion) reports that identify all periods of time during which the pressure drop across the dust collectors (BVN and BVD) did not comply with the allowable range specified above.
2. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in the oven of this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

E. Testing Requirements

1. Compliance with the emission limitation(s) specified in section A.I. of the terms and conditions of this permit shall be determined in accordance with the following method(s):
 - a. Emission limitation:
2.56 lbs PE/hr
11.21 tons PE/yr

Applicable Compliance Method:

The permittee may demonstrate compliance with this emissions unit's hourly limitation by summing the emissions from the three emission points, two dust collectors (BVN and BVD) and natural gas combustion emissions from the combustion chamber. Maximum grain loadings and volumetric airflows were used to calculate emissions from the baghouses (see A.I.2.c.). The appropriate emission factor from AP-42, Chapter 1.4.5, (7/98) of 7.6 lbs PE/mmCF of natural gas and the maximum firing rate of 0.009 mmCF/hr were used to calculate emissions from the combustion chamber (see A.I.2.c.). If required, compliance with the particulate emission limitation shall be determined in accordance with the test methods and procedures in 40 CFR Part 60, Appendix A - Method 5.

The annual limitation was developed by multiplying the hourly limitation by the maximum operating schedule of 8760 hrs/yr, and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- b. Emission Limitation:
0% opacity as a 6-minute average

Applicable Compliance Method:

Compliance with the opacity restriction shall be determined by using U.S. EPA Method 9. Method 9 is located in 40 CFR, Part 60, Appendix A.

- c. Emission Limitation:
0.90 lb NO_x/hr
3.94 tons NO_x/yr

Applicable Compliance Method:

The permittee may demonstrate compliance with the hourly limitation by multiplying the appropriate emission factor from AP-42, Chapter 1.4.5, (7/98) of 100 lbs NO_x/mmCF of natural gas by a maximum firing rate of 0.009 mmCF/hr. If required, the permittee shall demonstrate compliance by testing in accordance with Method 7, 40 CFR, Part 60, Appendix A.

The annual limitation was developed by multiplying the hourly limitation by the maximum operating schedule of 8760 hrs/yr, and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitations, compliance will also be shown with the annual limitation.

- d. Emission Limitation:
0.76 lb CO/hr
3.33 tons CO/yr

Applicable Compliance Method:

The permittee may demonstrate compliance with the hourly limitation by multiplying the appropriate emission factor from AP-42, Chapter 1.4.5, (7/98) of 84 lbs CO/mmCF of natural gas by a maximum firing rate of 0.009 mmCF/hr. If required, the permittee shall demonstrate compliance by testing in accordance with Method 7, 40 CFR, Part 60, Appendix A.

The annual limitation was developed by multiplying the hourly limitation by the maximum operating schedule of 8760 hrs/yr, and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitations, compliance will also be shown with the annual limitation.

F. Miscellaneous Requirements

None

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>
P025 - Raw material receiving and storage, pneumatic truck unloading, and 3 storage silos modification to PTI #03-13832 issued 9/24/02 revise emission limitation as a result of the removal of one baghouse and to change monitoring/record keeping requirements	OAC Rule 3745-31-05 (A)(3)	0.18 lb particulate emissions (PE)/hr 0.79 tons PE/year
		0% Opacity as a 6-minute average
		See A.I.2.a. - A.I.2.c.
	OAC Rule 3745-17-11 (B)	See A.I.2.d.
	OAC Rule 3745-17-07 (A)	See A.I.2.d.

2. Additional Terms and Conditions

- 2.a Best Available Technology (BAT) for this emissions unit has been determined to be the use of baghouses capable of achieving an outlet concentration of 0.007 gr/dscf.
- 2.b All particulate emissions from the baghouses are assumed to be PM10 (particulate emissions less than 10 microns in size).
- 2.c The total PE limitation is comprised of emissions from four baghouses (BVL, BVF, and BVS). The emission limitation of 0.18 lb PE/hr is a summation of the emissions from all four emission points and was established in accordance with the following:

$$0.18 \text{ lb PE/hr} = \text{BVL} + \text{BVF} + \text{BVS}$$

$$\text{BVL} = \text{PE from baghouse BVL}$$

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PTI Application: 02 12020

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Facility ID: 0372000242

Emissions Unit ID: **P025**

$$\begin{aligned} &= (0.007 \text{ gr/dscf})(1000 \text{ dscfm})(60 \text{ min/hr})(\text{lb}/7000\text{gr}) \\ &= 0.06 \text{ lb PE/hr} \end{aligned}$$

$$\begin{aligned} \text{BVF} &= \text{PE from baghouse BVF} \\ &= (0.007 \text{ gr/dscf})(1000 \text{ dscfm})(60 \text{ min/hr})(\text{lb}/7000\text{gr}) \\ &= 0.06 \text{ lb PE/hr} \end{aligned}$$

$$\begin{aligned} \text{BVS} &= \text{PE from baghouse BVS} \\ &= (0.007 \text{ gr/dscf})(1000 \text{ dscfm})(60 \text{ min/hr})(\text{lb}/7000\text{gr}) \\ &= 0.06 \text{ lb PE/hr} \end{aligned}$$

$$\begin{aligned} 0.18 \text{ lb PE/hr} &= 0.06 \text{ lb PE/hr} + 0.06 \text{ lb PE/hr} + 0.06 \text{ lb PE/hr} \\ 0.18 \text{ lb/hr (8760 hrs/year)} &(1 \text{ ton}/2000 \text{ lbs}) = 0.79 \text{ tons/year} \end{aligned}$$

B. Operational Restrictions

None

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the baghouse stacks serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
 - a. the color of the emissions;
 - b. the total duration of any visible emission incident; and
 - c. any corrective actions taken to eliminate the visible emissions.

D. Reporting Requirements

1. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

E. Testing Requirements

1. Compliance with the emission limitation(s) specified in section A.I. of the terms and conditions of this permit shall be determined in accordance with the following method(s):

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Synsil

PTI A

Modification Issued: 3/25/2004

Emissions Unit ID: **P025**

- a. Emission limitation:
0.18 lb PE/hr
0.79 tons PE/yr

Synsil**PTI A****Modification Issued: 3/25/2004**Emissions Unit ID: **P025**Applicable Compliance Method:

The permittee may demonstrate compliance with the hourly limitation by multiplying the maximum grain loadings by the maximum volumetric air flows for the baghouses (BVL, BVF and BVS) controlling this emissions unit, and using the appropriate conversion factors of 7000 grains/lb, 1 scf/1 acf, 60 minutes/hr (see A.I.2.c.) then summing the emissions from the baghouses. If required, compliance with the particulate emission limitation shall be determined in accordance with the test methods and procedures in 40 CFR Part 60, Appendix A - Method 5.

The annual limitation was developed by multiplying the hourly limitation by the maximum operating schedule of 8760 hrs/yr, and dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly limitation, compliance will also be shown with the annual limitation.

- b. Emission Limitation:
0% opacity as a 6-minute average

Applicable Compliance Method:

Compliance with the opacity restriction shall be determined by using U.S. EPA Method 9. Method 9 can be located in 40 CFR, Part 60, Appendix A.

F. Miscellaneous Requirements

1. The terms and conditions listed in this permit to install shall supercede all the air pollution control requirements for this emissions unit P025 contained in permit to install PTI #03-13832 as issued on September 24,2002.