



State of Ohio Environmental Protection Agency

**RE: FINAL PERMIT TO INSTALL
SUMMIT COUNTY**

CERTIFIED MAIL

Street Address:

50 West Town Street, Suite 700

Lazarus Gov. Center TELE: (614) 644-3020 FAX: (614) 644-2329

Mailing Address:

Lazarus Gov. Center
P.O. Box 1049

Application No: 16-02501

Fac ID: 1677140020

DATE: 8/9/2007

SNS Nano Fiber Technology Co LLC
Laura Frazier
1505 Corporate Woods Pkwy
Uniontown, OH 44385

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 of the Director is final and may be appealed to the Environmental Review Appeals Commission 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. The appeal must be filed with the Commission within thirty (30) days after notice of the Director's action. The appeal must be accompanied by a filing fee of \$70.00 which the Commission, in its discretion, may reduce if by affidavit you demonstrate that payment of the full amount of the fee would cause extreme hardship. Notice of the filing of the appeal shall be filed with the Director within three (3) days of filing with the Commission. Ohio EPA requests that a copy of the appeal be served upon the Ohio Attorney General's Office, Environmental Enforcement Section. 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, OH 43215

Sincerely,

Michael W. Ahern, Manager
Permit Issuance and Data Management Section
Division of Air Pollution Control

CC: USEPA

ARAQMD



**Permit To Install
Terms and Conditions**

**Issue Date: 8/9/2007
Effective Date: 8/9/2007**

FINAL PERMIT TO INSTALL 16-02501

Application Number: 16-02501
Facility ID: 1677140020
Permit Fee: **\$200**
Name of Facility: SNS Nano Fiber Technology Co LLC
Person to Contact: Laura Frazier
Address: 1505 Corporate Woods Pkwy
Uniontown, OH 44385

Location of proposed air contaminant source(s) [emissions unit(s)]:
**1505 Corporate Woods Pkwy
Uniontown, Ohio**

Description of proposed emissions unit(s):
Three (3) Applicators Transferring Fibers onto Carrier Film, Line 1.

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

Chris Korleski
Director

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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 (i.e., postmarked) quarterly 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

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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)

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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 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.

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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 ninety (90) days after commencing operation of the emissions unit(s) covered by this permit.

14. Construction Compliance Certification

The applicant shall provide Ohio EPA with a written certification (see enclosed form) that the facility has been constructed in accordance with the Permit to Install application and the terms and conditions of the Permit to Install. The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

15. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable Permit to Install fees within 30 days after the issuance of this Permit to Install.

B. Permit to Install Summary of Allowable Emissions

The following information summarizes the total allowable emissions, by pollutant, based on the individual allowable emissions of each air contaminant source identified in this permit.

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

<u>Pollutant</u>	<u>Tons Per Year</u>
VOC	20

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PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**A. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

Operations, Property, and/or Equipment - (P001) - Line 1 - Applicators transfer a proprietary mixture of solids and liquid organic material (exclusively ethanol, as a carrier solvent) to carrier film, e.g., paper, on a continuous conveyor. The ethanol evaporates during the process to produce dry fibrous material used as a man-made fabric for specialty applications. OAC rule 3745-21-09 does not apply since this is not a coating process or any other process listed in the rule. OAC rule 3745-21-07(G)(1) does not apply since the liquid organic material or substance containing liquid organic material used in this process does not come into contact with flame, nor is it baked, heat-cured, or heat-polymerized, in the presence of oxygen. Per OAC rule 3745-21-01(C)(5), ethanol is not a photochemically reactive material (PRM). Therefore, per OAC rule 3745-21-07(G)(9), the provisions of OAC rule 3745-21-07(G) do not apply to this process. OAC rule 3745-114 does not apply since ethanol is not listed in the rule. Therefore, the Ohio EPA "Air Toxic Policy" is satisfied without the requirement to perform air dispersion modeling. The best available technology (BAT) requirements of OAC rule 3745-31-05 apply, but do not include add-on emissions control since the lowest-cost effective control is estimated at \$24,300 per ton of VOC removed. BAT includes company-requested emissions limits, material usage restrictions, and the prohibition of the use of PRM. This facility is a natural minor source of volatile organic compounds (VOC). Therefore, emission and production restrictions imposed do not need to be federally enforceable. This will allow the permit to be processed as a direct final action.

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	<p>VOC emissions from this emissions unit shall not exceed 12.5 pounds per hour and 20 tons per year.</p> <p>The permittee shall not use any photochemically reactive material, as defined by OAC rule 3745-21-01(C)(5), in this emissions unit.</p> <p>The requirements of OAC rule 3745-31-05(A)(3) also include compliance with the requirements of OAC rule 3745-21-07(G)(9).</p>
OAC rule 3745-21-07(G)(9)	Exempt from the provisions of OAC rule 3745-21-07(G).

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2. Additional Terms and Conditions

- 2.a** The hourly VOC emissions limit established pursuant to OAC rule 3745-31-05(A)(3) reflects the potential to emit of this emissions unit. Therefore, no monitoring, record keeping, or reporting requirements are necessary to ensure ongoing compliance with this emissions limit.

However, the permittee shall apply for and, if required, obtain a final permit to install prior to equipment replacement, or any proposed modification of equipment, materials processed, or production procedures, or any other change that would increase the potential emissions of any air pollutant.

- 2.b** As a way to reduce air emissions, all liquid organic materials shall be properly identified and held in tightly closed containers at all times when not in use or waiting for appropriate off-site disposal.

B. Operational Restrictions

- 1 The maximum annual VOC material usage* for this emissions unit shall not exceed 20 tons. This restriction was a voluntary request by the facility as a BAT condition, while satisfying production needs, and is not necessary to avoid any federal new source review or Title V program requirements.

*Annual VOC material usage rate (input) is equivalent to an annual VOC emissions rate, and is based upon all the solvent in the materials employed or applied being emitted.

C. Monitoring and/or Recordkeeping Requirements

1. On any day the permittee employs any photochemically reactive material(s) in this emissions unit, as defined in OAC rule 3745-21-01(C)(5), the following information shall be collected and recorded:
- a. the company identification of each liquid organic material, excluding non photochemically reactive cleanup materials, employed in the emissions unit during each such day;
 - b. the total quantity of liquid organic material(s) emitted, in pounds, excluding non photochemically reactive cleanup materials, from the emissions unit during each such

Emissions Unit ID: P001

day;

- c. the actual number of hours of operation of the emissions unit during each such day; and
 - d. the average hourly rate of liquid organic material(s) emitted, in pounds/hour, excluding non photochemically reactive cleanup materials, from the emissions unit during each such day, i.e., $d = b/c$.
2. The permittee shall collect and record the total annual VOC material usage, in tons, and VOC emissions, in tons, for this emissions unit. Since all solvent used is assumed emitted, VOC emissions rate equals VOC material usage rate.

D. Reporting Requirements

1. The permittee shall submit quarterly deviation (excursion) reports which identify the days during which photochemically reactive materials were employed in the emissions unit. Each report shall identify the cause for the use of the photochemically reactive material(s) and the estimated total quantity of material(s) emitted in pounds, hourly and daily, during each such day.
2. The permittee shall submit quarterly deviation (excursion) reports which identify all exceedances of the emissions unit annual restricted allowable VOC material usage and VOC emissions rates.
3. The quarterly deviation (excursion) reports shall be submitted in accordance with the requirements specified in Part I - General Terms and Conditions of this permit under section (A)(1).

E. Testing Requirements

1. Compliance with the emission limitations in Section A.1 of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emissions Limitation: VOC emissions from this emissions unit shall not exceed 12.5 pounds per hour.

Applicable Compliance Method: The above emissions limitation was established based upon the following company-specified process/emissions data:

$$V = (A * f * T)/G$$

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Where:

V = 12.5 pounds per hour of VOC [potential to emit];
A = 125.7 grams per minute [mixture transfer to carrier film];
f = 0.75 [weight fraction of ethanol solvent];
G = 453.6 grams per pound [conversion factor]; and
T = 60 minutes per hour [conversion factor].

- b. Emissions Limitation: VOC emissions from this emissions unit shall not exceed 20 tons per year.

Applicable Compliance Method: Compliance with the above emissions limitation shall be based upon the record keeping requirements of C.2 above.

F. Miscellaneous Requirements

1. Modeling to demonstrate compliance with the Ohio EPA's "Air Toxic Policy" was not necessary because the emissions unit will not emit any toxic air contaminant listed in OAC rule 3745-114-01. OAC Chapter 3745-31 requires a permittee to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31-01. The permittee is hereby advised that a new permit to install application would be required for an emissions unit if changes in the composition of the materials or use of new materials would cause the emissions of any pollutant listed in OAC rule 3745-114-01.

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Emissions Unit ID: **P001**

SIC CODE 2824 SCC CODE 3-01-024-99 EMISSIONS UNIT ID P001

EMISSIONS UNIT DESCRIPTION Line 1

DATE INSTALLED after pti issued

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					
PM ₁₀					
Sulfur Dioxide					
Volatile Organic Compounds				12.5 lbs/hr	20
Nitrogen Oxides					
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?
no use of photochemically reactive materials; annual restrictions on material usage and emissions.

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? NO
 OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$ _____

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 _____ NO

IDENTIFY THE AIR CONTAMINANTS: _____