



7/16/2014

Certified Mail

Mr. Alan Sampson
 OMNOVA Solutions Inc.
 165 S. Cleveland Avenue
 Mogadore, OH 44260

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL
 Facility ID: 1667000007
 Permit Number: P0117111
 Permit Type: Administrative Modification
 County: Portage

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

Dear Permit Holder:

Enclosed please find a final Ohio Environmental Protection Agency (EPA) Air Pollution Permit-to-Install (PTI) which will allow you to install or modify the described emissions unit(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions, we urge you to read it carefully. Because this permit contains conditions and restrictions, please read it very carefully. In this letter you will find the information on the following topics:

- **How to appeal this permit**
- **How to save money, reduce pollution and reduce energy consumption**
- **How to give us feedback on your permitting experience**
- **How to get an electronic copy of your permit**

How to appeal this permit

The issuance of this PTI is a final action of the Director and may be appealed to the Environmental Review Appeals Commission pursuant to Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. The appeal must be filed with the Commission within thirty (30) days after notice of the Director's action. The appeal must be accompanied by a filing fee of \$70.00, made payable to "Ohio Treasurer Josh Mandel," which the Commission, in its discretion, may reduce if by affidavit you demonstrate that payment of the full amount of the fee would cause extreme hardship. Notice of the filing of the appeal shall be filed with the Director within three (3) days of filing with the Commission. Ohio EPA requests that a copy of the appeal be served upon the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
 77 South High Street, 17th Floor
 Columbus, OH 43215

How to save money, reduce pollution and reduce energy consumption

The Ohio EPA is encouraging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Compliance Assistance and Pollution Prevention at (614) 644-3469. Additionally, all or a portion of the capital expenditures related to installing air pollution control equipment under this permit may be eligible for financing and State tax exemptions through the Ohio Air Quality Development Authority (OAQDA) under Ohio Revised Code Section 3706. For more information, see the OAQDA website: www.ohioairquality.org/clean_air

How to give us feedback on your permitting experience

Please complete a survey at www.epa.ohio.gov/survey.aspx and give us feedback on your permitting experience. We value your opinion.

How to get an electronic copy of your permit

This permit can be accessed electronically via the eBusiness Center: Air Services in Microsoft Word format or in Adobe PDF on the Division of Air Pollution Control (DAPC) Web page, www.epa.ohio.gov/dapc by clicking the "Search for Permits" link under the Permitting topic on the Programs tab.

If you have any questions, please contact Akron Regional Air Quality Management District at (330)3752480 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469.

Sincerely,

Michael W. Ahern

Michael W. Ahern, Manager

Permit Issuance and Data Management Section, DAPC

Cc: U.S. EPA
ARAQMD; Pennsylvania; West Virginia; Canada



FINAL

**Division of Air Pollution Control
Permit-to-Install
for
OMNOVA Solutions Inc.**

Facility ID:	1667000007
Permit Number:	P0117111
Permit Type:	Administrative Modification
Issued:	7/16/2014
Effective:	7/16/2014



Division of Air Pollution Control
Permit-to-Install
for
OMNOVA Solutions Inc.

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Final Permit-to-Install
OMNOVA Solutions Inc.
Permit Number: P0117111
Facility ID: 1667000007
Effective Date: 7/16/2014

Authorization

Facility ID: 1667000007
Facility Description: Synthetic Polymer Manufacturing
Application Number(s): A0051058
Permit Number: P0117111
Permit Description: Administrative modification to emissions unit P004 to introduce new chemistry and two new polymerization processes (utilizing existing equipment to manufacture acrylic latex and acrylic resins) with no increase in the allowable emissions and to modify the terms and conditions to remove the deadline date for performing a stack test on the thermal oxidizer.
Permit Type: Administrative Modification
Permit Fee: \$625.00
Issue Date: 7/16/2014
Effective Date: 7/16/2014

This document constitutes issuance to:

OMNOVA Solutions Inc.
165 S. CLEVELAND AVENUE
Mogadore, OH 44260

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

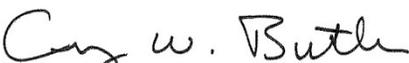
Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

Akron Regional Air Quality Management District
146 South High Street, Room 904
Akron, OH 44308
(330)375-2480

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


Craig W. Butler
Director



Final Permit-to-Install
OMNOVA Solutions Inc.
Permit Number: P0117111
Facility ID: 1667000007
Effective Date: 7/16/2014

Authorization (continued)

Permit Number: P0117111
Permit Description: Administrative modification to emissions unit P004 to introduce new chemistry and two new polymerization processes (utilizing existing equipment to manufacture acrylic latex and acrylic resins) with no increase in the allowable emissions and to modify the terms and conditions to remove the deadline date for performing a stack test on the thermal oxidizer.

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

Emissions Unit ID:	P004
Company Equipment ID:	Poly/Degas Process
Superseded Permit Number:	P0109399
General Permit Category and Type:	Not Applicable



Final Permit-to-Install
OMNOVA Solutions Inc.
Permit Number: P0117111
Facility ID: 1667000007
Effective Date: 7/16/2014

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) 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 Akron Regional Air Quality Management District.



- (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 Akron Regional Air Quality Management District. 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 to the Akron Regional Air Quality Management District 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 Akron Regional Air Quality Management District 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) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the appropriate Ohio EPA District Office or contracted



local air agency, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the electronic signature date shall constitute the date that the required application, notification or report is considered to be "submitted". Any document requiring signature may be represented by entry of the personal identification number (PIN) by responsible official as part of the electronic submission process or by the scanned attestation document signed by the Authorized Representative that is attached to the electronically submitted written report.

Any document (including reports) required to be submitted and required by a federally applicable requirement in this permit shall include a certification by a Responsible Official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.

- b) Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
 - (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.
- c) The permittee shall submit progress reports to the Akron Regional Air Quality Management District 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 Akron Regional Air Quality Management District.
- 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 Akron Regional Air Quality Management District. 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, 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) not exempt from the requirement to obtain a Permit-to-Install.

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 permittee 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 "Air Services" along with the date the emissions unit(s) was permanently removed and/or disabled. Submitting the facility profile update electronically will constitute notifying the Director 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.

Unless otherwise exempted, no emissions unit certified by the responsible official as being permanently shut down may resume operation without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31 and OAC Chapter 3745-77 if the restarted operation is subject to one or more applicable requirements.

- 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 operation of the proposed new or modified source(s) as authorized by this permit would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d) must be obtained before operating the source in a manner that would violate the existing Title V permit requirements.



13. Construction Compliance Certification

The applicant shall identify the following dates in the "Air Services" 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 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.



Final Permit-to-Install
OMNOVA Solutions Inc.
Permit Number: P0117111
Facility ID: 1667000007
Effective Date: 7/16/2014

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.

1. The following emissions unit contained in this permit is subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Chemical Manufacturing Area Sources, 40 CFR Part 63, Subpart VVVVVV: P004. The complete NESHAP requirements, including the General Provisions may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website <http://ecfr.gpoaccess.gov> or by contacting the Akron Regional Air Quality Management District (ARAQMD).



Final Permit-to-Install
OMNOVA Solutions Inc.
Permit Number: P0117111
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Effective Date: 7/16/2014

C. Emissions Unit Terms and Conditions



1. P004, Poly/Degas Process

Operations, Property and/or Equipment Description:

Latex and Resin Polymerization & Degassing Process

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) None.

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>Hourly mass emissions* from the thermal oxidizer shall not exceed the following limits:</p> <p>5.31 lbs/hr organic compounds (OC), measured as methane; 1.41 lbs/hr of 1,3-butadiene; 1.81 lbs/hr of styrene; and 2.50 lbs/hr of nitrogen oxides (NO_x).</p> <p>*The hourly allowable mass emission limitations are established for emissions units P004, P013, P014, P101, P103, P106, P110 and P115, combined.</p> <p>The thermal oxidizer shall achieve at least 98% overall control efficiency, by weight, for OC.</p>
b.	OAC rule 3745-21-07(M)(3)(iii)	<p>Emissions unit P004 is not subject to OAC rule 3745-21-07(M)(3)(a) and (M)(3)(b) because this emissions unit is subject to and complying with a best available technology requirement, pursuant to rule 3745-31-05 of the Administrative Code, that specifies an overall control efficiency for organic compound that is greater than eighty-five per cent, by weight.</p>



	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
c.	OAC rule 3745-31-05(D) (Synthetic Minor to avoid MACT applicability under 40 CFR Part 63, Subpart U, 40 CFR Part 63, Subpart JJJ and 40 CFR Part 63, Subpart FFFF and OAC rule 3745-21-14 applicability)	<p>Emissions of styrene from the facility shall not exceed 5.0 tons per year (tpy), based upon a rolling, 12-month summation of the monthly emissions.</p> <p>OC emissions from emissions units P004, P013, P014, P101, P103, P106, P110 and P115, combined, shall be vented to the thermal oxidizer. However, if the thermal oxidizer is not operational due to a malfunction or maintenance, OC emissions from only the styrene-acrylic polymer expansion process of emissions unit P004 may be vented to the atmosphere through the second-stage vacuum system for a maximum of 100 hours per year as long as the requirements of OAC rule 3745-15-06 are met. The OC emissions from the thermal oxidizer and the second-stage vacuum system, combined, shall not exceed 2.15 tpy, measured as methane, based upon a rolling, 12-month summation of the monthly emissions and 2.36 tpy, based upon a rolling, 12-month summation of the monthly emissions.</p> <p>Hazardous air pollutant (HAP) emissions from this facility shall not exceed 9.99tpy for any individual HAP and 24.99tpy for combined HAPs, based upon rolling, 12-month summations of the monthly HAPs emissions.</p>
d.	40 CFR Part 63, Subpart VVVVVV	See sections 63.11494 – 63.11503 and Tables 1 - 9 of 40 CFR Part 63, Subpart VVVVVV.
e.	40 CFR Part 63, Subpart A	Table 9 to Subpart VVVVVV of Part 63 – Applicability of General Provisions to Subpart VVVVVV shows which parts of the General Provisions in §§63.1 - 63.15 of 40 CFR Part 63, Subpart A apply.

(2) Additional Terms and Conditions

- a. The wastewater "bottoms" stream from the continuous steam stripping equipment may be piped to the existing wastewater effluent basin or directly to



the city-owned sewer system below-grade. The basin shall be equipped with a cover, and the emissions from the wastewater beneath the cover shall be vented to the ambient air from a stack at a height of 70 feet above grade.

c) Operational Restrictions

- (1) The thermal oxidizer shall be operated whenever OC emissions may be vented to it.
- (2) Continuous steam stripping equipment shall be employed and maintained to remove OC from the wastewater exiting the condensate pretreatment tanks. OC emissions from the continuous steam stripping equipment shall be vented to the thermal oxidizer.

d) Monitoring and/or Recordkeeping Requirements

- (1) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable average combustion chamber temperature within the thermal oxidizer, during any 3-hour period of time when the emissions unit(s) controlled by the thermal oxidizer is/are in operation, shall not be 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.
- (2) The permittee shall properly install, operate, and maintain a continuous temperature monitor and recorder that measures and records the combustion temperature within the thermal oxidizer when the emissions unit(s) is/are in operation. Units shall be in degrees Fahrenheit. The accuracy for each thermocouple, monitor, and recorder shall be guaranteed by the manufacturer to be within ± 1 percent of the temperature being measured or ± 5 degrees Fahrenheit, whichever is greater. The temperature monitor and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals. The permittee shall collect and record the following information each day the emissions unit(s) is/are in operation:
 - a. all 3-hour blocks of time, when the emissions unit(s) controlled by the thermal oxidizer was/were in operation, during which the average combustion chamber temperature within the thermal oxidizer 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 (date and total time) of the downtime or bypass of the capture (collection) system and thermal oxidizer, and/or downtime of the monitoring equipment, when the associated emissions unit(s) was/were in operation.
- (3) Whenever the monitored average combustion chamber temperature within the thermal oxidizer 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:

- f. a description of the corrective action;
- g. the date corrective action was completed;
- h. the date and time the deviation ended;
- i. the total period of time (in minutes) during which there was a deviation;
- j. the temperature readings immediately after the corrective action was implemented; and
- k. 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.

- (4) The permittee shall operate and maintain equipment to continuously monitor and record OC emissions from the thermal oxidizer in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13.

The continuous OC monitoring system, which includes the flow monitoring equipment, shall maintain a minimum 95 percent data capture efficiency.

The permittee shall maintain on-site, the document(s) of certification received from the U.S. EPA or the Ohio EPA's Central Office documenting that the continuous OC monitoring system has been certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specification 6 and Performance Specification 8 or 9 (as



appropriate). The letter(s)/document(s) of certification shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

The permittee shall maintain a written quality assurance/quality control plan for the continuous OC monitoring system designed to ensure continuous valid and representative readings of OC. The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous OC monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits as required in 40 CFR Part 60; and to conduct relative accuracy test audits in units of the standard(s), in accordance with and at the frequencies required per 40 CFR Part 60.

To convert the output of the OC monitor from parts per million by volume (ppmv) of methane to ppmv of styrene and butadiene, appropriate response factors (RFs) for the OC monitor shall be used. The RF is defined as the ratio of the known concentration of the target compound (styrene or butadiene) to the observed meter reading when the instrument has been calibrated with the reference compound (methane). The RF is equal to the true concentration divided by the instrument reading. In order for the RF to be acceptable, it must be determined to be less than 10 before the instrument can be used in the monitoring program. The RF for each combination of reference compound and target compound may be determined by testing or may be obtained from a "reference" source.

- (5) The permittee shall maintain records of all data obtained by the continuous OC monitoring system including, but not limited to:
- a. emissions of OC in parts per million for each cycle time of the analyzer, with no resolution less than one data point per minute required;
 - b. emissions of OC in pounds per hour and in units of the applicable standard(s) in the appropriate averaging period;
 - c. emissions of 1,3-butadiene and styrene, in pounds per hour;
 - d. results of quarterly cylinder gas audits;
 - e. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;
 - f. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);
 - g. hours of operation of the emissions unit, continuous OC monitoring system, and control equipment;
 - h. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous OC monitoring system;



- i. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous OC monitoring system; as well as,
- j. the reason (if known) and the corrective actions taken (if any) for each such event in (h) and (i).

All valid data points generated and recorded by the continuous emission monitoring and data acquisition and handling system shall be used in the calculation of the pollutant concentration and/or emission rate over the appropriate averaging period.

- (6) The permittee shall maintain a leak detection and repair program for pumps, valves and flanges in styrene, butadiene, and acrylonitrile service as indicated below:
 - a. Except as provided in d)(6)c. below, pumps, valves and flanges in styrene, butadiene, and acrylonitrile service shall be inspected for signs of leakage monthly using visual, audible, and/or olfactory methods.
 - b. Except as provided in d)(6)c. below, pumps and valves in styrene, butadiene, and acrylonitrile service shall be monitored for leaks once each six calendar months in accordance with the method specified in OAC rule 3745-21-10(F).
 - c. Excluded from the above monitoring requirements are any pumps in styrene, butadiene, and acrylonitrile service that are equipped with double mechanical seals. Pumps with double mechanical seals will be inspected for signs of leakage monthly as described in d)(6)a. above. Also, valves that are designated as difficult to inspect or monitor (valves which cannot be monitored without elevating the monitoring personnel more than six feet above a support surface) shall be inspected and monitored once each calendar year.
 - d. Flanges in styrene, butadiene, and acrylonitrile service shall be monitored for leaks once each 12 calendar months in accordance with the method specified in OAC rule 3745-21-10(F).
 - e. A leak is defined as visible frost (from butadiene pumps, valves or flanges) or drips (from styrene or acrylonitrile pumps, valves or flanges), a strong, distinctive odor (from the pump seal, valve or flange), or an organic vapor analyzer reading in excess of 10,000 parts per million by volume ("ppmv") for pumps, 5,000 ppmv for valves, and 1,000 ppmv for flanges.
 - f. If a leak is discovered, it shall be repaired within 30 calendar days. However, a first attempt at repair shall be made within five calendar days.
 - g. Any pump or valve from which a leak has been detected shall be monitored within five working days of being repaired, using an organic vapor analyzer. A reading below 2,000 ppmv for pumps, 1,000 ppmv for valves and 500 ppmv for flanges indicates a successful repair.
- (7) To demonstrate the effectiveness of the leak detection and repair program, the permittee shall maintain the following records:



- a. A list of identification numbers for all pumps, valves, and flanges in styrene, butadiene, and acrylonitrile service shall be recorded in a log that is kept in a readily accessible location.
- b. When a leak is detected as described in d)(6)e. above, the following information shall be recorded in the leak repair log:
 - i. The identification number of the leaking equipment.
 - ii. The basis for detection of the leak, for example, monitoring, visual inspection, or sensor.
 - iii. The date on which the leak was detected and the date of each attempt to repair the leaking equipment.
 - iv. The methods of repair applied in each attempt to repair the leaking equipment.
 - v. One of the following entries within five working days after each attempt to repair the leaking equipment:
 - (a) "not monitored," denoting the leaking equipment was presumed to still be leaking and it was not monitored; or
 - (b) if the leaking equipment was monitored with a leak detection instrument, the maximum concentration that was measured, in ppmv.
 - vi. If the leak is not repaired within 30 calendar days after the date on which it was detected, record the following:
 - (a) "repair delayed" and the reason for the delay;
 - (b) if the repair is being delayed until the next process shutdown due to technical infeasibility of repair, the signature of the owner or operator whose decision it was that repair is technically infeasible without a process shutdown;
 - (c) the expected date of successful repair of the leak; and
 - (d) the dates of process unit shutdowns that occur while the leaking equipment is unrepaired.
 - vii. The date on which the leak was successfully repaired.
- (8) The leak repair log shall be retained by the owner or operator of the process unit in a readily accessible location for a minimum of two years after the date on which the record was made.



- (9) The permittee shall maintain monthly records of the total facility emissions for each individual HAP and combined HAPs. The permittee also shall maintain monthly records of the rolling, 12-month summation of the total facility emissions for each individual HAP and combined HAPs.
- (10) For emissions units P004, P013, P014, P101, P103, P106, P110, and P115, the permittee shall maintain monthly records of OC emissions, as methane, from the thermal oxidizer. The permittee also shall maintain monthly records of the rolling, 12-month summation of OC emissions, as methane, from the thermal oxidizer and the rolling, 12-month summation of OC emissions from the thermal oxidizer.
- (11) For emissions unit P004, the permittee shall maintain monthly records of the amount of time the styrene-acrylic polymer expansion process was vented to atmosphere through the second-stage vacuum system.
- (12) The Permit to Install (PTI) application 16-1502 for this emissions unit, P004, 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 emissions unit 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, (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 units, i.e., “X” hours per day and “Y” 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) or “worst case” toxic contaminant(s):

Toxic Contaminant: styrene

TLV (mg/m³): 85.2

Maximum Hourly Emission Rate (lbs/hr): 1.81

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 10.96

MAGLC (ug/m³): 2028.6

Toxic Contaminant: 1,3-butadiene

TLV (mg/m³): 4.42

Maximum Hourly Emission Rate (lbs/hr): 1.41

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 8.54

MAGLC (ug/m³): 105.2

The permittee, has demonstrated that emissions of 1,3-butadiene and styrene, from emissions unit P004, 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).

- (13) Prior to making any physical changes to or changes in the method of operation of the emissions unit, 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 or its 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 finalPTI 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.

- (14) 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.
- (15) 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) The permittee shall submit quarterly deviation (excursion) reports that identify:

- a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit (PTE) of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:
 - i. each 3-hour period of time (start time and date, and end time and date) when the average combustion chamber temperature within the thermal oxidizer 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;
 - ii. 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 thermal oxidizer;
 - iii. all exceedances of the rolling, 12-month emission limitation for OC and OC, as methane;
 - iv. all exceedances of the rolling, 12-month emission limitation for any individual HAP;
 - v. all exceedances of the rolling, 12-month emission limitation for styrene; and
 - vi. all exceedances of the rolling, 12-month emission limitation for combined HAPs.
- b. the probable cause of each deviation (excursion);
- c. any corrective actions that were taken to remedy the deviations (excursions) or prevent future deviations (excursions); and
- d. the magnitude and duration of each deviation (excursion).

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submitted electronically through Ohio EPA Air Services, each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (the appropriate District Office or local air agency).



- (2) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous OC monitoring system:
- a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of OC, styrene, and 1,3-butadiene emissions in excess of any applicable limit specified in this permit, 40 CFR Part 60, OAC Chapter 3745-21, and any other applicable rules or regulations. The report shall document the date, commencement and completion times, duration, and magnitude of each exceedance, as well as, the reason (if known) and the corrective actions taken (if any) for each exceedance. Excess emissions shall be reported in units of the applicable standard(s).
 - b. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall include the following:
 - i. the facility name and address;
 - ii. the manufacturer and model number of the continuous OC and other associated monitors;
 - iii. a description of any change in the equipment that comprises the continuous emission monitoring system (CEMS), including any change to the hardware, changes to the software that may affect CEMS readings, and/or changes in the location of the CEMS sample probe;
 - iv. the excess emissions report (EER)*, i.e., a summary of any exceedances during the calendar quarter, as specified above;
 - v. the total OC emissions and the total OC, as methane, emissions for the calendar quarter (tons);
 - vi. the total operating time (hours) of the emissions unit;
 - vii. the total operating time of the continuous OC monitoring system while the emissions unit was in operation;
 - viii. results and dates of quarterly cylinder gas audits;
 - ix. unless previously submitted, results and dates of the relative accuracy test audit(s), including results in units of the applicable standard(s), (during appropriate quarter(s));
 - x. unless previously submitted, the results of any relative accuracy test audit showing the continuous OC monitor out-of-control and the compliant results following any corrective actions;
 - xi. the date, time, and duration of any/each malfunction** of the continuous OC monitoring system, emissions unit, and/or control equipment;



- xii. the date, time, and duration of any downtime** of the continuous OC monitoring system and/or control equipment while the emissions unit was in operation; and
- xiii. the reason (if known) and the corrective actions taken (if any) for each event in (b)(xi) and (xii).

Each report shall address the operations conducted and data obtained during the previous calendar quarter.

* where no excess emissions have occurred or the continuous monitoring system(s) has/have not been inoperative, repaired, or adjusted during the calendar quarter, such information shall be documented in the EER quarterly report

** each downtime and malfunction event shall be reported regardless if there is an exceedance of any applicable limit.

(3) Semiannual reports shall be submitted to the Director (the appropriate District Office or local air agency) by the first day of February and August and shall include the following information for each month during the preceding semiannual period:

- a. the number of pumps in styrene, butadiene, or acrylonitrile service for which leaks were detected as described in d)(6)e. above;
- b. the number of valves in styrene, butadiene, or acrylonitrile service for which leaks were detected as described in d)(6)e. above;
- c. the number of flanges in styrene, butadiene, or acrylonitrile service for which leaks were detected as described in d)(6)e. above;
- d. the number of pumps, valves, and/or flanges in styrene, butadiene, or acrylonitrile service for which leaks were not repaired within thirty calendar days after detection of the leak; and
- e. the facts that explain each delay of repair.

(4) 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 annual permit evaluation report (PER). 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 Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:



a. Emission Limitations:

5.31 lbs/hr of OC, measured as methane

Applicable Compliance Method:

Compliance with the hourly allowable OC emission limitation above shall be demonstrated through the use of the OC continuous emission monitoring system operated in accordance with 40 CFR Part 60.13 and 40 CFR Part 60, Appendix F as established in d)(4) above.

If required in writing by the Director (the appropriate District Office or local air agency), the permittee shall demonstrate compliance with the hourly allowable emission limitations based on the results of emission testing conducted in accordance with Methods 1-4 and 18, 25, or 25A, as appropriate, of 40 CFR Part 60, Appendix A.

b. Emission Limitations:

1.41 lbs/hr of 1,3-butadiene

Applicable Compliance Method:

Compliance with hourly allowable 1,3-butadiene emission limitation shall be demonstrated through the use of the OC continuous emission monitoring system operated in accordance with 40 CFR Part 60.13 and 40 CFR Part 60, Appendix F as established in d)(4) above. The hourly concentration of OC from the thermal oxidizer (measured as methane) will be converted to the equivalent concentration of 1,3-butadiene by employing an appropriate response factor (see the procedures in d)(4) above). The resulting concentration of 1,3-butadiene, in parts per million by volume (ppm_v), will be multiplied by the hourly average stack gas flow rate. Using the ideal gas law, the hourly mass emissions of 1,3-butadiene will then be calculated.

If required in writing by the Director (the appropriate District Office or local air agency), the permittee shall demonstrate compliance with the hourly allowable 1,3-butadiene emission limitation above based on the results of emission testing conducted in accordance with Methods 1-4 and 18 of 40 CFR Part 60, Appendix A.

c. Emission Limitations:

1.81 lbs/hr of styrene

Applicable Compliance Method:

Compliance with hourly allowable styrene emission limitation above shall be demonstrated through the use of the OC continuous emission monitoring system operated in accordance with 40 CFR Part 60.13 and 40 CFR Part 60, Appendix F as established in d)(4) above. The hourly concentration of OC from the thermal oxidizer (measured as methane) will be converted to the equivalent concentration



of styrene by employing an appropriate response factor (see the procedures in d)(4) above). The resulting concentration of styrene, in parts per million by volume (ppmv), will be multiplied by the hourly average stack gas flow rate. Using the ideal gas law, the hourly mass emissions of styrene will then be calculated.

If required in writing by the Director (the appropriate District Office or local air agency), the permittee shall demonstrate compliance with the hourly allowable styrene emission limitation above based on the results of emission testing conducted in accordance with Methods 1-4 and 18 of 40 CFR Part 60, Appendix A.

d. Emission Limitation:

2.50 lbs/hr of NO_x

Applicable Compliance Method:

If required in writing by the Director (the appropriate District Office or local air agency), the permittee shall demonstrate compliance with the hourly allowable NO_x emission limitation based on the results of emission testing conducted in accordance with Methods 1-4 and 7, 7A, or 7E, as appropriate, of 40 CFR Part 60, Appendix A.

e. Emission Limitation:

The thermal oxidizer shall achieve at least 98% overall control efficiency, by weight, for OC.

Applicable Compliance Method:

If required in writing by the Director (the appropriate District Office or local air agency), the permittee shall demonstrate compliance with the overall control efficiency emission limitation above based on the results of emission testing conducted in accordance with Methods 1-4 and 18, 25 or 25A, as appropriate, of 40 CFR Part 60, Appendix A.

f. Emission Limitation:

The OC emissions from the thermal oxidizer and the second-stage vacuum system, combined, shall not exceed 2.15 tpy, measured as methane, based upon a rolling, 12-month summation of the monthly emissions.

Applicable Compliance Method:

Compliance with the annual allowable OC emission limitation above shall be demonstrated through the record keeping requirements established in d)(10) above and through the use of the OC continuous emission monitoring system operated in accordance with 40 CFR Part 60.13 and 40 CFR Part 60, Appendix F as established in d)(4) above.



g. Emission Limitation:

The OC emissions from the thermal oxidizer and the second-stage vacuum system, combined, shall not exceed 2.36 tpy, based upon a rolling, 12-month summation of the monthly emissions.

Applicable Compliance Method:

Compliance with the annual allowable OC emission limitation above shall be demonstrated through the record keeping requirements established in d)(10) above and through the use of the OC continuous emission monitoring system operated in accordance with 40 CFR Part 60.13 and 40 CFR Part 60, Appendix F as established in d)(4) above and using OMNOVA Solutions Alternative Proposal for Establishing OC Limits in the June 20, 2012 e-mail.

h. Emission Limitation:

Emissions of styrene from the facility shall not exceed 5.0 tpy, based upon a rolling, 12-month summation of the monthly emissions.

Applicable Compliance Method:

Compliance with the annual allowable styrene emission limitation above shall be determined in accordance with the methodology specified in the document dated December 31, 1995 and entitled, "Methodology for Determining Monthly Styrene Emissions from the GenCorp, Inc. Facility in Mogadore," prepared by the Ohio EPA and GenCorp, Inc., and any subsequent modifications that are mutually agreeable to the Ohio EPA, the Akron Regional Air Quality Management District, and OMNOVA Solutions Inc. and in accordance with the record keeping requirements established in d)(9) above.

i. Emission Limitations:

HAP emissions from this facility shall not exceed 9.99tpy for any individual HAP and 24.99tpy for combined HAPs, based upon rolling, 12-month summations of the monthly HAPs emissions.

Applicable Compliance Method:

Compliance with the annual allowable HAP emission limitations above shall be demonstrated through the record keeping requirements established in d)(9) above and the following:

- i. To demonstrate compliance with annual HAP limitations for 1,3-butadiene, the hourly average concentration of OC from the thermal oxidizer (measured as methane) will be converted to the equivalent concentration of 1,3-butadiene by employing an appropriate response factor (see the procedures in d)(4) above). The resulting concentration of 1,3-butadiene, in parts per million by volume (ppmv), will be multiplied by the hourly average stack gas flow rate. Using the ideal gas law, the



hourly mass emissions of 1,3-butadiene will then be calculated. The monthly and annual mass emissions from the thermal oxidizer will be the sum of all the hourly mass emission values for the calendar month and calendar year. Fugitive emissions of 1,3-butadiene will be determined using the EPA Correlation Approach, as described in Section 2.3.3 (Page 2-24) of the reference document, "Protocol for Equipment Leak Emission Estimates" (the Protocol), dated November, 1995 (Report No. EPA-453/R-95-017), and monitoring results from the leak detection and repair program detailed in d)(6) and d)(7) above. The thermal oxidizer emissions and fugitive emissions will be summed to obtain the total facility emissions of 1,3-butadiene for each month and each year. Should more accurate emission factors be developed during the current permit cycle, the permittee shall use them, provided the new emission factors are mutually agreeable to the Ohio EPA, the Akron Regional Air Quality Management District (ARAQMD), and OMNOVA Solutions, Inc.

- ii. To demonstrate compliance with the annual HAP emission limitation for styrene, the permittee shall use the methodology specified in the document dated December 31, 1995 and entitled, "Methodology for Determining Monthly Styrene Emissions from the GenCorp, Inc. Facility in Mogadore," prepared by the Ohio EPA and GenCorp, Inc., and any subsequent modifications that are mutually agreeable to the Ohio EPA, the ARAQMD, and OMNOVA Solutions, Inc.
- iii. To demonstrate compliance with the monthly and annual HAP limitations for all other individual HAPs, except 1,3-butadiene and styrene, the monthly and annual actual emissions for each of these other HAPs shall be used and shall be calculated as indicated in the document entitled, "Mogadore Air Emissions Inventory", as submitted to the ARAQMD on August 28, 1996 (or the latest update to that document).
- iv. To demonstrate compliance with the annual limitation for combined HAPs, the mass emissions of each HAP, as described in f)(1)f.i., f)(1)f.ii., and f)(1)f.iii. above, shall be summed to obtain the total facility emissions, except that stack emissions from the thermal oxidizer shall be counted as 1,3-butadiene or styrene, whichever mass quantity is greater.

g) Miscellaneous Requirements

- (1) None.