



John R. Kasich, Governor  
Mary Taylor, Lt. Governor  
Craig W. Butler, Director

3/29/2016

Larry Fioritto  
Perstorp Polyols, Inc.  
600 Matzinger Road  
Toledo, OH 43612

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL  
Facility ID: 0448010133  
Permit Number: P0120528  
Permit Type: Administrative Modification  
County: Lucas

Certified Mail

No	TOXIC REVIEW
No	PSD
No	SYNTHETIC MINOR TO AVOID MAJOR NSR
No	CEMS
Yes	MACT/GACT
Yes	NSPS
No	NESHAPS
No	NETTING
No	MAJOR NON-ATTAINMENT
No	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**
- **What should you do if you notice a spill or environmental emergency?**

**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](http://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](http://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**

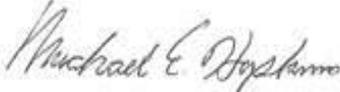
This permit can be accessed electronically via the eBusiness Center: Air Services in Microsoft Word format or in Adobe PDF on the Division of Air Pollution Control (DAPC) Web page, [www.epa.ohio.gov/dapc](http://www.epa.ohio.gov/dapc) by clicking the "Search for Permits" link under the Permitting topic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

## **What should you do if you notice a spill or environmental emergency?**

Any spill or environmental emergency which may endanger human health or the environment should be reported to the Emergency Response 24-HOUR EMERGENCY SPILL HOTLINE toll-free at (800) 282-9378. Report non-emergency complaints to the appropriate district office or local air agency.

If you have any questions regarding your permit, please contact Toledo Department of Environmental Services at (419)936-3015 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469.

Sincerely,



Michael E. Hopkins, P.E.  
Assistant Chief, Permitting Section, DAPC

Cc: U.S. EPA  
TDES; Michigan; Indiana; Canada



**FINAL**

**Division of Air Pollution Control  
Permit-to-Install  
for  
Perstorp Polyols, Inc.**

Facility ID:	0448010133
Permit Number:	P0120528
Permit Type:	Administrative Modification
Issued:	3/29/2016
Effective:	3/29/2016





**Division of Air Pollution Control**  
**Permit-to-Install**  
for  
Perstorp Polyols, Inc.

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**Final Permit-to-Install**  
Perstorp Polyols, Inc.  
**Permit Number:** P0120528  
**Facility ID:** 0448010133  
**Effective Date:** 3/29/2016

## Authorization

Facility ID: 0448010133  
Facility Description: Polyol and formaldehyde manufacturing facility  
Application Number(s): M0003887  
Permit Number: P0120528  
Permit Description: Administrative modification to incorporate specific language referencing compliance with OAC 3745-21-09(DD) to include an overlap provision which will provide that compliance with the requirements of 40 CFR 63, Subpart H will ensure compliance with OAC 3745-21-09(DD).  
Permit Type: Administrative Modification  
Permit Fee: \$375.00  
Issue Date: 3/29/2016  
Effective Date: 3/29/2016

This document constitutes issuance to:

Perstorp Polyols, Inc.  
600 Matzinger Road  
Toledo, OH 43612

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

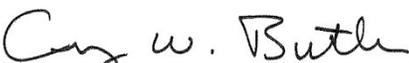
Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

Toledo Department of Environmental Services  
348 South Erie Street  
Toledo, OH 43604  
(419)936-3015

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**  
Perstorp Polyols, Inc.  
**Permit Number:** P0120528  
**Facility ID:** 0448010133  
**Effective Date:** 3/29/2016

## Authorization (continued)

Permit Number: P0120528

Permit Description: Administrative modification to incorporate specific language referencing compliance with OAC 3745-21-09(DD) to include an overlap provision which will provide that compliance with the requirements of 40 CFR 63, Subpart H will ensure compliance with OAC 3745-21-09(DD).

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

<b>Emissions Unit ID:</b>	<b>P801</b>
Company Equipment ID:	TMP and Formate Mfg.
Superseded Permit Number:	04-949
General Permit Category and Type:	Not Applicable



**Final Permit-to-Install**  
Perstorp Polyols, Inc.  
**Permit Number:** P0120528  
**Facility ID:** 0448010133  
**Effective Date:** 3/29/2016

## **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 Toledo Department of Environmental Services.

- (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 Toledo Department of Environmental Services. 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 Toledo Department of Environmental Services 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 Toledo Department of Environmental Services 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 Toledo Department of Environmental Services 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 Toledo Department of Environmental Services.
- 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 Toledo Department of Environmental Services. 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**  
Perstorp Polyols, Inc.  
**Permit Number:** P0120528  
**Facility ID:** 0448010133  
**Effective Date:** 3/29/2016

## **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.
2. The following emissions units contained in this permit are subject to the applicable requirements of 40 CFR Part 60, Subparts A and VV: P801. The complete NSPS requirements, including the NSPS 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 Toledo Division of Environmental Services.
3. The following emissions units contained in this permit are subject to the applicable requirements of 40 CFR Part 63, Subpart A (General Provisions) and 40 CFR Part 63, Subpart F: P801. The complete NSPS requirements, including the NSPS 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 Toledo Division of Environmental Services.
4. The following emissions units contained in this permit are subject to 40 CFR Part 63, Subpart A (General Provisions) and 40 CFR 63, subpart G: P801. The complete MACT requirements, including the MACT 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 Toledo Division of Environmental Services.
5. The following emissions units contained in this permit are subject to the applicable requirements of 40 CFR Part 63, Subpart A (General Provisions) and 40 CFR Part 63, Subpart H: P801. The complete NSPS requirements, including the NSPS 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 Toledo Division of Environmental Services.



**Final Permit-to-Install**  
Perstorp Polyols, Inc.  
**Permit Number:** P0120528  
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## **C. Emissions Unit Terms and Conditions**



**1. P801, TMP and Formate Mfg.**

**Operations, Property and/or Equipment Description:**

Trimethylolpropane (TMP) and sodium formate manufacturing process including reactors, evaporators, coolers, crystallizers and distillation equipment with VOCs controlled by catalytic incinerator

- 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
<b>Process stack emissions</b>		
a.	OAC rule 3745-31-05(A)(3) (established in PTI 04-949 issued 7/26/1995)	Volatile organic compound (VOC) emissions from the stack serving this emissions unit shall not exceed 0.70 pound per hour and 3.07 tons per year, including formaldehyde. Formaldehyde emissions from the stack serving this emissions unit shall not exceed 0.11 pound per hour and 0.48 ton per year. See b)(2)a. thru b)(2)c.
b.	40 CFR Part 63, Subpart A (40 CFR 63.01-16)	See b)(2)d.
c.	40 CFR Part 63, Subpart F (40 CFR 63.100-107) [In accordance with 40 CFR 63.100(b) this emissions unit is a chemical manufacturing process unit manufacturing as a primary product one of the chemicals listed in "Table 1 to Subpart F of Part 63 - Synthetic Organic Chemical Manufacturing Industry Chemicals", manufacturing as a product one of the organic hazardous air pollutants (HAPs) listed in "Table 2 to Subpart F of Part	This subpart provides applicability provisions, definitions, and other general provisions that are applicable to 40 CFR Part 63, Subparts G and H.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	63 - Organic Hazardous Air Pollutants" and located at a plant site that is a major source for HAPs]	
d.	40 CFR Part 63, Subpart G (40 CFR 63.110-153) [In accordance with 40 CFR 63.100(b) this emissions unit is existing in-process equipment with process vents, and subject to 63.149 within a source subject to 40 CFR Part 63 Subpart F which contact hazardous air pollutants (i.e., formaldehyde, acetaldehyde or methanol), as provided in 40 CFR 63.110]	See b)(2)f.
Process fugitive emissions		
e.	OAC rule 3745-31-05(A)(3) (established in PTI 04-949 issued 7/26/1995)	VOC fugitive emissions from this emissions unit shall not exceed 2.5 tons per year, including formaldehyde. See b)(2)c.
f.	OAC rule 3745-21-09(DD)	See b)(2)f.
g.	40 CFR Part 60, Subpart A (40 CFR 60.01-19)	See b)(2)g. and b)(2)h.
h.	40 CFR Part 60, Subpart VV (40 CFR 60.480-489) [In accordance with 40 CFR 63.480(a) and (b) this emissions unit is located at synthetic organic chemical manufacturing facility that commenced construction, reconstruction, or modification after January 5, 1981, and on or before November 7, 2006. The affected equipment in this emissions unit includes each pump, compressor, pressure relief device, sampling connection system, open-ended valve or line, valve, and flange or other connector in VOC service and any devices or systems required by 40 CFR Part 60 Subpart VV.]	The permittee shall implement a VOC leak detection and repair program consistent with the applicable Sections of 40 CFR Part 60, Subpart VV. The permittee may elect to comply with the VOC leak detection and repair program requirements of 40 CFR Part 60, Subpart VV by maintaining compliance with the operational restrictions, monitoring, record keeping and reporting requirements of 40 CFR Part 63, Subpart H for all VOC process equipment leaks as provided in 40 CFR 63.160(c).
i.	40 CFR Part 63, Subpart A (40 CFR 63.01-16)	See b)(2)d.
j.	40 CFR Part 63, Subpart F (40 CFR 63.100-107) [In accordance with 40 CFR	This subpart provides applicability provisions, definitions, and other general provisions that are applicable to 40 CFR

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	63.100(b) this emissions unit is a chemical manufacturing process unit manufacturing as a primary product one of the chemicals listed in "Table 1 to Subpart F of Part 63 - Synthetic Organic Chemical Manufacturing Industry Chemicals", manufacturing as a product one of the organic hazardous air pollutants (HAPs) listed in "Table 2 to Subpart F of Part 63 - Organic Hazardous Air Pollutants" and located at a plant site that is a major source for HAPs]	Part 63, Subparts G and H.
k.	40 CFR Part 63, Subpart H (40 CFR 63.160-183) [In accordance with 63.160(a), the affected equipment in this emissions unit includes each pump, sampling connection system, open-ended valve or line, valve, connector, surge control vessel, bottoms receiver, closed-vent system with control devices that operate more than 300 hours per year in organic hazardous air pollutant service (i.e., formaldehyde, acetaldehyde or methanol)]	Except as otherwise provided, the permittee shall establish a hazardous air pollutant (HAP) leak detection and repair program for the affected sources, in compliance with the operational restrictions, monitoring, record keeping and reporting requirements of 40 CFR 63.162 through 63.170 and 63.172 through 63.174. Equipment to which this subpart applies that are also subject to the provisions of 40 CFR Part 60 Subpart VV shall be required to comply only with the provisions of this subpart as provided in 40 CFR 63.160(b).

(2) Additional Terms and Conditions

- a. The emissions of VOC from emissions units P801 and P803 shall be vented to a catalytic incinerator that shall meet a minimum of 98% by weight destruction efficiency.
- b. These emission limitations were established for PTI purposes to reflect the potential to emit for this emissions unit at the maximum rate of production while controlled. Therefore, it is not necessary to develop monitoring, record keeping and/or reporting requirements to ensure compliance with these limitations.
- c. The requirements of this rule also include compliance with the requirements of 3745-21-09(DD), OAC rule 3745-21-09(EE) and 40 CFR Part 60, Subparts A and VV, and 40 CFR Part 63, Subparts A, F, G and H.
- d. This subpart provides applicability provisions, definitions, and other general provisions that are applicable under 40 CFR Part 63, Subparts F, G and H.

- i. Table 3 to 40 CFR Part 63, Subpart F of "General Provisions Applicability to Subparts F, G, and H", provides applicability provisions, definitions, and other general provisions 40 CFR Part 63, Subpart A that are applicable to emissions units affected by 40 CFR Part 63 Subparts F, G and H.
  - ii. Table 1A to 40 CFR Part 63, Subpart G - "Applicable 40 CFR Part 63 General Provisions", provides applicability provisions, definitions, and other general provisions 40 CFR Part 63, Subpart A that are applicable to emissions units affected by 40 CFR Part 63 Subpart G.
  - iii. Table 4 to 40 CFR Part 63, Subpart H - "Applicable 40 CFR Part 63 General Provisions", provides applicability provisions, definitions, and other general provisions 40 CFR Part 63, Subpart A that are applicable to emissions units affected by 40 CFR Part 63 Subpart H.
- e. Sources subject to 40 CFR Part 63, Subpart G include the process vents which contact hazardous air pollutants (i.e., formaldehyde, acetaldehyde or methanol), as provided in 40 CFR 63.110.
- i. The permittee shall maintain and operate a vapor collection system and control device to collect and control process vent emissions from affected sources in accordance with 40 CFR 63.113.
  - ii. The control device shall reduce the total organic hazardous air pollutants by 98 weight percent or to a concentration of 20 ppm by volume, whichever is less stringent.
- f. The permittee shall comply with the VOC leak detection and repair program requirements of OAC rule 3745-21-09(DD) by maintaining compliance with the operational restrictions, monitoring, recordkeeping and reporting requirements of 40 CFR Part 63, Subpart H for all VOC process equipment leaks.
- g. 40 CFR Part 60, Subpart A provides applicability provisions, definitions, and other general provisions that are applicable to emissions units affected by 40 CFR Part 60.
- h. The application and enforcement of the provisions of the New Source Performance Standards (NSPS), as promulgated by the United States Environmental Protection Agency (U.S. EPA), 40 CFR Part 60, are delegated to the Ohio Environmental Protection Agency (Ohio EPA).
- c) Operational Restrictions
- (1) The maximum capacity of P801 shall not exceed the maximum production rates of trimethylolpropane (TMP) and of sodium formate stated in the application for PTI 04-01123.
  - (2) See 40 CFR Part 60 Subpart VV (40 CFR 60.480-489).

- (3) See 40 CFR Part 63 Subpart F (40 CFR 63.100-107).
  - (4) See 40 CFR Part 63 Subpart G (40 CFR 63.110-153).
  - (5) See 40 CFR Part 63 Subpart H (40 CFR 63.160-183).
- d) **Monitoring and/or Recordkeeping Requirements**
- (1) The permittee shall maintain monthly records of the pounds of TMP and the pounds of sodium formate produced in this emissions unit, the hours of operation of this emissions unit for each product, and the average hourly production rate for each product.
  - (2) In order to maintain compliance with the applicable emission limitation(s) of OAC rule 3745-31-05, the permittee shall maintain the average temperature of the exhaust gases immediately before the catalyst bed, for any 3-hour block of time when the emissions unit is in operation, at not be more than 50 degrees Fahrenheit (28 degrees Celsius) below the average temperature during the most recent emission test that demonstrated the emission unit was in compliance. The average temperature across the catalyst bed, for any 3-hour block of time when the emissions unit is in operation, shall not be less than 80 percent of the average temperature difference during the most recent emission test that demonstrated the emissions unit was in compliance.
  - (3) The permittee shall properly install, operate, and maintain continuous temperature monitors and recorder(s) that measure and record either the instantaneous data value at least once every 15 minutes or records 15-minute or more frequent block average values of the temperature immediately upstream and downstream of the incinerator's catalyst bed when the emissions units are in operation, including periods of startup and shutdown. Units shall be in degrees Fahrenheit or Celsius. The device shall have an accuracy of the greater of  $\pm 1$  percent of the temperature being measured expressed in degrees Celsius or  $\pm 0.5$  Celsius degrees. The temperature monitors and recorder(s) 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 units controlled by the catalytic incinerator were in operation, during which the average temperature of the exhaust gases immediately before the catalyst bed was more than 50 degrees Fahrenheit (28 degrees Celsius) below the average temperature measured during the most recent performance test that demonstrated the emissions units were in compliance;
    - b. all 3-hour blocks of time, when the emissions units controlled by the catalytic incinerator were in operation, during which the average temperature difference across the catalyst bed was less than 80 percent of the average temperature difference measured during the most recent performance test that demonstrated the emissions units were in compliance; and

- c. a log (date and total time) of the downtime or bypass of the capture (collection) system and catalytic incinerator control, and/or downtime of the monitoring equipment, when the associated emissions unit was in operation.

The permittee may use a temperature chart recorder or equivalent recording device as the log that documents the temperature differential across the catalyst bed.

- (4) Whenever the monitored temperature deviates from the range or limit above, 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(s)/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:

- 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 of the exhaust gases immediately before the catalyst and, if appropriate, the average temperature difference across the catalyst bed 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.

- (5) See 40 CFR Part 60 Subpart VV (40 CFR 60.480-489).
- (6) See 40 CFR Part 63 Subpart F (40 CFR 63.100-107).
- (7) See 40 CFR Part 63 Subpart G (40 CFR 63.110-153).

(8) See 40 CFR Part 63 Subpart H (40 CFR 63.160-183).

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports that identify all exceedances of the TMP and sodium formate production rate limitations, as well as the corrective actions that were taken to achieve compliance.

(2) The permittee shall submit quarterly summaries of the following records:

a. all 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature of the exhaust gases immediately before the catalyst bed was more than 50 degrees Fahrenheit (28 degrees Celsius) below the average temperature established during the most recent performance test that demonstrated the emissions unit was in compliance;

b. all 3-hour blocks of time (when the emissions unit was in operation) during which the average temperature difference across the catalyst bed was less than 80 percent of the average temperature difference established during the most recent performance test that demonstrated the emissions unit was in compliance; and

c. any records of downtime (date and length of time) for the capture (collection) system, the catalytic incinerator, and/or the monitoring equipment when the emissions unit was in operation.

(3) The permittee shall submit quarterly deviation (excursion) reports which identify the following information concerning the operations of the catalytic incinerator:

a. each period of time (start time and date, and end time and date) when the temperature(s) established in d)(2) was (were) outside of the acceptable range(s);

b. any period of time (start time and date, and end time and date) when the emissions unit was in operation and the process emissions were not vented to the catalytic 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. (above) where prompt corrective action, that would bring the emissions unit into compliance and/or the temperature of the exhaust gases immediately before the catalyst bed or the average temperature difference across the catalyst bed into compliance with the acceptable range(s) established in d)(2), was determined to be necessary and was not taken; and

e. each incident of deviation described in a. or b. (above) 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.

- (4) The quarterly deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.
  - (5) 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.
  - (6) See 40 CFR Part 60 Subpart VV (40 CFR 60.480-489).
  - (7) See 40 CFR Part 63 Subpart F (40 CFR 63.100-107).
  - (8) See 40 CFR Part 63 Subpart G (40 CFR 63.110-153).
  - (9) See 40 CFR Part 63 Subpart H (40 CFR 63.160-183).
- 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 Limitation:  
  
0.70 pound of VOC per hour, including formaldehyde (process).  
  
Applicable Compliance Method:  
  
If required, compliance shall be demonstrated based upon the methods and procedures specified in 3745-21-10(C). Alternate USEPA approved test methods may be used with prior approval from the Ohio EPA.
    - b. Emission Limitation:  
  
3.07 tons of VOC per year, including formaldehyde (process).  
  
Applicable Compliance Method:  
  
This emission limitation was developed by multiplying the hourly allowable limitation (0.70 pound of VOC per hour, including formaldehyde) by the maximum annual hours of operation (8760 hours), and then dividing by 2000 pounds per ton. Therefore, if compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.
    - c. Emission Limitation:  
  
0.11 pound of formaldehyde per hour (process).  
  
Applicable Compliance Method:  
  
Compliance shall be demonstrated based upon the methods and procedures specified in Method 0011 of 40 CFR Part 266, Appendix IX. Alternately, any

other method or data that has been validated according to the applicable procedures in Method 301 of Appendix A of 40 CFR Part 63, may be used with prior approval from the Ohio EPA.

d. Emission Limitation:

0.48 ton of formaldehyde per year (process).

Applicable Compliance Method:

This emission limitation was developed by multiplying the hourly allowable limitation (0.11 pound of formaldehyde per hour) by the maximum annual hours of operation (8760 hours), and then dividing by 2000 pounds per ton. Therefore, if compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

e. Emission Limitation:

2.5 tons of VOC per year (fugitive).

Applicable Compliance Method:

Compliance shall be demonstrated by using the emission factors from "Control Techniques for Fugitive VOC Emissions from Chemical Process Facilities" EPA/625/R-93/005 March 1994 Table 7-2, or other approved alternate, and the number of pumps, valves, flanges, etc. to calculate the pounds per hour of fugitive VOC emissions. The annual fugitive VOC emissions (in tons VOC per year) shall be calculated by multiplying pounds per hour emission rate by the maximum annual hours of operation (8760 hours), and then dividing by 2000 pounds per ton.

f. Emission Limitation:

VOC emissions reduction by at least 98%.

Applicable Compliance Method:

VOC concentration and the control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in 3745-21-10(C)(3), or an alternative test protocol approved by the Ohio EPA. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

g. Emission Limitation:

Emissions of total organic hazardous air pollutants reduced by 98 weight-percent or to a concentration of 20 parts per million by volume.



Applicable Compliance Method:

Pollutant concentration and the control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in 40 CFR 63.116(c), or an alternative test protocol approved by the Ohio EPA.

h. Emission Limitation:

g) Miscellaneous Requirements

(1) None.