



Environmental
Protection Agency

Ted Strickland, Governor
Lee Fisher, Lt. Governor
Chris Korleski, Director

7/28/2010

Certified Mail

Mark Arnold
Owens Corning Insulating Systems, LLC
400 Case Ave.
Newark, OH 43055-5893

RE: DRAFT AIR POLLUTION PERMIT-TO-INSTALL
Facility ID: 0145020185
Permit Number: P0106378
Permit Type: OAC Chapter 3745-31 Modification
County: Licking

No	TOXIC REVIEW
No	PSD
Yes	SYNTHETIC MINOR TO AVOID MAJOR NSR
No	CEMS
No	MACT
No	NSPS
No	NESHAPS
No	NETTING
No	MAJOR NON-ATTAINMENT
No	MODELING SUBMITTED

Dear Permit Holder:

A draft of the Ohio Administrative Code (OAC) Chapter 3745-31 Air Pollution Permit-to-Install for the referenced facility has been issued for the emissions unit(s) listed in the Authorization section of 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 permit. A public notice will appear in the Ohio EPA Weekly Review and the local newspaper, The Newark Advocate. A copy of the public notice and the draft permit are enclosed. This permit can be accessed electronically on the Division of Air Pollution Control (DAPC) Web page, www.epa.ohio.gov/dapc by clicking the "Issued Air Pollution Control Permits" link. Comments will be accepted as a marked-up copy of the draft permit or in narrative format. Any comments must be sent to the following:

Andrew Hall
Permit Review/Development Section
Ohio EPA, DAPC
122 South Front Street
Columbus, Ohio 43215

and Ohio EPA DAPC, Central District Office
50 West Town Street, 6th Floor
P.O. Box 1049
Columbus, OH 43216-1049

Comments and/or a request for a public hearing will be accepted within 30 days of the date the notice is published in the newspaper. You will be notified in writing if a public hearing is scheduled. A decision on issuing a final permit-to-install will be made after consideration of comments received and oral testimony if a public hearing is conducted. Any permit fee that will be due upon issuance of a final Permit-to-Install is indicated in the Authorization section. Please do not submit any payment now. If you have any questions, please contact Ohio EPA DAPC, Central District Office at (614)728-3778.

Sincerely,


Michael W. Ahern, Manager
Permit Issuance and Data Management Section, DAPC

Cc: U.S. EPA Region 5 - *Via E-Mail Notification*
Ohio EPA-CDO

PUBLIC NOTICE
Issuance of Draft Air Pollution Permit-To-Install
Owens Corning Insulating Systems, LLC

Issue Date: 7/28/2010
Permit Number: P0106378
Permit Type: OAC Chapter 3745-31 Modification
Permit Description: Chapter 31 modification to allow the use of non-phenolic binders on the F-6 line.
Facility ID: 0145020185
Facility Location: Owens Corning Insulating Systems, LLC
400 CASE AVE.,
NEWARK, OH 43055-5893
Facility Description: Mineral Wool Manufacturing

Chris Korleski, Director of the Ohio Environmental Protection Agency, 50 West Town Street, Columbus Ohio has issued a draft action of an air pollution control, federally enforceable permit-to-install (PTI) to Owens Corning Insulating Systems, LLC, located at 400 Case Avenue, Newark, Ohio 43055 on the date indicated above. The draft permit proposes to allow a modification to the F-6 fiberglass production line to allow use of a non-phenolic binder system. A public hearing and information session on the draft air permit will be held on Tuesday, August 31, 2010 at 6:00PM, at the Licking County Library, Newark Branch, 101 W. Main St., Newark, OH 43055. A brief information session about the permit will followed by the public hearing to accept comments on the draft permit. A presiding officer will be present and may limit oral testimony to ensure that all parties are heard. All interested persons are entitled to attend or be represented and give written or oral comments on the draft permit at the hearing. Written comments on the draft permit must be received by the close of business on Wednesday, September 1, 2010. Comments received after this date will not be considered to be a part of the official record. Written comments may be submitted at the hearing or sent to: Adam Novak, Ohio EPA - CDO, PO Box 1049, Columbus, Ohio, 43216-1049. All comments, questions, requests for permit applications or other pertinent documentation, and correspondence concerning this action must be directed to Adam Novak at Ohio EPA DAPC, Central District Office, 50 West Town Street, 6th Floor P.O. Box 1049, Columbus, OH 43216-1049 or (614)728-3778. The permit can be downloaded from the Web page: www.epa.ohio.gov/dapc



Permit Strategy Write-Up

1. Check all that apply:

Synthetic Minor Determination

Netting Determination

2. Source Description:

The applicant, Owens Corning Insulating Systems, LLC has submitted a request for a Chapter 31 modification of PTI No. 01-08329 issued 08/01/02. Owens Corning Insulating Systems, LLC manufactures fiberglass building materials and is requesting a change to the emissions limitations for their F-6 production line, specifically the curing oven (P066), cooling section (P128), and the fiber pack and forming section (P031). To allow for the use of non-phenolic resins in place of the currently used phenolic resins, a move that will ultimately facilitate lower formaldehyde and hazardous air pollutant (HAP) emissions, Owens Corning Insulation Systems, LLC is requesting a synthetic minor limit on VOC emissions across the F-6 manufacturing line restricting the increase in VOC emissions from the use of non-phenolic binders to less than 40 tons per year above current actual baseline levels.

3. Facility Emissions and Attainment Status:

Owens Corning Insulating Systems, LLC is classified as a Major Stationary Source pursuant to New Source Review (NSR) and Prevention of Significant Deterioration (PSD). Also, Owens Corning Insulating Systems, LLC Inc. holds a Title V operating permit with requirements for nitrogen oxides (NO_x), sulfur oxides (SO_x), carbon dioxides (CO), ammonia (NH₃), formaldehyde, phenol, methanol, chlorides, and particulate emissions (PE).

Currently, Licking County is attainment for all criteria pollutants *excluding* PM 2.5.

4. Source Emissions:

Emission limitations for all pollutants from the F-6 line (P031, P066, and P128) will remain the same. Actual emissions will remain the same or decrease for all pollutants excluding VOC. Actual emissions of VOC will remain below current emission limits and will be restricted to an increase of less than 40 tons per year above current actual VOC limits.

5. Conclusion:

The proposed Chapter 31 modifications to PTI No. 01-08329 will result in a net reduction in HAP emissions for emission units P031, P066, and P128. The operational restrictions, monitoring and record keeping requirements, and required stack testing will ensure Owens Corning's ability to comply with the proposed emission limits.

6. Please provide additional notes or comments as necessary:

None

7. Total Permit Allowable Emissions Summary (for informational purposes only):

<u>Pollutant</u>	<u>Tons Per Year</u>
<u>VOC</u>	<u>143.2</u>
<u>PM</u>	<u>171.2</u>
<u>SO2</u>	<u>25.9</u>
<u>NOx</u>	<u>84.3</u>
<u>CO</u>	<u>168.7</u>



DRAFT

**Division of Air Pollution Control
Permit-to-Install
for
Owens Corning Insulating Systems, LLC**

Facility ID: 0145020185
Permit Number: P0106378
Permit Type: OAC Chapter 3745-31 Modification
Issued: 7/28/2010
Effective: To be entered upon final issuance



Division of Air Pollution Control
Permit-to-Install
for
Owens Corning Insulating Systems, LLC

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Authorization

Facility ID: 0145020185
Facility Description: Mineral Wool
Application Number(s): A0038797
Permit Number: P0106378
Permit Description: Chapter 31 modification to allow the use of non-phenolic binders on the F-6 line.
Permit Type: OAC Chapter 3745-31 Modification
Permit Fee: \$1,500.00 *DO NOT send payment at this time, subject to change before final issuance*
Issue Date: 7/28/2010
Effective Date: To be entered upon final issuance

This document constitutes issuance to:

Owens Corning Insulating Systems, LLC
400 CASE AVE.
NEWARK, OH 43055-5893

of a Permit-to-Install for the emissions unit(s) identified on the following page.

Ohio EPA District Office or local air agency responsible for processing and administering your permit:

Ohio EPA DAPC, Central District Office
50 West Town Street, 6th Floor
P.O. Box 1049
Columbus, OH 43216-1049
(614)728-3778

The above named entity is hereby granted a Permit-to-Install for the emissions unit(s) listed in this section 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 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



Authorization (continued)

Permit Number: P0106378

Permit Description: Chapter 31 modification to allow the use of non-phenolic binders on the F-6 line.

Permits for the following Emissions Unit(s) or groups of Emissions Units are in this document as indicated below:

Emissions Unit ID:	P031
Company Equipment ID:	F-5/6 Forming
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P066
Company Equipment ID:	F-5/6 Oven
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	P128
Company Equipment ID:	F6/5 Trim
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable



A. Standard Terms and Conditions



1. Federally Enforceable Standard Terms and Conditions

- a) All Standard Terms and Conditions are federally enforceable, with the exception of those listed below which are enforceable under State law only:
 - (1) Standard Term and Condition A.2.a), Severability Clause
 - (2) Standard Term and Condition A.3.c) through A. 3.e) General Requirements
 - (3) Standard Term and Condition A.6.c) and A. 6.d), Compliance Requirements
 - (4) Standard Term and Condition A.9., Reporting Requirements
 - (5) Standard Term and Condition A.10., Applicability
 - (6) Standard Term and Condition A.11.b) through A.11.e), Construction of New Source(s) and Authorization to Install
 - (7) Standard Term and Condition A.14., Public Disclosure
 - (8) Standard Term and Condition A.15., Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations
 - (9) Standard Term and Condition A.16., Fees
 - (10) Standard Term and Condition A.17., Permit Transfers

2. Severability Clause

- a) 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.
- b) All terms and conditions designated in parts B and C of this permit are federally enforceable as a practical matter, if they are required under the Act, or any of 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. Terms and conditions in parts B and C of this permit shall not be federally enforceable and shall be enforceable under State law only, only if specifically identified in this permit as such.

3. 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.

4. Monitoring and Related Record Keeping 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:
 - (1) The date, place (as defined in the permit), and time of sampling or measurements.
 - (2) The date(s) analyses were performed.
 - (3) The company or entity that performed the analyses.
 - (4) The analytical techniques or methods used.
 - (5) The results of such analyses.
 - (6) 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:
 - (1) Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the Ohio EPA DAPC, Central District Office.

- (2) 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 Ohio EPA DAPC, Central District Office. The written 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 A.15. below if no deviations occurred during the quarter.
 - (3) 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 Ohio EPA DAPC, Central District Office 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.
 - (4) This permit is for an emissions unit located at a Title V facility. 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.

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, i.e., upset, of any emissions units or any associated air pollution control system(s) shall be reported to the Ohio EPA DAPC, Central District Office 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).

6. Compliance Requirements

- a) 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.
- b) 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.
- c) 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:

- (1) 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.
 - (2) 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.
 - (3) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
 - (4) 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.
- d) The permittee shall submit progress reports to the Ohio EPA DAPC, Central District Office 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 the Ohio EPA. Progress reports shall contain the following:
- (1) Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
 - (2) 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.

7. Best Available Technology

As specified in OAC Rule 3745-31-05, new sources that must employ Best Available Technology (BAT) shall comply with the Applicable Emission Limitations/Control Measures identified as BAT for each subject emissions unit.

8. 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.

9. 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 Ohio EPA DAPC, Central District Office.

- 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 Ohio EPA DAPC, Central District Office. 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.)

10. 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).

11. Construction of New Sources(s) and Authorization to Install

- a) 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.
- b) If applicable, authorization to install any new 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 installation or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation. 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.

- c) The permittee may notify Ohio EPA of any emissions unit that is permanently shut down (i.e., the emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31) by submitting a certification from the authorized official that identifies the date on which the emissions unit was permanently shut down. Authorization to operate the affected emissions unit shall cease upon the date certified by the authorized official that the emissions unit was permanently shut down. At a minimum, notification of permanent shut down shall be made or confirmed by marking the affected emissions unit(s) as "permanently shut down" in Ohio EPA's "Air Services" along with the date the emissions unit(s) was permanently removed and/or disabled. Submitting the facility profile update will constitute notifying of the permanent shutdown of the affected emissions unit(s).
- d) The provisions of this permit shall cease to be enforceable for each affected emissions unit after the date on which an emissions unit is permanently shut down (i.e., emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31). All records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, must be maintained in accordance with law. All reports required by this permit must be submitted for any period an affected emissions unit operated prior to permanent shut down. At a minimum, the permit requirements must be evaluated as part of the reporting requirements identified in this permit covering the last period the emissions unit operated.

No emissions unit certified by the authorized official as being permanently shut down may resume operation without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31.

- e) The permittee shall comply with any residual requirements related to this permit, such as the requirement to submit a deviation report, air fee emission report, or other any reporting required by this permit for the period the operating provisions of this permit were enforceable, or as required by regulation or law. All reports shall be submitted in a form and manner prescribed by the Director. All records relating to this permit must be maintained in accordance with law.

12. Permit-To-Operate Application

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).

13. Construction Compliance Certification

The applicant shall identify the following dates in the online facility profile for each new emissions unit identified in this permit.

- a) Completion of initial installation date shall be entered upon completion of construction and prior to start-up.



- b) Commence operation after installation or latest modification date shall be entered within 90 days after commencing operation of the applicable emissions unit.

14. 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.

15. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations

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.

16. 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.

17. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The new owner must update and submit the ownership information via the "Owner/Contact Change" functionality in Air Services once the transfer is legally completed. The change must be submitted through Air Services within thirty days of the ownership transfer date.

18. 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.

19. Title IV Provisions

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

B. Facility-Wide Terms and Conditions

1. All the following facility-wide terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:
 - a) None.

C. Emissions Unit Terms and Conditions



1. P031, F-5/6 Forming

Operations, Property and/or Equipment Description:

F-5 Fiber and Pack Forming (Terms in this permit supersede those identified in PTI 01-08329 issued 08/01/02)

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) d)(7)-(10) and e)(7)

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	<p>When employing phenolic binder, volatile organic compound emissions shall not exceed 53.6 pounds per hour.</p> <p>The following limits apply when employing either phenolic or non-phenolic binder:</p> <p>Filterable and condensable particulate emissions shall not exceed 29.5 pounds per hour and 129.2 tons per year.</p> <p>Sulfur dioxide emissions shall not exceed 5.3 pounds per hour and 23.0 tons per year.</p> <p>Nitrogen oxide emissions shall not exceed 5.3 pounds per hour and 23.0 tons per year.</p> <p>Carbon monoxide emissions shall not exceed 17.5 pounds per hour and 76.7 tons per year.</p> <p>Formaldehyde emissions shall not exceed 8.5 pounds per hour and 37.2 tons per year.</p> <p>Methanol emissions shall not exceed 18.5</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		<p>pounds per hour.</p> <p>Phenol emissions shall not exceed 26.5 pounds per hour.</p> <p>Ammonia emissions shall not exceed 40 pounds per hour and 175.2 tons per year.</p> <p>The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(D).</p> <p>See b)(2)a-b and c)(1)-(2) below.</p>
b.	ORC 3704.03(T)	When employing non-phenolic binder, volatile organic compound emissions from P031 shall not exceed 12.9 pounds per ton binder solids applied.
c.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack shall not exceed twenty per cent opacity, as a six-minute average.
d.	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).
e.	OAC rule 3745-21-07(G)(2)	Exempt, see c)(3)-(4).
f.	OAC rule 3745-31-05(D)	<p>Total volatile organic compound emissions from P031, P066, and P128 shall not exceed 143.2 tons per rolling 12-month summation.</p> <p>Total methanol emissions from P031, P066, and P128 shall not exceed 45.0 tons per rolling 12-month summation.</p> <p>Total phenol emissions from P031, P066, and P128 shall not exceed 50.0 tons per rolling 12-month summation.</p> <p>See b)(2)c. and c)(5)-(7) below</p>
g.	40 CFR Part 63, Subpart NNN (40 CFR 63.1380-63.1399) [In accordance with 40 CFR 63.1380(b)(2), this emissions unit serves a rotary spin wool fiberglass manufacturing line subject to the emissions limitations/control measures specified in this section when producing a bonded wool	<p>0.6 kg of formaldehyde per megagram (1.2 lb of formaldehyde per ton) of glass pulled for P031, P066, and P128 combined.</p> <p>See b)(2)d.</p>



Effective Date: To be entered upon final issuance

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	fibreglass building insulation product.]	
h.	40 CFR Part 63, Subpart A (40 CFR 63.1380(d))	Table 1 to Subpart NNN of 40 CFR Part 63 – Applicability of General Provisions to Subpart NNN shows which parts of the General Provisions in 40 CFR 63.1-63.15 apply.

(2) Additional Terms and Conditions

- a. The permittee shall control particulate emissions using a system consisting of a drop-out box, a fan, and a set of cyclonic separators (secondary separators).
- b. Filterable particulate emissions shall not exceed 23.5 pounds per hour per the 1980 Consent Decree, State of Ohio versus Owens-Corning Fiberglass Corporation.
- c. The use of non-phenolic binder in P031, P066, and P128 shall not cause a VOC emissions increase of more than 38.8 tons, as a rolling 12-month summation of emissions, over the baseline actual emissions from P031, P066, and P128.
- d. The emissions limit required pursuant to 40 CFR 63.1382(a)(2) for rotary spin manufacturing lines applies to P031 only when the following conditions are met:
 - i. Phenol-formaldehyde binder is employed in the F-6 Line to produce a bonded wool fiberglass building insulation that:
 - (a) Has a loss on ignition (LOI) of less than 8 percent, and
 - (b) Has a density of less than 32 kilograms per cubic meter (kg/m³) (2 pounds per cubic foot) (lb/ft³)

When utilizing a non-phenolic binder, the F-6 Line is not an affected source pursuant to 40 CFR 63.1380(b)(2) since it is not producing a “bonded” wool fiberglass insulation product as defined in 40 CFR 63.1381.

c) Operational Restrictions

- (1) Phenol formaldehyde resin delivered to the facility shall not exceed a free methanol content of 1%.
- (2) The permittee shall burn only natural gas in this emissions unit.
- (3) To avoid the emission limitations/control requirements contained in OAC rule 3745-21-07(G)(2), no photochemically reactive materials (i.e., as raw materials or cleanup materials) shall be employed in this emissions unit.

Note: The definition of "photochemically reactive material" is based upon OAC rule 3745-21-01(C)(5).

- (4) The requirement that no photochemically reactive materials (i.e., as raw materials or cleanup materials) shall be employed in this emissions unit shall cease to be effective and federally enforceable on the date the U.S. EPA approves the revisions to OAC rule 3745-21-07(G) as a revision to the Ohio SIP for organic compounds. After the rule is added to the Ohio SIP, the emission limitations, monitoring, record keeping, reporting and testing requirements related to this limitation shall be void.
- (5) The maximum amount of methanol and phenol in the resin delivered to P027 and P031 combined that is or will be employed in a phenolic binder shall not exceed 156 tons, based upon a rolling, 12-month summation of the resin delivered that is or will be employed in a phenolic binder.
- (6) In order to ensure that VOC emissions from P031, P066, and P128 do not exceed 143.2 tons per rolling 12-month summation, the total amount of binder solids employed in P031, P066, and P128 shall not exceed the amount determined based on the following equation, in tons, based upon a rolling, 12-month summation of the tons of binder solids that are employed in P031, P066, and P128:

$$P_T \leq \frac{286,400 - \sum_{i=1}^n [P_{PF_i} \times (EF_{PF_i} - EF_{NP})]}{EF_{NP}}$$

Where:

- n = number of products/product families capable of being produced when utilizing the phenolic binder (e.g., Product Family A, Product Family B, etc.)
- P_T = total binder solids employed in P031, P066, and P128 (as part of either phenolic or non-phenolic binder), tons
- EF_{PF} = VOC emission factor associated with use of phenolic binder in P031, P066, and P128 for product/product family i, lb VOC/ton binder solids applied
- P_{PF} = Phenolic binder solids usage in P031, P066, and P128 for product/product family i, tons
- EF_{NP} = VOC emission factor for non-phenolic binder, lb VOC/ton binder solids. Use 15.7 lb/ton or the value determined from the most recent stack test performed while employing the non-phenolic binder
- 286,400 = lbs VOC/yr limit equivalent to the 143.2 tons/year VOC limit required in b)(1)g.

For the purposes of this PTI, "binder solids" are defined as any material in a phenolic or non-phenolic binder formulation that is not water.

- (7) In order to ensure that the use of non-phenolic binder does not cause a VOC emissions increase of more than 38.8 tons, per rolling 12-month summation, over baseline actual emissions, the total amount of binder solids employed in P031, P066, and P128 shall not exceed the amount determined based on the following equation, in tons, based upon a rolling, 12-month summation of the tons of binder solids that are employed in P031, P066, and P128:

$$P_T \leq \sum_{i=1}^n \frac{77,600 + COA + EF_{NP} \times \sum_{i=1}^n P_{PF_i} - \sum_{i=1}^n (P_{PF_i} \times EF_{PF_i})}{EF_{NP}}$$

Where:

- P_T = total binder solids employed in P031, P066, and P128 (as part of either phenolic or non-phenolic binder), tons
- EF_{PF} = VOC emission factor associated with use of phenolic binder in P031, P066, and P128 for product/product family i, lb VOC/ton binder solids applied
- EF_{NP} = VOC emission factor for non-phenolic binder, lb VOC/ton binder solids. Use 15.7 lb/ton or the value determined from the most recent stack test performed while employing the non-phenolic binder
- P_{PF} = Phenolic binder solids usage in P031, P066, and P128, tons
- 77,600 = lbs VOC/yr limit equivalent to 38.8 tons/year to maintain project VOC emissions below a significant emissions increase
- COA = emissions that could have been accommodated by P031, P066, and P128 during the baseline period, calculated as follows:

$$\sum_{i=1}^n (P_{PF_i} + P_{NP_i}) \times EF_{PF_i}$$

COA shall not be based on production that exceeds the maximum 30-day production rate of product/product family i (annualized) achieved during the 2005-2006 baseline period.

For the purposes of this PTI, “binder solids” are defined as any material in a phenolic or non-phenolic binder formulation that is not water.

To ensure enforceability during the first 12 calendar months of operation following the modification, the permittee shall not exceed the amount determined based on the following equation, in tons.

$$P_T \leq \sum_{i=1}^n \frac{A + COA + EF_{NP} \times \sum_{i=1}^n P_{PF_i} - \sum_{i=1}^n (P_{PF_i} \times EF_{PF_i})}{EF_{NP}}$$



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Where:

A = lbs VOC/month limit to maintain annual project emissions during the first 12-months of operation following the modification below a significant emissions increase

Month(s)	A (lb):
1	8,321
1 - 2	16,642
1 - 3	24,963
1 - 4	33,284
1 - 5	41,605
1 - 6	49,926
1 - 7	58,247
1 - 8	66,568
1 - 9	74,889
1 - 10	77,600
1 - 11	77,600
1 - 12	77,600

(8) See 40 CFR Part 63, Subpart NNN (40 CFR 63.1380-63.1399), as applicable per b)(2)d.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain monthly records of the following information:

- a. ton(s) of resin delivered to P031 that is or will be employed in a phenolic binder;
- b. methanol concentration (%) in resin that is or will be employed in a phenolic binder (an average of the methanol content in the resin taken from the resin delivery certificates received during the year);
- c. phenol concentration (%) that is or will be employed in a phenolic binder (an average of the resin phenol concentration determined from resin delivery certificates received during the year);
- d. total methanol delivered to P031, calculated as follows: a*b;
- e. total phenol delivered to P031, calculated as follows: a*c;
- f. total methanol and phenol delivered to P027 and P031 combined (tons) that is or will be employed in a phenolic binder, calculated as follows: d + e + M_{P027} + P_{P027} where M equals methanol and P equals phenol; and
- g. the rolling, 12-month summation of the tons of methanol and phenol in the resin that is or will be employed in a phenolic binder delivered to P027 and P031 combined.

- (2) The permittee shall maintain monthly records of the following information:
- a. methanol emitted from P031, P066, and P128 when employing a phenolic binder, calculated as follows: $d)(1)d * [0.87 \text{ (percent of delivered methanol estimated to be emitted over the entire F-6 manufacturing line)}]$;
 - b. phenol emitted from P031, P066, and P128 when employing a phenolic binder, calculated as follows: $d)(1)e * [0.87 \text{ (percent of delivered phenol estimated to be emitted over the entire F-6 manufacturing line)}]$;
 - c. total hours of operation for P031 when employing a phenolic binder;
 - d. formaldehyde emissions from P031 (F_{P031}) when employing a phenolic binder, calculated as follows: $8.5 \text{ lbs/hr (hourly maximum) } * c$;
 - e. total tons of non-phenolic binder solids employed in P031 (P_{NP});
 - f. methanol emitted from P031, P066, and P128 when employing a non-phenolic binder, calculated as follows: $e * 3.22 \text{ lb methanol/ton binder solids (maximum) or emission factor determined from most recent stack test performed while employing the non-phenolic binder}$;
 - g. phenol emitted from P031, P066, and P128 when employing a non-phenolic binder, calculated as follows: $e * 0.437 \text{ lb phenol/ton binder solids (maximum) or emission factor determined from most recent stack test performed while employing the non-phenolic binder}$;
 - h. total methanol emissions from phenolic and non-phenolic binders employed in P031, P066, and P128, calculated as follows: $a+f$;
 - i. the rolling, 12-month summation of methanol emissions from P031, P066, and P128, in tons;
 - j. total phenol emissions from phenolic and non-phenolic binders employed in P031, P066, and P128, calculated as follows: $b+g$;
 - k. the rolling, 12-month summation of phenol emissions from P031, P066, and P128, in tons;
 - l. total VOC emissions from natural gas combustion from P031 (tons) when employing a phenolic binder, calculated as follows: $[158 \text{ MMCF/yr } * (5.5 \text{ lbs VOC/mmcf })*(c) / (8760*2000)]$;
 - m. total VOC emissions from P031, P066, and P128 when employing a phenolic binder (P031, P066, and P128) shall be calculated as follows: $NG_{P031} + F_{P031} + NG_{P066} + F_{P066} + NG_{P128} + F_{P128} + a + b$, where NG equals natural gas and F equals formaldehyde;
 - n. total VOC emitted from P031, P066, and P128 when employing a non-phenolic binder, calculated as follows: $e * 15.7 \text{ lb VOC/ton binder solids (maximum) or emission factor determined from most recent stack test performed while employing a non-phenolic binder}$;



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- o. Total VOC emissions from P031, P066, and P128, calculated as follows: m+n, in tons; and
 - p. the rolling, 12-month summation of VOC emissions from P031, P066, and P128, in tons.
- (3) The permittee shall maintain monthly records of the following:
- a. tons binder solids usage rate for each type of product/product family produced using phenolic binder during each calendar month (P_{PFI});
 - b. rolling, 12-month summation of binder solids usage total for all products made using phenolic binder (P_{PF});
 - c. documentation of the associated emission factor, in units of lb/tons binder solids, for each product/product family produced using phenolic binder during the calendar month (EF_{PFI});
 - d. tons of binder solids employed in P031 for each product/product family produced using a non-phenolic binder (P_{NPI});
 - e. beginning after the first 12 calendar months of operation following the modification, the rolling, 12-month summation of the binder solid throughput rates employed as part of a non-phenolic binder. During the first 12 calendar months of operation following the modification, the permittee shall record the cumulative binder solids throughput rate employed as part of a non-phenolic binder for each calendar month (P_{NP});
 - f. total rolling 12-month summation of binder solids usage for both phenolic and non-phenolic binder (P_T), calculated as follows: b+e;
 - g. VOC emissions increase (AEI_{VOC}) as a result of the use of non-phenolic binder in P031, P066, and P128 as determined using the following equation (i.e., the calculation methodology presented in Appendix A of the associated PTI application):

$$AEI_{VOC} = \sum_{i=1}^n [P_{NPI_i}(EF_{NP} - EF_{PFI_i})] \div 2,000 \left(\frac{lb}{ton} \right) \leq 38.8 \text{ tpy}$$

Where:

- AEI_{VOC} = emissions increase as a result of the non-phenolic binder project, tpy
- n = number of products/product families capable of being produced when utilizing the phenolic binder (e.g., Product Family A, Product Family B, etc.)
- EF_{PF} = VOC emission factor associated with use of phenolic binder in P031, P066, and P128 for product/product family i, lb VOC/ton binder solids applied

P_{NP} = Non-phenolic binder solids usage in P031, P066, and P128 for product/product family i, tons

EF_{NP} = VOC emission factor for non-phenolic binder, lb VOC/ton binder solids. Use 15.7 lb/ton or the value determined from the most recent stack test performed while employing the non-phenolic binder

For the purposes of this PTI, "binder solids" are defined as any material in a phenolic or non-phenolic binder formulation that is not water.

As documented in Appendix A to the PTI application, the permittee cannot exclude VOC emissions from phenolic binder resulting from production that exceeds the maximum 30-day production rate (annualized) achieved during the 2005-2006 baseline period; and

- h. beginning after the first 12 calendar months of operation following the first use of non-phenolic binder in P031, P066, and P128, the rolling, 12-month summation of the VOC emissions increase as a result of the use of non-phenolic binder in P032, P066, and P128. During the first 12 calendar months of operation following the first use of non-phenolic binder in P031, P066, and P128, the permittee shall record the cumulative VOC emissions increase as a result of the use of non-phenolic binder in P032, P066, and P128.
- (4) For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
- (5) The permittee shall maintain records for each material employed in this emissions unit that indicate whether or not the material is a photochemically reactive material.
- (6) See 40 CFR Part 63, Subpart NNN (40 CFR 63.1380-63.1399), as applicable per b)(2)d.
- (7) The permit-to-install (PTI) application for these emissions units, P031, P066, and P128, was evaluated based on the actual materials and the design parameters of the emissions units' exhaust system, as specified by the permittee. The Toxic Air Contaminant Statute, ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled Review of New Sources of Air Toxic Emissions, Option A, as follows:
- a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been

documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):

- i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists' (ACGIH) Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices; or
 - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists' (ACGIH) Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
 - c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., 24 hours per day and 7 days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

$$\text{TLV}/10 \times 8/X \times 5/Y = 4 \text{ TLV}/XY = \text{MAGLC}$$

- d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year):

Toxic Contaminant: formic acid

TLV (mg/m³): 9.41

Maximum Hourly Emission Rate (lbs/hr): 0.60 lb/hr formic acid

Predicted 1-Hour Maximum Ground-Level Concentration (µg/m³): 5.2

MAGLC (µg/m³): 224.1

Toxic Contaminant: diethanolamine

TLV (mg/m³): 1.0

Maximum Hourly Emission Rate (lbs/hr): 0.47 lb/hr diethanolamine

Predicted 1-Hour Maximum Ground-Level Concentration (µg/m³): 3.3

MAGLC (µg/m³): 23.8

The permittee, has demonstrated that emissions of formic acid and diethanolamine, from emissions units P031, P066, and P128, is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or

processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the Toxic Air Contaminant Statute, ORC 3704.03(F).

- (8) Prior to making any physical changes to or changes in the method of operation of the emissions units, that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:
- a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;
 - b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
 - c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the Toxic Air Contaminant Statute will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification", the permittee shall apply for and obtain a final PTI prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

- (9) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F):
- a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
 - b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the Toxic Air Contaminant Statute, ORC 3704.03(F);
 - c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F),

initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and

- d. the documentation of the initial evaluation of compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

- (10) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

e) Reporting Requirements

- (1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.
- (2) The permittee shall submit quarterly deviation (excursion) reports that identify the following:
 - a. all exceedances of the cumulative rolling, 12-month tons limitation of methanol and phenol in the resin delivered to P027 and P031 combined that is or will be employed in a phenolic binder [see term c)(5)]; and
 - b. all exceedances of the rolling, 12-month tons binder solids usage limitations; and for the first 12 calendar months of operation following the modification, all exceedances of the maximum allowable cumulative binder solids usage rate levels as used in P031, P066, and P128 [see terms c)(6)-(8)];.

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

- (3) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
- (4) The permittee shall submit deviation (excursion) reports that identify all periods of time when a photochemically reactive material was employed in this emissions unit. These reports shall be submitted within 30 days after the occurrence.
- (5) The permittee shall submit deviation (excursion) reports that identify all periods of time when the percent of free methanol in the formaldehyde exceeds 1. These reports shall be submitted within 30 days after the occurrence.
- (6) See 40 CFR Part 63, Subpart NNN (40 CFR 63.1380-63.1399) as applicable per b)(2)d.
- (7) The permittee shall include any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), through the predicted 1-hour maximum

ground-level concentration, in the quarterly deviation (excursion) reports. If no changes to the emissions, emissions unit(s), or the exhaust stack have been made, then the report shall include a statement to this effect.

f) Testing Requirements

(1) Compliance with the emission limitation(s) in Section b)(1) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

Filterable and condensable particulate emissions shall not exceed 29.5 pounds per hour and 129.2 tons per year. **

** Filterable particulate emissions cannot exceed 23.5 pounds per hour. **

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the allowable mass emission rate for filterable and condensable particulate in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 5E. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

To demonstrate compliance with the annual limitation, multiply the hourly emission rate (established from the most recent stack test) by 8760 and divide by 2000 to convert to tons per year.

b. Emission Limitation:

Sulfur dioxide emissions shall not exceed 5.3 pounds per hour and 23.0 tons per year

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the allowable mass emission rate for filterable and sulfur dioxide in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6C. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

To demonstrate compliance with the annual limitation, multiply the hourly emission rate (established from the most recent stack test) by 8760 and divide by 2000 to convert to tons per year.

c. Emission Limitation:

Nitrogen oxide emissions shall not exceed 5.3 pounds per hour and 23.0 tons per year.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the allowable mass emission rate for nitrogen oxide with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 7 E. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

To demonstrate compliance with the annual limitation, multiply the hourly emission rate (established from the most recent stack test) by 8760 and divide by 2000 to convert to tons per year.

d. Emission Limitation:

Carbon monoxide emissions shall not exceed 17.5 pounds per hour and 76.7 tons per year.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the allowable mass emission rate for carbon monoxide with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 10. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

To demonstrate compliance with the annual limitation, multiply the hourly emission rate (established from the most recent stack test) by 8760 and divide by 2000 to convert to tons per year.

e. Emission Limitation:

Formaldehyde emissions shall not exceed 8.5 pounds per hour and 37.2 tons per year.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the allowable mass emission rate for formaldehyde in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and Method 316 or 318. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

To demonstrate compliance with the annual limitation, multiply the hourly emission rate (established from the most recent stack test) by 8760 and divide by 2000 to convert to tons per year.

f. Emission Limitation:

Methanol emissions shall not exceed 18.5 pounds per hour.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the allowable mass emission rate for methanol in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and Method 308 or 318. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

g. Emission Limitation:

Phenol emissions shall not exceed 26.5 pounds per hour.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the allowable mass emission rate for phenol in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and Method 18 or 318. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

h. **Emission Limitation:**

When employing a phenolic binder, volatile organic compound emissions shall not exceed 53.6 pounds per hour.

Applicable Compliance Method:

The hourly VOC emission limit is a summation of maximum formaldehyde, methanol, phenol, and natural gas consumption emissions. Compliance with the hourly limitation will be demonstrated by summing the most recent hourly stack test results derived for formaldehyde, methanol, and phenol with the hourly VOC emissions from natural gas combustion for this emissions unit. Hourly VOC emissions from natural gas combustion are derived by multiplying the MMCF usage of the natural gas burners (158) by the AP-42 emission factor for natural gas (5.5 lbs VOC/mmcf) from Table 1.4-1, 7/98, and then divide by 8760 to convert from annual to hourly.

i. **Emission Limitation:**

Methanol emissions from P031, P066, and P128 shall not exceed 45.0 tons per rolling 12-month summation.

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements in section d)(2)i. of this permit.

j. **Emission Limitation:**

Phenol emissions from P031, P066, and P128 shall not exceed 50.0 tons per rolling 12-month summation.

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements in section d)(2)k. of this permit.

k. **Emission Limitation:**

Volatile organic compound emissions shall not exceed 143.2 tons per rolling 12-month summation.

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements in section d)(2)p. of this permit.

I. Emission Limitation:

The use of non-phenolic binder shall not cause a significant VOC emissions increase (i.e., more than 38.8 tpy as a rolling 12-month summation of emissions) over the baseline actual emissions.

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements in section d)(3)h. of this permit.

m. Emission Limitation:

Visible emissions shall not exceed 20% opacity, as a six-minute average

Applicable Compliance Method:

Compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Method 9 and the procedures in OAC rule 3745-17-03(A)(1).

n. Emission Limitation:

Ammonia emissions shall not exceed 40 pounds per hour and 175.2 tons per year.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the allowable mass emission rate for ammonia in accordance with US EPA Method CTM-027 or alternative U.S. EPA approved test method may be used with prior approval from the Ohio EPA, Central District Office.

To demonstrate compliance with the annual limitation, multiply the hourly emission rate (established from the most recent stack test) by 8760 and divide by 2000 to convert to tons per year.

o. Emission Limitation:

When employing a non-phenolic binder, volatile organic compound emissions shall not exceed 12.9 pounds per ton binder solids applied

Applicable Compliance Method:

The permittee shall conduct, or have conducted, emission testing for P031 in accordance with the following requirements:

- i. The emission testing shall be conducted within 6 months of commencement of operation of the modified source after permit issuance.
- ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for VOC when employing a non-phenolic binder.

- iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): 40 CFR Part 60, Appendix A, Methods 1–4, 5E, and 25A with the modifications proposed by the permittee in the May 14, 2010, permit to install application as approved by Ohio EPA. Alternative test methods may be used with prior approval from the Ohio EPA.
 - iv. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Central District Office.
- (2) Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Central District Office's refusal to accept the results of the emission test(s).

Personnel from the Central District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Central District Office within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Central District Office.

g) **Miscellaneous Requirements**

- (1) None.



2. P066, F-5/6 Oven

Operations, Property and/or Equipment Description:

F-5 Curing Oven (Terms in this permit supersede those identified in PTI 01-08329 issued 08/01/02)

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) d)(9)-(12), e)(7)

b) Applicable Emissions Limitations and/or Control Requirements

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

a.	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
b.	OAC rule 3745-31-05(A)(3)	<p>When employing phenolic binder, volatile organic compound emissions shall not exceed 0.6 pound per hour.</p> <p>The following limits apply when employing either phenolic or non-phenolic binder:</p> <p>Filterable and condensable particulate emissions shall not exceed 4.0 pounds per hour and 17.5 tons per year.</p> <p>Sulfur dioxide emissions shall not exceed 0.65 pound per hour and 2.9 tons per year.</p> <p>Nitrogen oxide emissions shall not exceed 14 pounds per hour and 61.3 tons per year.</p> <p>Carbon monoxide emissions shall not exceed 21 pounds per hour and 92 tons per year.</p> <p>Formaldehyde emissions shall not exceed 0.25 pound per hour and 1.1 tons per year.</p> <p>Methanol emissions shall not exceed 0.1</p>

		<p>pound per hour.</p> <p>Phenol emissions shall not exceed 0.1 pound per hour.</p> <p>The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(D).</p> <p>See b)(2)a and c)(1)-(3) below.</p>
c.	ORC 3704.03(T)	When employing non-phenolic binder, volatile organic compound emissions from P066 shall not exceed 0.5 pound per ton binder solids applied.
d.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack shall not exceed twenty per cent opacity, as a six-minute average.
e.	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).
f.	OAC rule 3745-21-07(G)(2)	Exempt, see c)(4)-(5).
g.	OAC rule 3745-31-05(D)	<p>Total volatile organic compound emissions from P031, P066, and P128 shall not exceed 143.2 tons per rolling 12-month summation.</p> <p>Total methanol emissions from P031, P066, and P128 shall not exceed 45.0 tons per rolling 12-month summation.</p> <p>Total phenol emissions from P031, P066, and P128 shall not exceed 50.0 tons per rolling 12-month summation.</p> <p>See b)(2)b. and c)(6)-(8) below.</p>
h.	<p>40 CFR Part 63, Subpart NNN (40 CFR 63.1380-63.1399)</p> <p>[In accordance with 40 CFR 63.1380(b)(2), this emissions unit serves a rotary spin wool fiberglass manufacturing line subject to the emissions limitations/control measures specified in this section when producing a bonded wool fiberglass building insulation product.]</p>	<p>0.6 kg of formaldehyde per megagram (1.2 lb of formaldehyde per ton) of glass pulled</p> <p>See b)(2)c.</p>
i.	40 CFR Part 63, Subpart A (40 CFR 63.1380(d))	Table 1 to Subpart NNN of 40 CFR Part 63 – Applicability of General Provisions to Subpart NNN shows which parts of the General Provisions in 40 CFR 63.1-63.15



		apply.
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(2) Additional Terms and Conditions

- a. Emissions from this emissions unit shall be vented to an incinerator that shall meet the operational, monitoring, and record keeping requirements of this permit, when the emissions unit is in operation.
- b. The use of non-phenolic binder in P031, P066, and P128 shall not cause a VOC emissions increase of more than 38.8 tons, as a rolling 12-month summation of emissions, over the baseline actual emissions from P031, P066, and P128.
- c. The emissions limit required pursuant to 40 CFR 63.1382(a)(2) for rotary spin manufacturing lines applies to P031 only when the following conditions are met:
 - i. Phenol-formaldehyde binder is employed in P031, P066, and P128 to produce a bonded wool fiberglass building insulation that:
 - (a) Has a loss on ignition (LOI) of less than 8 percent, and
 - (b) Has a density of less than 32 kilograms per cubic meter (kg/m³) (2 pounds per cubic foot) (lb/ft³)

When utilizing a non-phenolic binder, P031, P066, and P128 is not an affected source pursuant to 40 CFR 63.1380(b)(2) since it is not producing a "bonded" wool fiberglass insulation product as defined in 40 CFR 63.1381.

c) Operational Restrictions

- (1) Phenol formaldehyde resin delivered to the facility shall not exceed a free methanol content of 1%.
- (2) The permittee shall burn only natural gas in this emissions unit.
- (3) The average combustion temperature within the incinerator, for any 3-hour block of time when the emissions unit is in operation, shall not be more than 50 degrees Fahrenheit below the average temperature to be determined during the performance test required by the MACT that demonstrates the emissions unit in compliance with the hourly permit limit.
- (4) To avoid the emission limitations/control requirements contained in OAC rule 3745-21-07(G)(2), no photochemically reactive materials (i.e., as raw materials or cleanup materials) shall be employed in this emissions unit.

Note: The definition of "photochemically reactive material" is based upon OAC rule 3745-21-01(C)(5).

- (5) The requirement that no photochemically reactive materials (i.e., as raw materials or cleanup materials) shall be employed in this emissions unit shall cease to be effective and federally enforceable on the date the U.S. EPA approves the revisions to OAC rule 3745-21-07(G) as a revision to the Ohio SIP for organic compounds. After the rule is

added to the Ohio SIP, the emission limitations, monitoring, record keeping, reporting and testing requirements related to this limitation shall be void.

- (6) The maximum amount of methanol and phenol in the resin delivered to P027 and P031 combined that is or will be employed in a phenolic binder shall not exceed 156 tons, based upon a rolling, 12-month summation of the resin delivered that is or will be employed in a phenolic binder.
- (7) In order to ensure that VOC emissions from P031, P066, and P128 do not exceed 143.2 tons per rolling 12-month summation, the total amount of binder solids employed in P031, P066, and P128 shall not exceed the amount determined based on the following equation, in tons, based upon a rolling, 12-month summation of the tons of binder solids that are employed in P031, P066, and P128:

$$P_T \leq \frac{286,400 - \sum_{i=1}^n [P_{PF_i} \times (EF_{PF_i} - EF_{NP})]}{EF_{NP}}$$

Where:

- n = number of products/product families capable of being produced when utilizing the phenolic binder (e.g., Product Family A, Product Family B, etc.)
- P_T = total binder solids employed in P031, P066, and P128 (as part of either phenolic or non-phenolic binder), tons
- EF_{PF} = VOC emission factor associated with use of phenolic binder in P031, P066, and P128 for product/product family i, lb VOC/ton binder solids applied
- P_{PF} = Phenolic binder solids usage in P031, P066, and P128 for product/product family i, tons
- EF_{NP} = VOC emission factor for non-phenolic binder, lb VOC/ton binder solids. Use 15.7 lb/ton or the value determined from the most recent stack test performed while employing the non-phenolic binder
- 286,400 = lbs VOC/yr limit equivalent to the 143.2 tons/year VOC limit required in b)(1)g.

For the purposes of this PTI, “binder solids” are defined as any material in a phenolic or non-phenolic binder formulation that is not water.

- (8) In order to ensure that the use of non-phenolic binder does not cause a VOC emissions increase of more than 38.8 tons, per rolling 12-month summation, over baseline actual emissions, the total amount of binder solids employed in P031, P066, and P128 shall not exceed the amount determined based on the following equation, in tons, based upon a rolling, 12-month summation of the tons of binder solids that are employed in P031, P066, and P128:

$$P_T \leq \sum_{i=1}^n \frac{77,600 + COA + EF_{NP} \times \sum_{i=1}^n P_{PF_i} - \sum_{i=1}^n (P_{PF_i} \times EF_{PF_i})}{EF_{NP}}$$

Where:

P_T = total binder solids employed in P031, P066, and P128 (as part of either phenolic or non-phenolic binder), tons

EF_{PF} = VOC emission factor associated with use of phenolic binder in P031, P066, and P128 for product/product family i, lb VOC/ton binder solids applied

EF_{NP} = VOC emission factor for non-phenolic binder, lb VOC/ton binder solids. Use 15.7 lb/ton or the value determined from the most recent stack test performed while employing the non-phenolic binder

P_{PF} = Phenolic binder solids usage in P031, P066, and P128, tons

77,600 = lbs VOC/yr limit equivalent to 38.8 tons/year to maintain project VOC emissions below a significant emissions increase

COA = $\sum_{i=1}^n (P_{PF_i} + P_{NP_i}) \times EF_{PF_i}$

COA shall not be based on production that exceeds the maximum 30-day production rate of product/product family i (annualized) achieved during the 2005-2006 baseline period.

For the purposes of this PTI, “binder solids” are defined as any material in a phenolic or non-phenolic binder formulation that is not water.

To ensure enforceability during the first 12 calendar months of operation following the modification, the permittee shall not exceed the amount determined based on the following equation, in tons.

$$P_T \leq \sum_{i=1}^n \frac{A + COA + EF_{NP} \times \sum_{i=1}^n P_{PF_i} - \sum_{i=1}^n (P_{PF_i} \times EF_{PF_i})}{EF_{NP}}$$

Where:

A = lbs VOC/month limit to maintain annual project emissions during the first 12-months of operation following the modification below a significant emissions increase

Month(s)	A (lb):
1	8,321
1 - 2	16,642
1 - 3	24,963
1 - 4	33,284



Table with 2 columns: Range (1-5 to 1-12) and Value (41,605 to 77,600)

(9) See 40 CFR Part 63, Subpart NNN (40 CFR 63.1380-63.1399), as applicable per b)(2)c.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall properly install, operate, and maintain a continuous temperature monitor and recorder that measures and records the combustion temperature within the incinerator when the emissions unit is in operation, including periods of startup and shutdown. Units shall be in degrees Fahrenheit. The temperature monitor and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications deemed necessary by the permittee. The permittee shall collect and record the following information each day the emissions unit is in operation:

- a. all 3-hour blocks of time, when the emissions unit controlled by the incinerator was in operation, during which the average combustion temperature within the incinerator was more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance; and
b. A log of the downtime for the capture (collection)(system, control device, and monitoring equipment, when the associated emissions unit was in operation.

(2) Whenever the monitored average combustion temperature within the incinerator deviates from the range or limit established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

- a. the date and time the deviation began;
b. the magnitude of the deviation at that time;
c. the date the investigation was conducted;
d. the name(s) of the personnel who conducted the investigation; and
e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range/limit specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that

determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

- a. a description of the corrective action;
- b. the date corrective action was completed;
- c. the date and time the deviation ended;
- d. the total period of time (in minutes) during which there was a deviation;
- e. the temperature readings immediately after the corrective action was implemented; and
- f. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The temperature range/limit is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted temperature range/limit based upon information obtained during future performance tests that demonstrate compliance with the allowable emission rate(s) for the controlled pollutant(s). In addition, approved revisions to the temperature range/limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification

- (3) The permittee shall maintain monthly records of the following information:
- a. ton(s) of resin delivered to P031 that is or will be employed in a phenolic binder;
 - b. methanol concentration (%) in resin that is or will be employed in a phenolic binder (an average of the methanol content in the resin taken from the resin delivery certificates received during the year);
 - c. phenol concentration (%) that is or will be employed in a phenolic binder (an average of the resin phenol concentration determined from resin delivery certificates received during the year);
 - d. total methanol delivered to P031, calculated as follows: $a*b$;
 - e. total phenol delivered to P031, calculated as follows: $a*c$;
 - f. total methanol and phenol delivered to P027 and P031 combined (tons) that is or will be employed in a phenolic binder, calculated as follows: $d + e + M_{P027} + P_{P027}$ where M equals methanol and P equals phenol; and
 - g. the rolling 12-month summation of the tons of methanol and phenol in the resin that is or will be employed in a phenolic binder delivered to P027 and P031, combined.

- (4) The permittee shall maintain monthly records of the following information:
- a. methanol emitted from P031, P066, and P128 when employing a phenolic binder, calculated as follows: $d)(3)d * [0.87 \text{ (percent of delivered methanol estimated to be emitted over the entire F-6 manufacturing line)}]$;
 - b. phenol emitted from P031, P066, and P128 when employing a phenolic binder, calculated as follows: $d)(3)e * [0.87 \text{ (percent of delivered phenol estimated to be emitted over the entire F-6 manufacturing line)}]$;
 - c. total hours of operation for P066 when employing a phenolic binder;
 - d. formaldehyde emissions from P066 (F_{P066}), calculated as follows: $0.25 \text{ lbs/hr (hourly maximum) } * c$;
 - e. total tons of non-phenolic binder solids employed in P031, P066, and P128 (P_{NP});
 - f. methanol emitted from P031, P066, and P128 when employing a non-phenolic binder, calculated as follows: $e * 3.22 \text{ lb methanol/ton binder solids (maximum) or emission factor determined from most recent stack test performed while employing a non-phenolic binder}$;
 - g. phenol emitted from P031, P066, and P128 when employing a non-phenolic binder, calculated as follows: $e * 0.437 \text{ lb phenol/ton binder solids (maximum) or emission factor determined from most recent stack test performed while employing a non-phenolic binder}$;
 - h. total methanol emissions from phenolic and non-phenolic binders employed in P031, P066, and P128, calculated as follows: $a+f$;
 - i. the rolling, 12-month summation of methanol emissions from P031, P066, and P128, in tons;
 - j. total phenol emissions from phenolic and non-phenolic binders employed in P031, P066, and P128, calculated as follows: $b+g$;
 - k. the rolling, 12-month summation of phenol emissions from P031, P066, and P128, in tons;
 - l. total VOC emissions from natural gas combustion from P066 (tons) when employing a phenolic binder, calculated as follows: $[239 \text{ MMCF/yr } * (5.5 \text{ lbs VOC/mmcf })*(c) / (8760*2000)]$;
 - m. total VOC emissions from P031, P066, and P128 when employing a phenolic binder (P031, P066, and P128) shall be calculated as follows: $NG_{P031} + F_{P031} + NG_{P066} + F_{P066} + NG_{P128} + F_{P128} + a + b$, where NG equals natural gas and F equals formaldehyde;
 - n. total VOC emitted from P031, P066, and P128 when employing a non-phenolic binder, calculated as follows: $e * 15.7 \text{ lb VOC/ton binder solids (maximum) or emission factor determined from most recent stack test performed while employing a non-phenolic binder}$;

- o. Total VOC emissions from P031, P066, and P128, calculated as follows: m+n, in tons; and
 - p. the rolling, 12-month summation of VOC emissions from P031, P066, and P128, in tons.
- (5) The permittee shall maintain monthly records of the following:
- a. tons binder solids usage rate for each type of product/product family produced using phenolic binder during each calendar month (P_{PFI});
 - b. rolling, 12-month summation of binder solids usage total for all products made using phenolic binder (P_{PF});
 - c. documentation of the associated emission factor, in units of lb/tons binder solids, for each product/product family produced using phenolic binder during the calendar month (EF_{PFI});
 - d. tons of binder solids employed in P031, P066, and P128 for each product/product family produced using a non-phenolic binder (P_{NPI});
 - e. beginning after the first 12 calendar months of operation following modification, the rolling, 12-month summation of the binder solid throughput rates employed as part of a non-phenolic binder. During the first 12 calendar months of operation following the modification, the permittee shall record the cumulative binder solids throughput rate employed as part of a non-phenolic binder for each calendar month (P_{NP});
 - f. total rolling 12-month summation of binder solids usage for both phenolic and non-phenolic binder (P_T), calculated as follows: b+e;
 - g. VOC emissions increase (AEI_{VOC}) as a result of the use of non-phenolic binder in P031, P066, and P128 as determined using the following equation (i.e., the calculation methodology presented in Appendix A of the associated PTI application):

$$AEI_{VOC} = \sum_{i=1}^n [P_{NPI} (EF_{NP} - EF_{PFI})] \div 2,000 \left(\frac{lb}{ton} \right) \leq 38.8 \text{ tpy}$$

Where:

- AEI_{VOC} = emissions increase as a result of the non-phenolic binder project, tpy
- n = number of products/product families capable of being produced when utilizing the phenolic binder (e.g., Product Family A, Product Family B, etc.)
- EF_{PF} = VOC emission factor associated with use of phenolic binder in P031, P066, and P128 for product/product family i, lb VOC/ton binder solids applied

P_{NP} = Non-phenolic binder solids usage in P031, P066, and P128 for product/product family i, tons

EF_{NP} = VOC emission factor for non-phenolic binder, lb VOC/ton binder solids. Use 15.7 lb/ton or the value determined from the most recent stack test performed while employing the non-phenolic binder

For the purposes of this PTI, "binder solids" are defined as any material in a phenolic or non-phenolic binder formulation that is not water.

As documented in Appendix A to the PTI application, the permittee cannot exclude VOC emissions from phenolic binder resulting from production that exceeds the maximum 30-day production rate (annualized) achieved during the 2005-2006 baseline period; and

- h. beginning after the first 12 calendar months of operation following the first use of non-phenolic binder in P031, P066, and P128, the rolling, 12-month summation of the VOC emissions increase as a result of the use of non-phenolic binder in P032, P066, and P128. During the first 12 calendar months of operation following the first use of non-phenolic binder in P031, P066, and P128, the permittee shall record the cumulative VOC emissions increase as a result of the use of non-phenolic binder in P032, P066, and P128. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
- (6) The permittee shall maintain records for each material employed in this emissions unit that indicate whether or not the material is a photochemically reactive material.
 - (7) See 40 CFR Part 63, Subpart NNN (40 CFR 63.1380-63.1399), as applicable per b)(2)c.
 - (8) The permit-to-install (PTI) application for these emissions units, P031, P066, and P128, was evaluated based on the actual materials and the design parameters of the emissions units' exhaust system, as specified by the permittee. The Toxic Air Contaminant Statute, ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled Review of New Sources of Air Toxic Emissions, Option A, as follows:
 - a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):

- i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists' (ACGIH) Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices; or
 - ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists' (ACGIH) Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
 - c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., 24 hours per day and 7 days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

$$TLV/10 \times 8/X \times 5/Y = 4 TLV/XY = MAGLC$$

The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year):

Toxic Contaminant: formic acid

TLV (mg/m³): 9.41

Maximum Hourly Emission Rate (lbs/hr): 0.60 lb/hr formic acid

Predicted 1-Hour Maximum Ground-Level Concentration (µg/m³): 5.2

MAGLC (µg/m³): 224.1

Toxic Contaminant: diethanolamine

TLV (mg/m³): 1.0

Maximum Hourly Emission Rate (lbs/hr): 0.47 lb/hr diethanolamine

Predicted 1-Hour Maximum Ground-Level Concentration (µg/m³): 3.3

MAGLC (µg/m³): 23.8

The permittee, has demonstrated that emissions of formic acid and diethanolamine, from emissions units P031, P066, and P128, is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the Toxic Air Contaminant Statute, ORC 3704.03(F).

- (9) Prior to making any physical changes to or changes in the method of operation of the emissions units, that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:
- a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;
 - b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
 - c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the Toxic Air Contaminant Statute will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification", the permittee shall apply for and obtain a final PTI prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

- (10) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F):
- a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
 - b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the Toxic Air Contaminant Statute, ORC 3704.03(F);
 - c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and

- d. the documentation of the initial evaluation of compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.
- (11) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.
- e) Reporting Requirements
- (1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.
 - (2) The permittee shall submit quarterly deviation (excursion) reports that identify the following for the incinerator:
 - a. each 3-hour block of time (start time and date, and end time and date) when the average combustion temperature within the incinerator was outside of the acceptable range;
 - b. any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the incinerator;
 - c. each incident of deviation described in "a" or "b" (above) where a prompt investigation was not conducted;
 - d. each incident of deviation described in "a" or "b" where prompt corrective action, that would bring the emissions unit(s) into compliance and/or the temperature within the incinerator into compliance with the acceptable range, was determined to be necessary and was not taken; and
 - e. each incident of deviation described in "a" or "b" where proper records were not maintained for the investigation and/or the corrective action(s).
 - (3) The permittee shall submit quarterly deviation (excursion) reports that identify the following:
 - a. all exceedances of the cumulative rolling, 12-month tons limitation of methanol and phenol in the resin delivered to P027 and P031 combined that is or will be employed in a phenolic binder [see term c)(6)]; and
 - b. all exceedances of the rolling, 12-month tons binder solids usage limitations; and for the first 12 calendar months of operation following the modification, all exceedances of the maximum allowable cumulative binder solids usage rate levels as used in P031, P066, and P128 [see terms c)(7)-(9)].

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

- (4) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.
 - (5) The permittee shall submit deviation (excursion) reports that identify all periods of time when the percent of free methanol in the formaldehyde exceeds 1. These reports shall be submitted within 30 days after the occurrence.
 - (6) See 40 CFR Part 63, Subpart NNN (40 CFR 63.1380-63.1399) as applicable per b)(2)c.
 - (7) The permittee shall include any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration, in the quarterly deviation (excursion) reports. If no changes to the emissions, emissions unit(s), or the exhaust stack have been made, then the report shall include a statement to this effect.
- f) **Testing Requirements**
- (1) Compliance with the emission limitation(s) in Section b)(1) of these terms and conditions shall be determined in accordance with the following methods:
 - a. **Emission Limitation:**

Filterable and condensable particulate emissions shall not exceed 4.0 pounds per hour and 17.5 tons per year.

Applicable Compliance Method:
If required, the permittee shall demonstrate compliance with the allowable mass emission rate for filterable and condensable particulate in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 5E. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

To demonstrate compliance with the annual limitation, multiply the hourly emission rate (established from the stack test required above) by 8760 and divide by 2000 to convert to tons per year.
 - b. **Emission Limitation:**

Sulfur dioxide emissions shall not exceed 0.65 pound per hour and 2.9 tons per year

Applicable Compliance Method:
If required, the permittee shall demonstrate compliance with the allowable mass emission rate for filterable and sulfur dioxide in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6C. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

To demonstrate compliance with the annual limitation, multiply the hourly emission rate (established from the stack test required above) by 8760 and divide by 2000 to convert to tons per year.

c. Emission Limitation:

Nitrogen oxide emissions shall not exceed 14 pounds per hour and 61.3 tons per year.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the allowable mass emission rate for nitrogen oxide with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 7 E. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

To demonstrate compliance with the annual limitation, multiply the hourly emission rate (established from the stack test required above) by 8760 and divide by 2000 to convert to tons per year.

d. Emission Limitation:

Carbon monoxide emissions shall not exceed 21 pounds per hour and 92 tons per year.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the allowable mass emission rate for carbon monoxide with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 10. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

To demonstrate compliance with the annual limitation, multiply the hourly emission rate (established from the stack test required above) by 8760 and divide by 2000 to convert to tons per year.

e. Emission Limitation:

Formaldehyde emissions shall not exceed 0.25 pound per hour and 1.1 tons per year.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the allowable mass emission rate for formaldehyde in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and Method 316 or 318. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

To demonstrate compliance with the annual limitation, multiply the hourly emission rate (established from the stack test required above) by 8760 and divide by 2000 to convert to tons per year.

f. Emission Limitation:

Methanol emissions shall not exceed 0.1 pound per hour.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the allowable mass emission rate for methanol in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and Method 308 or 318. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

g. Emission Limitation:

Phenol emissions shall not exceed 0.1 pound per hour.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the allowable mass emission rate for phenol in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and Method 18 or 318. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

h. Emission Limitation:

When employing a phenolic binder, volatile organic compound emissions shall not exceed 0.6 pounds per hour.

Applicable Compliance Method:

The hourly VOC emission limit is a summation of maximum formaldehyde, methanol, phenol, and natural gas consumption emissions. Compliance with the hourly limitation will be demonstrated by summing the hourly stack test results derived for formaldehyde, methanol, and phenol with the hourly VOC emissions from natural gas combustion for this emissions unit. Hourly VOC emissions from natural gas combustion are derived by multiplying the MMCF usage of the natural gas burners (239) by the AP-42 emission factor for natural gas (5.5 lbs VOC/mmcf) from Table 1.4-1, 7/98, and then divide by 8760 to convert from annual to hourly.

i. Emission Limitation:

Methanol emissions from P031, P066, and P128 shall not exceed 45.0 tons per rolling 12-month summation.

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements in section d)(4)i. of this permit.

j. Emission Limitation:

Phenol emissions from P031, P066, and P128 shall not exceed 50.0 tons per rolling 12-month summation.

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements in section d)(4)k. of this permit.

k. Emission Limitation:

Total volatile organic compound emissions from P031, P066, and P128 shall not exceed 143.2 tons per rolling 12-month summation.

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements in section d)(4)p. of this permit.

l. Emission Limitation:

The use of non-phenolic binder shall not cause a significant VOC emissions increase (i.e., more than 38.8 tpy as a rolling 12-month summation of emissions) over the baseline actual emissions.

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements in section d)(5)h. of this permit.

m. Emission Limitation:

Visible emissions shall not exceed 20% opacity, as a six-minute average

Applicable Compliance Method:

Compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Method 9 and the procedures in OAC rule 3745-17-03(A)(1).

n. Emission Limitation:

When employing a non-phenolic binder, volatile organic compound emissions shall not exceed 0.5 pounds per ton binder solids applied

Applicable Compliance Method:

The permittee shall conduct, or have conducted, emission testing for P066 in accordance with the following requirements:

- i. The emission testing shall be conducted within 6 months of commencement of operation of the modified source after permit issuance.
- ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for VOC when employing a non-phenolic binder.
- iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): 40 CFR Part 60,

Appendix A, Methods 1–4, 5E, and 25A with the modifications proposed by the permittee in the May 14, 2010, permit to install application as approved by Ohio EPA. Alternative test methods may be used with prior approval from the Ohio EPA.

- iv. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Central District Office.
- (2) Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Central District Office's refusal to accept the results of the emission test(s).

Personnel from the Central District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Central District Office within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Central District Office.

g) **Miscellaneous Requirements**

- (1) None.



3. P128, F6/5 Trim

Operations, Property and/or Equipment Description:

F-5 Cooling Section (Terms in this permit supersede those identified in PTI 01-08329 issued 08/01/02)

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) d)(7)-(10), e)(7)

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	<p>When employing phenolic binder, volatile organic compound emissions shall not exceed 2.92 pounds per hour.</p> <p>The following limits apply when employing either phenolic or non-phenolic binder:</p> <p>Filterable and condensable particulate emissions shall not exceed 5.6 pounds per hour and 24.5 tons per year.</p> <p>Formaldehyde emissions shall not exceed 2.0 pounds per hour and 8.8 tons per year.</p> <p>Phenol emissions shall not exceed 0.5 pound per hour.</p> <p>Methanol emissions shall not exceed 0.4 pound per hour.</p> <p>Ammonia emissions shall not exceed 5 pounds per hour and 21.9 tons per year.</p> <p>The requirements of this rule also include compliance with the requirements of OAC rule 3745-31-05(D).</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		See b)(2)a. and c)(1)-(3) below.
b.	ORC 3704.03(T)	When employing non-phenolic binder, volatile organic compound emissions from P128 shall not exceed 2.4 pounds per ton binder solids applied.
c.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack shall not exceed twenty per cent opacity, as a six-minute average.
d.	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).
e.	OAC rule 3745-21-07(G)(2)	Exempt; see c)(4)-(5)
f.	OAC rule 3745-31-05(D)	Total volatile organic compound emissions from P031, P066, and P128 shall not exceed 143.2 tons per rolling 12-month summation. Total methanol emissions from P031, P066, and P128 shall not exceed 45.0 tons per rolling 12-month summation. Total phenol emissions from P031, P066, and P128 shall not exceed 50.0 tons per rolling 12-month summation. See b)(2)b. and c)(6)-(8) below.
g.	40 CFR Part 63, Subpart NNN (40 CFR 63.1380-63.1399) [In accordance with 40 CFR 63.1380(b)(2), this emissions unit serves a rotary spin wool fiberglass manufacturing line subject to the emissions limitations/control measures specified in this section when producing a bonded wool fiberglass building insulation product.]	0.6 kg of formaldehyde per megagram (1.2 lb of formaldehyde per ton) of glass pulled for P031, P066, and P128 combined. See b)(2)c.
h.	40 CFR Part 63, Subpart A (40 CFR 63.1380(d))	Table 1 to Subpart NNN of 40 CFR Part 63 – Applicability of General Provisions to Subpart NNN shows which parts of the General Provisions in 40 CFR 63.1-63.15 apply.

(2) Additional Terms and Conditions

- a. Particulate emissions shall be vented to a control system which includes a smoke stripper, screen filter, and cooling scrubber at all times the emissions unit is in operation.
- b. The use of non-phenolic binder in P031, P066, and P128 shall not cause a VOC emissions increase of more than 38.8 tons, as a rolling 12-month summation of emissions, over the baseline actual emissions from P031, P066, and P128.
- c. The emissions limit required pursuant to 40 CFR 63.1382(a)(2) for rotary spin manufacturing lines applies to P031 only when the following conditions are met:
 - i. Phenol-formaldehyde binder is employed in the F-6 Line to produce a bonded wool fiberglass building insulation that:
 - (a) Has a loss on ignition (LOI) of less than 8 percent, and
 - (b) Has a density of less than 32 kilograms per cubic meter (kg/m³) (2 pounds per cubic foot) (lb/ft³)

When utilizing a non-phenolic binder, the F-6 Line is not an affected source pursuant to 40 CFR 63.1380(b)(2) since it is not producing a "bonded" wool fiberglass insulation product as defined in 63.1381.

c) Operational Restrictions

- (1) The pressure drop across the venturi throat portion of the scrubber shall be maintained within the range of 0.5 - 10 inches water column while the emissions unit is in operation.
- (2) Phenol formaldehyde resin delivered to the facility shall not exceed a free methanol content of 1%.
- (3) The permittee shall burn only natural gas in this emissions unit.
- (4) To avoid the emission limitations/control requirements contained in OAC rule 3745-21-07(G)(2), no photochemically reactive materials (i.e., as raw materials or cleanup materials) shall be employed in this emissions unit.

Note: The definition of "photochemically reactive material" is based upon OAC rule 3745-21-01(C)(5).

- (5) The requirement that no photochemically reactive materials (i.e., as raw materials or cleanup materials) shall be employed in this emissions unit shall cease to be effective and federally enforceable on the date the U.S. EPA approves the revisions to OAC rule 3745-21-07(G) as a revision to the Ohio SIP for organic compounds. After the rule is added to the Ohio SIP, the emission limitations, monitoring, record keeping, reporting and testing requirements related to this limitation shall be void.
- (6) The maximum amount of methanol and phenol in the resin delivered to P027 and P031 combined that is or will be employed in a phenolic binder shall not exceed 156 tons,

based upon a rolling, 12-month summation of the resin delivered that is or will be employed in a phenolic binder.

- (7) In order to ensure that VOC emissions from P031, P066, and P128 do not exceed 143.2 tons per rolling 12-month summation, the total amount of binder solids employed in the F-6 line shall not exceed the amount determined based on the following equation, in tons, based upon a rolling, 12-month summation of the tons of binder solids that are employed in P031, P066, and P128:

$$P_T \leq \frac{286,400 - \sum_{i=1}^n [P_{PF_i} \times (EF_{PF_i} - EF_{NP})]}{EF_{NP}}$$

Where:

- n = number of products/product families capable of being produced when utilizing the phenolic binder (e.g., Product Family A, Product Family B, etc.)
- P_T = total binder solids employed in P031, P066, and P128 (as part of either phenolic or non-phenolic binder), tons
- EF_{PF} = VOC emission factor associated with use of phenolic binder in P031, P066, and P128 for product/product family i, lb VOC/ton binder solids applied
- P_{PF} = Phenolic binder solids usage in P031, P066, and P128 for product/product family i, tons
- EF_{NP} = VOC emission factor for non-phenolic binder, lb VOC/ton binder solids. Use 15.7 lb/ton or the value determined from the most recent stack test performed while employing the non-phenolic binder
- 286,400 = lbs VOC/yr limit equivalent to the 143.2 tons/year VOC limit required in b)(1)f.

For the purposes of this PTI, “binder solids” are defined as any material in a phenolic or non-phenolic binder formulation that is not water.

- (8) In order to ensure that the use of non-phenolic binder does not cause a VOC emissions increase of more than 38.8 tons, per rolling 12-month summation, over baseline actual emissions, the total amount of binder solids employed in P031, P066, and P128 shall not exceed the amount determined based on the following equation, in tons, based upon a rolling, 12-month summation of the tons of binder solids that are employed in P031, P066, and P128:

$$P_T \leq \sum_{i=1}^n \frac{77,600 + COA + EF_{NP} \times \sum_{i=1}^n P_{PF_i} - \sum_{i=1}^n (P_{PF_i} \times EF_{PF_i})}{EF_{NP}}$$

Where:

P_T = total binder solids employed in P031, P066, and P128 (as part of either phenolic or non-phenolic binder), tons

EF_{PF} = VOC emission factor associated with use of phenolic binder in P031, P066, and P128 for product/product family i , lb VOC/ton binder solids applied

EF_{NP} = VOC emission factor for non-phenolic binder, lb VOC/ton binder solids. Use 15.7 lb/ton or the value determined from the most recent stack test performed while employing the non-phenolic binder

P_{PF} = Phenolic binder solids usage in P031, P066, and P128, tons

77,600 = lbs VOC/yr limit equivalent to 38.8 tons/year to maintain project VOC emissions below a significant emissions increase

$$COA = \sum_{i=1}^n (P_{PF_i} + P_{NP_i}) \times EF_{PF_i}$$

COA shall not be based on production that exceeds the maximum 30-day production rate of product/product family i (annualized) achieved during the 2005-2006 baseline period.

For the purposes of this PTI, “binder solids” are defined as any material in a phenolic or non-phenolic binder formulation that is not water.

To ensure enforceability during the first 12 calendar months of operation following the modification, the permittee shall not exceed the amount determined based on the following equation, in tons.

$$P_T \leq \sum_{i=1}^n \frac{A + COA + EF_{NP} \times \sum_{i=1}^n P_{PF_i} - \sum_{i=1}^n (P_{PF_i} \times EF_{PF_i})}{EF_{NP}}$$

Where:

A = lbs VOC/month limit to maintain annual project emissions during the first 12-months of operation following the modification below a significant emissions increase

Month(s)	A (lb):
1	8,321
1 - 2	16,642
1 - 3	24,963
1 - 4	33,284
1 - 5	41,605
1 - 6	49,926



Table with 2 columns: Range (1-7 to 1-12) and Value (58,247 to 77,600)

(9) See 40 CFR Part 63, Subpart NNN (40 CFR 63.1380-63.1399), as applicable per b)(2)b.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall maintain monthly records of the following information:

- a. ton(s) of resin delivered to P031 that is or will be employed in a phenolic binder;
b. methanol concentration (%) in resin that is or will be employed in a phenolic binder...
c. phenol concentration (%) that is or will be employed in a phenolic binder...
d. total methanol delivered to P031, calculated as follows: a*b;
e. total phenol delivered to P031, calculated as follows: a*c;
f. total methanol and phenol delivered to P027 and P031 combined (tons) that is or will be employed in a phenolic binder...
g. the rolling, 12-month summation of the tons of methanol and phenol in the resin that is or will be employed in a phenolic binder delivered to P027 and P031 combined.

(2) The permittee shall maintain monthly records of the following information:

- a. methanol emitted from P031, P066, and P128 when employing a phenolic binder, calculated as follows: d(1)d * [0.87 (percent of delivered methanol estimated to be emitted over the entire F-6 manufacturing line)];
b. phenol emitted from P031, P066, and P128 when employing a phenolic binder, calculated as follows: d)(1)e * [0.87 (percent of delivered phenol estimated to be emitted over the entire F-6 manufacturing line)];
c. total hours of operation for P128 when employing a phenolic binder;
d. formaldehyde emissions from P128 (F_P128), calculated as follows: 2.0 lbs/hr (hourly maximum) * c;
e. total tons of non-phenolic binder solids employed in P031, P066, and P128 (P_NP);

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- f. methanol emitted from P031, P066, and P128 when employing a non-phenolic binder, calculated as follows: $e * 3.22$ lb methanol/ton binder solids (maximum) or the emission factor determined from most recent stack test performed while employing a non-phenolic binder;
 - g. phenol emitted from P031, P066, and P128 when employing a non-phenolic binder, calculated as follows: $e * 0.437$ lb phenol/ton binder solids (maximum) or the emission factor determined from most recent stack test performed while employing a non-phenolic binder;
 - h. total methanol emissions from phenolic and non-phenolic binders employed in P031, P066, and P128, calculated as follows: $a+f$;
 - i. the rolling, 12-month summation of methanol emissions from P031, P066, and P128, in tons;
 - j. total phenol emissions from phenolic and non-phenolic binders employed in P031, P066, and P128, calculated as follows: $b+g$;
 - k. the rolling, 12-month summation of phenol emissions from P031, P066, and P128, in tons;
 - l. total VOC emissions from natural gas combustion from P128 (tons) when employing a phenolic binder, calculated as follows: $[31 \text{ MMCF/yr} * (5.5 \text{ lbs VOC/mmcf}) * (c) / (8760 * 2000)]$;
 - m. total VOC emissions from P031, P066, and P128 when employing a phenolic binder (P031, P066, and P128) shall be calculated as follows: $NG_{P031} + F_{P031} + NG_{P066} + F_{P066} + NG_{P128} + F_{P128} + a + b$, where NG equals natural gas and F equals formaldehyde;
 - n. total VOC emitted from P031, P066, and P128 when employing a non-phenolic binder, calculated as follows: $e * 15.7$ lb VOC/ton binder solids (maximum) or the emission factor determined from the most recent stack test performed while employing a non-phenolic binder;
 - o. Total VOC emissions from P031, P066, and P128, calculated as follows: $m+n$, in tons; and
 - p. the rolling, 12-month summation of VOC emissions from P031, P066, and P128, in tons.
- (3) The permittee shall maintain monthly records of the following:
- a. tons binder solids usage rate for each type of product/product family produced using phenolic binder during each calendar month (P_{PFi});
 - b. rolling, 12-month summation of binder solids usage total for all products made using phenolic binder (P_{PF});

- c. documentation of the associated emission factor, in units of lb/tons binder solids, for each product/product family produced using phenolic binder during the calendar month (EF_{PFI});
- d. tons of binder solids employed in P031, P066, and P128 for each product/product family produced using a non-phenolic binder (P_{NPI});
- e. beginning after the first 12 calendar months of operation following the modification, the rolling, 12-month summation of the binder solid throughput rates employed as part of a non-phenolic binder. During the first 12 calendar months of operation following modification, the permittee shall record the cumulative binder solids throughput rate employed as part of a non-phenolic binder for each calendar month (P_{NP});
- f. total rolling 12-month summation of binder solids usage for both phenolic and non-phenolic binder (P_T), calculated as follows: b+e;
- g. VOC emissions increase (AEI_{VOC}) as a result of the use of non-phenolic binder in P031, P066, and P128 as determined using the following equation (i.e., the calculation methodology presented in Appendix A of the associated PTI application):

$$AEI_{VOC} = \sum_{i=1}^n [P_{NPI} (EF_{NP} - EF_{PFI})] \div 2,000 \left(\frac{lb}{ton} \right) \leq 38.8 \text{ tpy}$$

Where:

- AEI_{VOC} = emissions increase as a result of the non-phenolic binder project, tpy
- n = number of products/product families capable of being produced when utilizing the phenolic binder (e.g., Product Family A, Product Family B, etc.)
- EF_{PF} = VOC emission factor associated with use of phenolic binder in P031, P066, and P128 for product/product family i, lb VOC/ton binder solids applied
- P_{NP} = Non-phenolic binder solids usage in P031, P066, and P128 for product/product family i, tons
- EF_{NP} = VOC emission factor for non-phenolic binder, lb VOC/ton binder solids. Use 15.7 lb/ton or the value determined from the most recent stack test performed while employing the non-phenolic binder

For the purposes of this PTI, “binder solids” are defined as any material in a phenolic or non-phenolic binder formulation that is not water.

As documented in Appendix A to the PTI application, the permittee cannot exclude VOC emissions from phenolic binder resulting from production that exceeds the maximum 30-day production rate (annualized) achieved during the 2005-2006 baseline period; and

- h. beginning after the first 12 calendar months of operation following the first use of non-phenolic binder in P031, P066, and P128, the rolling, 12-month summation of the VOC emissions increase as a result of the use of non-phenolic binder in P032, P066, and P128. During the first 12 calendar months of operation following the first use of non-phenolic binder in P031, P066, and P128, the permittee shall record the cumulative VOC emissions increase as a result of the use of non-phenolic binder in P032, P066, and P128.
- (4) For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.
 - (5) The permittee shall properly install, operate, and maintain equipment to continuously monitor the pressure drop across the scrubber (inches water column) during operation of this emissions unit, including periods of startup and shutdown. The permittee shall record the pressure drop across the scrubber on a daily basis. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s), with any modifications deemed necessary by the permittee.

Whenever the monitored value for any parameter deviates from the range(s) or minimum limit(s) established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

- a. the date and time the deviation began;
- b. the magnitude of the deviation at that time;
- c. the date the investigation was conducted;
- d. the name(s) of the personnel who conducted the investigation; and
- e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the control equipment parameters within the acceptable range(s), or at or above the minimum limit(s) specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

- a. a description of the corrective action;
- b. the date the corrective action was completed;

- c. the date and time the deviation ended;
- d. the total period of time (in minutes) during which there was a deviation;
- e. the pressure drop and flow rate readings immediately after the corrective action was implemented; and
- f. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

These range(s) and/or limit(s) for the pressure drop are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted range or limit for the pressure drop based upon information obtained during future performance tests that demonstrate compliance with the allowable particulate emission rate for this/these emissions unit(s). In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

- (6) See 40 CFR Part 63, Subpart NNN (40 CFR 63.1380-63.1399), as applicable per b)(2)b.
- (7) The permit-to-install (PTI) application for these emissions units, P031, P066, and P128, was evaluated based on the actual materials and the design parameters of the emissions units' exhaust system, as specified by the permittee. The Toxic Air Contaminant Statute, ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground-level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled Review of New Sources of Air Toxic Emissions, Option A, as follows:
 - a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour work week, for each toxic compound(s) emitted from the emissions unit(s), (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):
 - i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists' (ACGIH) Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices; or

- ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists' (ACGIH) Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.
- b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).
- c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., 24 hours per day and 7 days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

$$TLV/10 \times 8/X \times 5/Y = 4 TLV/XY = MAGLC$$

- d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year):

Toxic Contaminant: formic acid

TLV (mg/m³): 9.41

Maximum Hourly Emission Rate (lbs/hr): 0.60 lb/hr formic acid

Predicted 1-Hour Maximum Ground-Level Concentration (µg/m³): 5.2

MAGLC (µg/m³): 224.1

Toxic Contaminant: diethanolamine

TLV (mg/m³): 1.0

Maximum Hourly Emission Rate (lbs/hr): 0.47 lb/hr diethanolamine

Predicted 1-Hour Maximum Ground-Level Concentration (µg/m³): 3.3

MAGLC (µg/m³): 23.8

The permittee, has demonstrated that emissions of formic acid and diethanolamine, from emissions units P031, P066, and P128, is calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the Toxic Air Contaminant Statute, ORC 3704.03(F).

- (8) Prior to making any physical changes to or changes in the method of operation of the emissions units, that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can

affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:

- a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;
- b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and
- c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the Toxic Air Contaminant Statute will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a “modification” under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a “modification”, the permittee shall apply for and obtain a final PTI prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

- (9) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F):
 - a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);
 - b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the Toxic Air Contaminant Statute, ORC 3704.03(F);
 - c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and
 - d. the documentation of the initial evaluation of compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

- (10) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

e) Reporting Requirements

- (1) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.
- (2) The permittee shall submit quarterly deviation (excursion) reports that identify the following for the scrubber:
- each period of time (start time and date, and end time and date) when the pressure drop across the scrubber was outside of the appropriate range or exceeded the applicable limit contained in this permit;
 - any period of time (start time and date, and end time and date) when the emissions unit(s) was/were in operation and the process emissions were not vented to the scrubber;
 - each incident of deviation described in "a" or "b" (above) where a prompt investigation was not conducted;
 - each incident of deviation described in "a" or "b" where prompt corrective action, that would bring the pressure drop into compliance with the acceptable range, was determined to be necessary and was not taken; and
 - each incident of deviation described in "a" or "b" where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit.
- (3) The permittee shall submit quarterly deviation (excursion) reports that identify the following:
- all exceedances of the cumulative rolling, 12-month tons limitation of methanol and phenol in the resin delivered to P027 and P031 combined that is or will be employed in a phenolic binder [see term c)(6)]; and
 - all exceedances of the rolling, 12-month tons binder solids usage limitations; and for the first 12 calendar months of operation following the modification, all exceedances of the maximum allowable cumulative binder solids usage rate levels as used in P031, P066, and P128 [see terms c)(7)-(9)].

The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

- (4) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

- (5) The permittee shall submit deviation (excursion) reports that identify all periods of time when the percent of free methanol in the formaldehyde exceeds 1. These reports shall be submitted within 30 days after the occurrence.
 - (6) See 40 CFR Part 63, Subpart NNN (40 CFR 63.1380-63.1399) as applicable per b)(2)b.
 - (7) The permittee shall include any changes made to a parameter or value used in the dispersion model, that was used to demonstrate compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration, in the quarterly deviation (excursion) reports. If no changes to the emissions, emissions unit(s), or the exhaust stack have been made, then the report shall include a statement to this effect.
- f) Testing Requirements
- (1) Compliance with the emission limitation(s) in Section b)(1) of these terms and conditions shall be determined in accordance with the following methods:
 - a. Emission Limitation:

Filterable and condensable particulate emissions shall not exceed 5.6 pounds per hour and 24.5 tons per year.

Applicable Compliance Method:
If required, the permittee shall demonstrate compliance with the allowable mass emission rate for filterable and condensable particulate in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 5E. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

To demonstrate compliance with the annual limitation, multiply the hourly emission rate (established from the stack test required above) by 8760 and divide by 2000 to convert to tons per year.
 - b. Emission Limitation:

Formaldehyde emissions shall not exceed 2.0 pounds per hour and 8.8 tons per year.

Applicable Compliance Method:
If required, the permittee shall demonstrate compliance with the allowable mass emission rate for formaldehyde in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and Method 316 or 318. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

To demonstrate compliance with the annual limitation, multiply the hourly emission rate (established from the stack test required above) by 8760 and divide by 2000 to convert to tons per year.

c. Emission Limitation:

Methanol emissions shall not exceed 0.4 pound per hour.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the allowable mass emission rate for methanol in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and Method 308 or 318. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

d. Emission Limitation:

Phenol emissions shall not exceed 0.5 pound per hour.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the allowable mass emission rate for phenol in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and Method 18 or 318. Alternative U.S. EPA-approved test methods may be used with prior approval from the Ohio EPA.

e. Emission Limitation:

When employing a phenolic binder, volatile organic compound emissions shall not exceed 2.92 pounds per hour.

Applicable Compliance Method:

The hourly VOC emission limit is a summation of maximum formaldehyde, methanol, phenol, and natural gas consumption emissions. Compliance with the hourly limitation will be demonstrated by summing the hourly stack test results derived for formaldehyde, methanol, and phenol with the hourly VOC emissions from natural gas combustion for this emissions unit. Hourly VOC emissions from natural gas combustion are derived by multiplying the MMCF usage of the natural gas burners (31) by the AP-42 emission factor for natural gas (5.5 lbs VOC/mmcf) from Table 1.4-1, 7/98, and then divide by 8760 to convert from annual to hourly.

f. Emission Limitation:

Methanol emissions from P031, P066, and P128 shall not exceed 45.0 tons per rolling 12-month summation.

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements in section d)(2)i. of this permit.

g. Emission Limitation:

Phenol emissions from P031, P066, and P128 shall not exceed 50.0 tons per rolling 12-month summation.

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements in section d)(2)k. of this permit.

h. Emission Limitation:

Total volatile organic compound emissions from P031, P066, and P128 shall not exceed 143.2 tons per rolling 12-month summation.

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements in section d)(2)p. of this permit.

i. Emission Limitation:

The use of non-phenolic binder shall not cause a significant VOC emissions increase (i.e., more than 38.8 tpy as a rolling 12-month summation of emissions) over the baseline actual emissions.

Applicable Compliance Method:

Compliance shall be based upon the record keeping requirements in section d)(3)h. of this permit.

j. Emission Limitation:

Visible emissions shall not exceed 20% opacity, as a six-minute average

Applicable Compliance Method:

Compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Method 9 and the procedures in OAC rule 3745-17-03(A)(1).

k. Emission Limitation:

Ammonia emissions shall not exceed 5 pounds per hour and 21.9 tons per year.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the allowable mass emission rate for ammonia in accordance with US EPA Method CTM-027 or alternative U.S. EPA approved test method may be used with prior approval from the Ohio EPA, Central District Office.

To demonstrate compliance with the annual limitation, multiply the hourly emission rate (established from the stack test required above) by 8760 and divide by 2000 to convert to tons per year.

l. Emission Limitation:

When employing a non-phenolic binder, volatile organic compound emissions shall not exceed 2.4 pounds per ton binder solids applied

Applicable Compliance Method:

The permittee shall conduct, or have conducted, emission testing for P128 in accordance with the following requirements:

- i. The emission testing shall be conducted within 6 months of commencement of operation of the modified source after permit issuance.
 - ii. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for VOC when employing a non-phenolic binder.
 - iii. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s): 40 CFR Part 60, Appendix A, Methods 1 – 4, 5E, and 25A with the modifications proposed by the permittee in the May 14, 2010, permit to install application as approved by Ohio EPA.
 - iv. The test(s) shall be conducted while the emissions unit is operating at or near its maximum capacity, unless otherwise specified or approved by the Central District Office.
- (2) Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Central District Office's refusal to accept the results of the emission test(s).

Personnel from the Central District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Central District Office within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Central District Office.

g) Miscellaneous Requirements

- (1) None.