

Synthetic Minor Determination and/or  Netting Determination

Permit To Install 06-07977

**A. Source Description**

This temporary emissions unit/facility will consist of one emissions unit for the purpose of manufacturing and installing two fiberglass reinforced plastic (FRP) chimney liners and installation of internal FRP components in jet bubbling reactors (JBRs) and stack breechings for Unit 1 at American Electric Power's (AEP) Cardinal Generating Station located in Brilliant, Ohio. The temporary emissions unit/facility will be a major source of styrene and must therefore comply with the reinforced plastic composites maximum achievable control technology standard (40 CFR Part 63 Subpart WWWW).

**B. Facility Emissions and Attainment Status**

Annual emissions from this emissions unit/facility will be limited to 45 tons per year. Jefferson County is Non-Attainment for Ozone and PM2.5.

**C. Source Emissions**

Annual emissions from this emissions unit/facility will be limited to 45 tons per year and will be tracked through the rolling, 12-month summation of the VOC emissions.

**D. Conclusion**

This temporary emissions unit/facility is a separate stationary source from the AEP Cardinal coal fired power plant because the two facilities have different major group SIC codes. In addition, aside from a contract to build and install stack liners, breechings, and JBR internals, there is no business relationship. There is no sharing of ownership, management, personnel, or equipment, and neither company can direct the activities of the other. The Ershigs AEP Cardinal Stack Liner Project is not a support facility to the AEP Cardinal coal fired power plant because it does not convey, store, or otherwise assist in the production of the principal products or raw materials of the AEP Cardinal Station. After the project is completed the Ershigs operation will be removed. A review of all applicable requirements was conducted and the controlling limitations and monitoring requirements are contained in this permit. PSD is not triggered for the proposed project because of the proposed voluntary emissions limits.



State of Ohio Environmental Protection Agency

**RE: DRAFT PERMIT TO INSTALL  
JEFFERSON COUNTY**

**CERTIFIED MAIL**

Street Address:

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

Mailing Address:  
Lazarus Gov.  
Center

**Application No: 06-07977**

**Fac ID: 0641050258**

**DATE: 2/23/2006**

Ershigs AEP Cardinal Stack Liner  
Bruce Smith  
PO Box 1707 742 Marine Drive  
Bellingham, WA 98227

You are hereby notified that the Ohio Environmental Protection Agency has made a draft action recommending that the Director issue a Permit to Install for the air contaminant source(s) [emissions unit(s)] shown on the enclosed draft permit. This draft action is not an authorization to begin construction or modification of your emissions unit(s). The purpose of this draft is to solicit public comments on the proposed installation. A public notice concerning the draft permit will appear in the Ohio EPA Weekly Review and the newspaper in the county where the facility will be located. Public comments will be accepted by the field office within 30 days of the date of publication in the newspaper. Any comments you have on the draft permit should be directed to the appropriate field office within the comment period. A copy of your comments should also be mailed to Robert Hodanbosi, Division of Air Pollution Control, Ohio EPA, P.O. Box 1049, Columbus, OH, 43266-0149.

A Permit to Install may be issued in proposed or final form based on the draft action, any written public comments received within 30 days of the public notice, or record of a public meeting if one is held. You will be notified in writing of a scheduled public meeting. Upon issuance of a final Permit to Install a fee of **\$600** will be due. Please do not submit any payment now.

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. If you have any questions about this draft permit, please contact the field office where you submitted your application, or Mike Ahern, Field Operations & Permit Section at (614) 644-3631.

Sincerely,

*Michael W. Ahern*

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

CC: USEPA

SEDO

Brooke-Hancock-Jefferson Area Trans. Study

WV

PA



**JEFFERSON  
COUNTY**

**PUBLIC NOTICE**

**ISSUANCE OF DRAFT PERMIT TO INSTALL 06-07977 FOR AN AIR CONTAMINANT SOURCE FOR  
Ershigs AEP Cardinal Stack Liner**

On 2/23/2006 the Director of the Ohio Environmental Protection Agency issued a draft action of a Permit To Install an air contaminant source for **Ershigs AEP Cardinal Stack Liner**, located at **306 County Road 7 East, Brilliant**, Ohio.

Installation of the air contaminant source identified below may proceed upon final issuance of Permit To Install 06-07977:

**FRP Layup Process.**

Comments concerning this draft action, or a request for a public meeting, must be sent in writing to the address identified below no later than thirty (30) days from the date this notice is published. All inquiries concerning this draft action may be directed to the contact identified below.

Bruce Weinberg, Ohio EPA, Southeast District Office, 2195 Front Street, Logan, OH 43138 [(740)385-8501]



**Permit To Install  
Terms and Conditions**

**Issue Date: To be entered upon final issuance  
Effective Date: To be entered upon final issuance**

**DRAFT PERMIT TO INSTALL 06-07977**

Application Number: 06-07977  
Facility ID: 0641050258  
Permit Fee: **To be entered upon final issuance**  
Name of Facility: Ershigs AEP Cardinal Stack Liner  
Person to Contact: Bruce Smith  
Address: PO Box 1707 742 Marine Drive  
Bellingham, WA 98227

Location of proposed air contaminant source(s) [emissions unit(s)]:  
**306 County Road 7 East  
Brilliant, Ohio**

Description of proposed emissions unit(s):  
**FRP Layup Process.**

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

Ershigs AEP Cardinal Stack Liner  
PTI Application: 06-07977  
Issued: To be entered upon final issuance  
Part I - GENERAL TERMS AND CONDITIONS

Facility ID: 0641050258

**A. State and Federally Enforceable Permit-To-Install General Terms and Conditions**

**1. Monitoring and Related Recordkeeping and Reporting Requirements**

- a. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
  - i. The date, place (as defined in the permit), and time of sampling or measurements.
  - ii. The date(s) analyses were performed.
  - iii. The company or entity that performed the analyses.
  - iv. The analytical techniques or methods used.
  - v. The results of such analyses.
  - vi. The operating conditions existing at the time of sampling or measurement.
- b. 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.
- c. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:
  - i. Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
  - ii. Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the appropriate Ohio EPA District Office or local air agency. The written

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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. See B.9 below if no deviations occurred during the quarter.

- iii. Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted (i.e., postmarked) to the appropriate Ohio EPA District Office or local air agency every six months, by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.
  - iv. If this permit is for an emissions unit located at a Title V facility, then each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.
- d. The permittee shall report actual emissions pursuant to OAC Chapter 3745-78 for the purpose of collecting Air Pollution Control Fees.

## 2. 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, i.e., upset, 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. (The definition of an upset condition shall be the same as that used in OAC rule 3745-15-06(B)(1) for a malfunction.) The verbal and written reports shall be submitted pursuant to 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 emission unit(s) that is (are) served by such control system(s).

## 3. Risk Management Plans

If the permittee is required to develop and register a risk management plan pursuant to section 112(r) of the Clean Air Act, as amended, 42 U.S.C. 7401 et seq. ("Act"), the permittee shall comply with the requirement to register such a plan.

## 4. Title IV Provisions

If the permittee is subject to the requirements of 40 CFR Part 72 concerning acid rain,

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the permittee shall ensure that any affected emissions unit complies with those requirements. Emissions exceeding any allowances that are lawfully held under Title IV of the Act, or any regulations adopted thereunder, are prohibited.

## **5. Severability Clause**

A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.

## **6. General Requirements**

- a. The permittee must comply with all terms and conditions of this permit. Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and re-issuance, or modification
- b. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.
- c. This permit may be modified, revoked, or revoked and reissued, for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.
- d. This permit does not convey any property rights of any sort, or any exclusive privilege.
- e. 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 or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

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**7. 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 any permit-to-install. The permittee shall pay all applicable permit-to-operate fees within thirty days of the issuance of the invoice.

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**8. Federal and State Enforceability**

Only those terms and conditions designated in this permit as federally enforceable, that are required under the Act, or any its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA and the State and by citizens (to the extent allowed by section 304 of the Act) under the Act. All other terms and conditions of this permit shall not be federally enforceable and shall be enforceable under State law only.

**9. Compliance Requirements**

- a. Any document (including reports) required to be submitted and required by a federally applicable requirement in this permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.
- b. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
  - i. At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
  - ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.
  - iii. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
  - iv. As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- c. The permittee shall submit progress reports to the appropriate Ohio EPA District Office or local air agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually, or more frequently if specified in the applicable requirement or by the Director of

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the Ohio EPA. Progress reports shall contain the following:

- i. Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
- ii. An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

## **10. Permit-To-Operate Application**

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

## **11. 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.

## **12. 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.

## **13. Permit-To-Install**

A permit-to-install must be obtained pursuant to OAC Chapter 3745-31 prior to "installation" of "any air contaminant source" as defined in OAC rule 3745-31-01, or "modification", as defined in OAC rule 3745-31-01, of any emissions unit included in

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this permit.**

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**B. State Only Enforceable Permit-To-Install General Terms and Conditions**

**1. Compliance Requirements**

The emissions unit(s) identified in this Permit 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 of state-only enforceable 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 state-only required 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. 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.

**4. Authorization To Install or Modify**

If applicable, authorization to install or modify any new or existing emissions unit included in this permit shall terminate within eighteen months of the effective date of the permit if the owner or operator has not undertaken a continuing program of

**Ershigs AEP Cardinal Stack Liner****Facility ID: 0641050258****PTI Application: 06-07977****Issued: To be entered upon final issuance**

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.

**5. Construction of New Sources(s)**

This permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. This permit does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the application and terms and conditions of this permit. 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 this permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Issuance of this permit 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.

**6. 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.

**7. 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).

**8. Construction Compliance Certification**

If applicable, the applicant shall provide Ohio EPA with a written certification (see enclosed form if applicable) 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.

**9. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations (See Section A of This Permit)**

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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., postmarked), by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

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**C. 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	45.0

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**Part II - FACILITY SPECIFIC TERMS AND CONDITIONS**

**A. State and Federally Enforceable Permit To Install Facility Specific Terms and Conditions**

- 1. Add 40 CFR Part 63 Subpart A Here**
- 2. Add 40 CFR Part 63 Subpart WWWW Here**

**B. State Only Enforceable Permit To Install Facility Specific Terms and Conditions**

None.

**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

**A. State and Federally Enforceable Section**

**I. 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>
P001 - Winding Station consisting of one winding machine, one non-atomized chopper gun, one 4.0 square foot resin bath and two 250 gallon resin day tanks	OAC rule 3745-31-05(A)(3)	Volatile Organic Compound(VOC) emissions from resin use shall not exceed 76.5 pounds per hour.  VOC emissions from the cleanup material shall not exceed 5.1 pounds per hour.  See Section A.I.2.a below.  The requirements of this rule also includes compliance with the requirements of 40 CFR Part 63 Subpart WWWW.
	OAC rule 3745-31-05(C)	See section A.I.2.b below.
	OAC rule 3745-21-07(G)(9)(g)	In accordance with OAC rule 3745-21-07(G)(9)(g), Best Available Technology (BAT) for this emissions unit, as established pursuant to OAC rule 3745-31-05, has been determined to be less stringent than, or inconsistent with, the requirements of OAC rule 3745-21-07(G).
	40 CFR Part 63 Subpart WWWW	See Section A.I.2.c and A.II.1-6 below
		See Facility Specific Terms and

Ershig  
PTI A

Emissions Unit ID: P001

**Issued: To be entered upon final issuance**

Conditions, Part II. Section |

A. 1.

## **2. Additional Terms and Conditions**

- 2.a** These hourly emissions limitations represent the maximum production capacity of this emissions unit; therefore, only monthly record keeping that demonstrates compliance with 40 CFR Part 63 Subpart WWWW (Subpart WWWW), Table 3 limits is necessary to demonstrate compliance with the pounds per hour limitation.
- 2.b** The VOC emissions from this emissions unit P001, including cleanup material, shall not exceed 45.0 tons/yr, based upon a rolling, 12-month summation of VOC emissions.
- 2.c** Since BAT for P001 includes compliance with Subpart WWWW, Subpart WWWW has control limitations for organic HAPs, and Organic HAPs are estimated to be 94% of the organic compound emissions, the requirements of Subpart WWWW are sufficient to compare to the requirements of OAC rule 3745-21-07(G)(2).

## **II. Operational Restrictions**

- 1. The maximum styrene monomer weight percent, as applied, for each resin employed in this emissions unit shall not exceed forty-one percent (41%).
- 2. The VOC content of the cleanup material employed shall not exceed 9.1 pounds VOC per gallon, as applied.
- 3. The permittee shall utilize non-atomized application equipment for mechanical and filament winding resin application in this emissions unit.
- 4. The permittee shall only employ vapor suppressant resins.
- 5. The permittee shall comply with each of the following during cleanup operations:
  - a. Solvent-laden applicators (e.g., rags) shall be placed in closed containers immediately after use, and the containers must be kept closed at all times except when depositing or removing materials from the container.
  - b. Solvent cleanup basins shall be closed at all times when not in use.

**Ershig  
PTI A**

Emissions Unit ID: P001

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- c. Solvent containers for soaking tools and applicators must be kept closed at all times except when depositing or removing the items from the containers.
  - d. All cleanup solvents shall be stored, transported, and disposed of in closed containers.
  - e. All cleanup solvents shall be limited to non-photochemically reactive materials.
6. The volatile organic materials stored and used in emissions unit P001, including cleanup material, shall not cause combined VOC emissions to exceed 45.0 tons per year, based upon a rolling, 12-month summation of VOC emissions. To ensure enforceability during the first 12 calendar months of operation under the provisions of this permit, the permittee shall not exceed the emission limits specified in the following table:

<u>Month(s)</u>	<u>Maximum Allowable Combined VOC Emission Rates(tons)</u>
1	10.00
1-2	20.00
1-3	30.00
1-4	40.00
1-5	45.00
1-6	45.00
1-7	45.00
1-8	45.00
1-9	45.00
1-10	45.00
1-11	45.00
1-12	45.00

After the first 12 calendar months following issuance of this permit, compliance with the annual VOC emission rates from P001 shall be based upon a rolling, 12-month summation of the tons of VOC emissions. These combined VOC emission shall be determined in accordance with Section A.III.3. of these terms and conditions.

**III. Monitoring and/or Recordkeeping Requirements**

1. The permittee shall maintain monthly records of the following information for resins employed in emissions unit P001:

Emissions Unit ID: P001

- a. The name and identification of each resin;
- b. Documentation that each resin employed was a vapor suppressant resin;
- c. The mass of each resin employed ( $M_r$ ), in tons;
- d. The weight fraction of styrene monomer (in percent) for each resin, as applied;
- e. Calculation of the styrene emissions ( $E_r$ ) from resin usage for each resin application technique using the following equation:

$$E_r = \sum_{i=1}^n M_{r,i} UEF$$

where

$n$  = number of resins employed

$UEF$  = United Emission Factor for open molding of composites based on the styrene content of the resin and the resin application method taken from the following table:

**Table 1. Unified Emission Factors for Open Molding of Composites, ACMA, July 23, 2001**

Styrene Content in resin, %	35	36	37	38	39	40	41
<b>Manual</b>	94.4	100.1	105.8	111.6	117.3	123	128.7
<b>Manual w/ Vapor Suppressed Resin (VSR)</b>	<b>Manual emission factor</b> [listed above] x (1 - (0.50 x specific VSR reduction factor for each resin/suppressant formulation))						
<b>Mechanical Non-Atomized</b>	76.9	80	83.2	86.3	89.5	92.6	95.7
<b>Mechanical Non-Atomized with VSR</b>	<b>Mechanical Non-Atomized emission factor</b> [listed above] x (1 - (0.45 x specific VSR reduction factor for each resin/suppressant formulation))						
<b>Filament Application with VSR</b>	86.2	89.8	93.3	96.9	100.5	104.1	107.6

- 2. The permittee shall maintain monthly records of the following information for cleanup materials employed in emission unit P001:
  - a. The name and identification for each cleanup material employed;
  - b. The volume of each cleanup material employed ( $V_s$ ), in gallons;
  - c. The VOC content of each cleanup material employed ( $C_s$ ), in pounds per gallon;
  - d. Calculation of the VOC emissions from cleanup material usage ( $E_s$ ), using the following equation:

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$$E_s = \sum_{i=1}^n V_s C_s$$

where

$n$  = number of cleanup materials employed;

- e. The permittee may calculate VOC emissions from cleanup materials in accordance with the following formula if waste cleanup materials are sent off site for disposal/reclamation:

VOC emissions = (total gallons of cleanup material used) x (solvent density of cleanup material) - (total gallons of cleanup material sent off site [minus solids]) x (solvent density of cleanup material).

3. The permittee shall maintain monthly records of the following information for emissions unit P001:
  - a. During the first 12 calendar months of operation following the issuance of this permit, the permittee shall record the cumulative VOC emission rates from cleanup material and resin for each calendar month. These calculations shall be performed in accordance with section A.V.1.c of these terms and conditions.
  - b. Beginning after the first 12 calendar months of operation following the issuance of this permit, the rolling, 12-month summation of the VOC emission rates from cleanup material and resin. These calculations shall be performed in accordance with section A.V.1.c of these terms and conditions.
4. The permittee shall maintain documentation that non-atomized application equipment was employed for mechanical and filament winding resin application at the facility.

#### **IV. Reporting Requirements**

1. The permittee shall submit deviation (excursion) reports which identify the number of pounds of noncomplying resin (i.e., weight fraction of styrene monomer in excess of 41%) employed.
2. The permittee shall submit deviation (excursion) reports if a cleanup material with a VOC content in excess of 9.1 pounds per gallon is used.
3. The permittee shall submit deviation (excursion) reports which identify any use of

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atomized spray equipment for mechanical and filament winding resin application.

4. The permittee shall submit deviation (excursion) reports which identify any use of resins that did not meet the definition of vapor suppressant resin.
5. The permittee shall submit deviation (excursion) reports which identify all exceedances of the combined rolling, 12-month VOC emissions limitation of 45.0tons/yr from emissions unit P001.
6. These deviation reports shall be submitted in accordance with the reporting requirements of the General Terms and Conditions of this permit.

#### **V. Testing Requirements**

1. Compliance with the allowable emission limitations in this permit shall be determined according to the following methods:
  - a. Emissions Limitation:

      Volatile Organic Compound(VOC) emissions from resin use shall not exceed 76.5 pounds per hour.

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Applicable Compliance Method:

VOC emissions from resin usage ( $E_r$ ) shall be calculated by using data from Section A.III.1 and the following equation :

$$E_r = \left( \frac{M_r}{2000} UEF \right)_{Manual} + \left( \frac{M_r}{2000} UEF \right)_{Filament} + \left( \frac{M_r}{2000} UEF \right)_{Mechanical}$$

where

$M_r$  = maximum hourly resin usage of 400 lb/hr for mechanical, 600 lb/hr for filament, and 45 lb/hr for manual application.

$UEF$  = 112 lbs/ton for non-atomized mechanical application with vapor suppression, 123 lb/ton for manual application with vapor suppression, and 171 lb/ton for filament application with vapor suppression (taken from Table 3 of Subpart WWWW)

$E_r = (45 \text{ lb resin/hr} / 2000 \text{ lb/ton} \times 123 \text{ lb VOC/ton resin}) + (400 \text{ lb resin/hr} / 2000 \text{ lb/ton} \times 112 \text{ lb VOC/ton resin}) + (600 \text{ lb resin/hr} / 2000 \text{ lb/ton} \times 171 \text{ lb VOC/ton resin})$

$E_r = 76.5 \text{ lb VOC/hr}$

Therefore, compliance with the VOC pounds per hour limitation shall be demonstrated through the compliance demonstration with Subpart WWWW, Table 3 limits in Part II.

b. Emission Limitation:

VOC emissions from the cleanup material shall not exceed 5.1 pounds per hour.

Applicable Compliance Method:

VOC emissions from cleanup material usage ( $E_s$ ) shall be calculated by using data from Section A.III.2 and the following equation:

$$E_s = V_s C_s (0.4)$$

where

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$V_s$  = the maximum hourly volume of cleanup material employed = 1.4 gallons per hour

$C_s$  = the maximum VOC content of cleanup material employed = 9.1 pounds VOC per gallon

0.4 = Based on the conservative assumption that only 40% of the solvent used is emitted to atmosphere

c. Emission Limitation:

The combined VOC emissions from emissions unit P001, including cleanup material, shall not exceed 45.0 tons/yr, based upon a rolling, 12-month summation of VOC emissions.

Applicable Compliance Method:

Compliance shall be demonstrated by summation of the annual emissions from emissions unit P001. The annual emission for emission unit P001 shall be determined in accordance with monitoring and record keeping found in sections A.III, 1 and 2 above.

**VI. Miscellaneous Requirements**

None.

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**B. State Only Enforceable Section**

**I. 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>
P001 - Winding Station consisting of one winding machine, one non-atomized chopper gun, one 4.0 square foot resin bath and two 250 gallon resin day tanks	None	None

**2. Additional Terms and Conditions**

- 2.a None.

**II. Operational Restrictions**

None.

**III. Monitoring and/or Recordkeeping Requirements**

None.

**IV. Reporting Requirements**

None.

**V. Testing Requirements**

None.

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**VI. Miscellaneous Requirements**

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None.

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**Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)**

**A. State and Federally Enforceable Section**

**I. 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>
T001 - 10,000 gallon bulk resin storage tank	OAC rule 3745-31-05 (A)(3)	Volatile Organic Compound (VOC)* emissions shall not exceed 0.012 pound per hour and 0.051 ton per year.
	OAC rule 3745-21-07 (D)(2)	See section A.2.b below
	40 CFR Part 63 Subpart WWWW Reinforced Plastic Composites Production	See section A.2.a below. See Facility Specific Terms and Conditions, Part II, A.1
		* For the purposes of this permit, all Organic Compound (OC) emissions and HAP emissions are considered VOC emissions. VOC emissions include HAPs, and Styrene.

**2. Additional Terms and Conditions**

- 2.a The storage vessel shall be equipped with a permanent submerged fill pipe.
- 2.b The hourly and annual emissions limits represent the maximum production capacity of this emissions unit; therefore, no monitoring or recordkeeping is required to demonstrate compliance.

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**II. Operational Restrictions**

None.

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**III. Monitoring and/or Recordkeeping Requirements**

None.

**IV. Reporting Requirements**

None.

**V. Testing Requirements**

1. Compliance with the allowable emission limitations in this permit shall be determined according to the following methods:

- a. Emissions Limitation  
VOC emissions shall not exceed 0.012 lbs/hr and 0.051 tpy.

Applicable Compliance Method:

The permittee shall demonstrate compliance using the potential to emit of this emissions unit as calculated in the permit to install application. The potential to emit is based upon the latest version of the TANKS program, the maximum tank material throughput, and the assumption the tank contains 100% styrene. The annual emissions shall be multiplied by 2000 lb/ton and divided by 8760 hr/yr to obtain the hourly emission limitation.

**VI. Miscellaneous Requirements**

None.

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**B. State Only Enforceable Section**

**I. 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>
T001 - 10,000 gallon bulk resin storage tank	None	None

**2. Additional Terms and Conditions**

- 2.a None.

**II. Operational Restrictions**

None.

**III. Monitoring and/or Recordkeeping Requirements**

None.

**IV. Reporting Requirements**

None.

**V. Testing Requirements**

None.

**VI. Miscellaneous Requirements**

None.