

X Synthetic Minor Determination and/or Netting Determination
Permit To Install 04-01225
Perstorp Polyols Inc

A. Source Description

Perstorp Polyols, Inc currently manufactures formaldehyde and various polyols. The company will be adding a new Acetaldehyde Plant and Ethanol Storage tank. In addition, they will be adding a new 115.0 MMBtu/hr natural gas fired boiler (B002) and removing an existing 81.0 MMBtu/hr natural gas fired boiler (B001).

B. Facility Emissions and Attainment Status

Perstorp Polyols, Inc is a non-major facility for all criteria pollutants. It is classified Title V for Hazardous Air Pollutants (HAPs). The portion of Toledo, Ohio, Lucas County where the plant is located is classified non-attainment for SO₂, unclassified for PM₁₀, and attainment for NO_x, CO and Ozone. The addition of the new boiler would be a major source itself due to NO_x. Except for the thermal incinerator combustion emissions in this PTI, there were no other contemporaneous NO_x additions in the past five years.

C. Source Emissions

The allowable emission rates for B002 established by Best Available Technology (BAT) and New Source Performance Standards (NSPS) subpart Db are as follows:

NO_x: 0.20 lb/MMBtu
CO: 0.082 lb/MMBtu
PE: 0002 lb/MMBtu
SO₂: 0.0006 lb/MMBtu
VOC: 0.005 lb/MMBtu

The allowable emission rates at maximum boiler capacity of 115.0 MMBtu/hr and 8760 hrs/yr of operation establish the following annual emissions for B002:

NO_x: 100.8 t/yr
CO: 41.3 t/yr
PE: 1.0 t/yr
SO₂: 0.3 t/yr
VOC: 2.52 t/yr

Based on the above, the NO_x emissions would trigger PSD. The permittee has agreed to limit the boiler emissions to 95 tons/yr based on a rolling, 12-month summation using the results of the emission test required by the PTI and the actual natural gas usage.

D. Conclusion

Restricting the NO_x emissions to 95 tons based on a rolling, 12-month summation will avoid PSD. None of the other criteria pollutants trigger NSR.



State of Ohio Environmental Protection Agency

Street Address:

Lazarus Gov. Center
122 S. Front Street
Columbus, OH 43215

TELE: (614) 644-3020 FAX: (614) 644-2329

Mailing Address:

Lazarus Gov. Center
P.O. Box 1049
Columbus, OH 43216-1049

**RE: DRAFT PERMIT TO INSTALL
LUCAS COUNTY
Application No: 04-01225**

CERTIFIED MAIL

	TOXIC REVIEW
	PSD
Y	SYNTHETIC MINOR
	CEMS
40 CFR Part 63 Subpart F, G & H VV, III, Kb, Db	MACT
	NSPS
	NESHAPS
Y	NETTING
	MAJOR NON-ATTAINMENT
Y	MODELING SUBMITTED
	GASOLINE DISPENSING FACILITY

DATE: 3/22/2001

Perstorp Polyols Inc
Anthony Sloma
600 Matzinger Rd
Toledo, OH 43612

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

A Permit to Install may be issued in proposed or final form based on the draft action, any written public comments received within 30 days of the public notice, or record of a public meeting if one is held. You will be notified in writing of a scheduled public meeting. Upon issuance of a final Permit to Install a fee of **\$1350** will be due. Please do not submit any payment now.

The Ohio EPA is urging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Pollution Prevention at (614) 644-3469. If you have any questions about this draft permit, please contact the field office where you submitted your application, or Mike Ahern, Field Operations & Permit Section at (614) 644-3631.

Very truly yours,

Thomas G. Rigo
Field Operations and Permit Section
Division of Air Pollution Control



**Permit To Install
Terms and Conditions**

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

DRAFT PERMIT TO INSTALL 04-01225

Application Number: 04-01225

APS Premise Number: 0448010133

Permit Fee: **To be entered upon final issuance**

Name of Facility: Perstorp Polyols Inc

Person to Contact: Anthony Sloma

Address: 600 Matzinger Rd
Toledo, OH 43612

Location of proposed air contaminant source(s) [emissions unit(s)]:

**600 Matzinger Rd
Toledo, Ohio**

Description of proposed emissions unit(s):

1-115 MMBtu/hr natural gas fired boiler, storage tank and Acetaldehyde Mfg plant with associated equipment.

The above named entity is hereby granted a Permit to Install for the above described emissions unit(s) pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the above described emissions unit(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

Part I - GENERAL TERMS AND CONDITIONS

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

1. Monitoring and Related Recordkeeping and Reporting Requirements

- a. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
 - i. The date, place (as defined in the permit), and time of sampling or measurements.
 - ii. The date(s) analyses were performed.
 - iii. The company or entity that performed the analyses.
 - iv. The analytical techniques or methods used.
 - v. The results of such analyses.
 - vi. The operating conditions existing at the time of sampling or measurement.
- b. Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.
- c. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:
 - i. Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
 - ii. Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the appropriate Ohio EPA District Office or local air agency. The written reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See B.11 below if no deviations occurred during the quarter.

- iii. Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted to the appropriate Ohio EPA District Office or local air agency every six months, i.e., by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.
- iv. 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.

2. Scheduled Maintenance/Malfunction Reporting

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction, i.e., upset, of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. (The definition of an upset condition shall be the same as that used in OAC rule 3745-15-06(B)(1) for a malfunction.) The verbal and written reports shall be submitted pursuant to OAC rule 3745-15-06. Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emission unit(s) that is (are) served by such control system(s).

3. Risk Management Plans

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

4. Title IV Provisions

If the permittee is subject to the requirements of 40 CFR Part 72 concerning acid rain, the permittee shall ensure that any affected emissions unit complies with those requirements. Emissions exceeding any allowances that are lawfully held under Title IV of the Act, or any regulations adopted thereunder, are prohibited.

5. Severability Clause

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

6. General Requirements

- a. The permittee must comply with all terms and conditions of this permit. Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and reissuance, or modification, or for denial of a permit renewal application.
- 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, reopened, 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, reopening 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.

7. Fees

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

8. Federal and State Enforceability

Only those terms and conditions designated in this permit as federally enforceable, that are required under the Act, or any 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, the State, and citizens under the Act. All other terms and conditions of this permit shall not be federally enforceable and shall be enforceable under State law only.

9. Compliance Requirements

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

- b. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
 - i. At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
 - ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.
 - iii. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
 - iv. As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- c. The permittee shall submit progress reports to the appropriate Ohio EPA District Office or local air agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually, or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
 - i. Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
 - ii. An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

10. Permit To Operate Application

- a. If the permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77, the permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if the proposed new or modified source(s) would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification must be obtained before the operation of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d).
- b. If the permittee is required to apply for permit(s) pursuant to OAC Chapter 3745-35, the source(s) identified in this Permit To Install is (are) permitted to operate for a period of up to one year from the date the source(s) commenced operation. Permission to operate is

granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within thirty (30) days after commencing operation of the source(s) covered by this permit.

11. Best Available Technology

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

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

1. Compliance Requirements

The emissions unit(s) identified in this Permit to Install shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.

2. Reporting Requirements Related to Monitoring and Recordkeeping Requirements

The permittee shall submit required reports in the following manner:

- a. Reports of any required monitoring and/or recordkeeping of state-only enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
- b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from state-only required emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

3. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

4. 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.

5. Termination of Permit To Install

This permit to install shall terminate within eighteen months of the effective date of the permit to install if the owner or operator has not undertaken a continuing program of installation or modification or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation or modification. This deadline may

be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

6. Construction of New Sources(s)

The proposed emissions unit(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed sources cannot meet the requirements of this permit or cannot meet applicable standards.

If the construction of the proposed emissions unit(s) has already begun or has been completed prior to the date the Director of the Environmental Protection Agency approves the permit application and plans, the approval does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the approved plans. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of the Permit to Install does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Approval of the plans in any case is not to be construed as an approval of the facility as constructed and/or completed. Moreover, issuance of the Permit to Install is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.

7. 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.

8. 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).

9. Construction Compliance Certification

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

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

If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

C. Permit To Install Summary of Allowable Emissions

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

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

<u>Pollutant</u>	<u>Tons Per Year</u>
PE	1.04
SO ₂	0.31
NO _x	97.15
CO	51.0
VOC	16.75

Part II - FACILITY SPECIFIC TERMS AND CONDITIONS

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

None

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

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
B002 - 115 MMBtu natural gas fired boiler with low NOx burner and flue gas recirculation.	3745-31-05(A)(3)	The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-08(B), 3745-23-06(B) and 40 CFR 60.46b. 41.3 tons CO/yr, 0.002 lb PE/MMBtu, 1.0 ton PE /yr, 0.0006 lb SO ₂ /MMBtu, 0.3 ton SO ₂ /yr, 0.005 lb VOC/MMBtu, 2.52 tons VOC/yr, 95.0 tons NO _x /yr.as a rolling, 12-month summation; and 5 percent opacity as a 6-minute average.
	3745-17-07(A)(1)	See A.I.2.a.
	3745-17-10(B)(1)	See A.I.2.a.
	3745-18-06(A)	Exempt
	3745-21-08(B)	0.082 lb CO/MMBtu
	3745-23-06(B)	See A.I.2.b.
	40 CFR 60.40b	0.20 lb NO _x /MMBtu.

2. Additional Terms and Conditions

2.a The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

2.b The requirements of this rule are equivalent to the requirements of 40 CFR 60.40b.

II. Operational Restrictions

1. The permittee shall burn only natural gas in this emissions units.

III. Monitoring and/or Record keeping Requirements

1. The permittee shall comply with the applicable monitoring and record keeping requirements in 40 CFR Part 60.48b and 60.49b.

2. The permittee shall collect and record the following information each month:

a. the volume of natural gas burned by this emission unit in MM scf; and

b. the NO_x emissions in tons per month as determined by multiplying the actual NO_x emission rate in lbs NO_x/MMBtus (as measured by the most recent compliance test) times the volume of natural gas burned per month in MM scf times the higher heating value of 1020 Btus/scf for natural gas and dividing by 2000 lbs/ton.

3. The permittee shall record the tons of NO_x emissions from this emission unit as a rolling, 12-month summation.

4. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

IV. Reporting Requirements

1. The permittee shall comply with the applicable reporting requirements in 40 CFR Part 60.49b

2. The permittee shall submit deviation (excursion) reports that identify the following:

a. each day when a fuel other than natural gas was burned in this emissions unit; and/or

b. each month when the rolling 12-month summation of NO_x emissions exceeded 95.0 tons.

Each report shall be submitted to the City of Toledo, Division of Environmental Services (TDOES) within 30 days after the deviation occurs.

V. Testing Requirements

1. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

- a. the emission testing shall be conducted within 90 days of initial startup;
- b. the emission testing shall be conducted to demonstrate compliance with the allowable mass emissions limitations for NO_x and CO ;
- c. the following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

<u>POLLUTANT</u>	<u>TEST METHOD</u>	<u>LOCATION</u>
NO _x	40	CFR Part 60.46b
CO	10	40 CFR Part 60, Appendix A

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

- d. the test(s) shall be conducted while the emissions unit is operating at its maximum capacity;
- e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to TDOES. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the TDOES's refusal to accept the results of the emission test(s).

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

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

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

a. Emission Limitation:

5 percent opacity as a 6-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9. Alternate, equivalent methods may be used upon approval by the Toledo Division of Environmental Services.

b. Emission Limitation:

0.082 lb CO/MMBtu actual heat input.

Applicable Compliance Method:

The permittee shall use the actual emission rate of CO as measured during the most recent test that demonstrated compliance. If required, the permittee shall demonstrate compliance with this emission limitation in accordance with the methods and procedures specified in Method 10 of 40 CFR Part 60, Appendix A. Alternate, equivalent methods may be used upon approval by the Toledo Division of Environmental Services.

c. Emission Limitation:

0.20 lb NO_x/MMBtu actual heat input.

Applicable Compliance Method:

The permittee shall use the actual emission rate of NO_x as measured during the most recent test that demonstrated compliance. If required, the permittee shall demonstrate compliance with this emission limitation in accordance with the methods and procedures specified in 40 CFR Part 60.46b. Alternate, equivalent methods may be used upon approval by the Toledo Division of Environmental Services.

d. Emission Limitation:

0.002 lb PE/MMBtu of actual heat input for gas.

Applicable Compliance Method:

When firing natural gas, compliance shall be based upon an emission factor of 1.90 lb PE/MM scf of gas and a higher heating value of 1,020 Btu/scf of gas. This emission factor is specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, dated 7/98. If required, the permittee shall demonstrate compliance with this emission limitation in accordance with the methods and procedures

specified in OAC rule 3745-17-03(B)(9). Alternate, equivalent methods may be used upon approval by the Toledo Division of Environmental Services.

e. Emission Limitation:

0.0006 lb SO₂/MMBtu actual heat input for gas.

Applicable Compliance Method:

When firing natural gas, compliance shall be based upon an emission factor of 0.6 lb SO₂/MM scf of gas and a higher heating value of 1,020 Btu/scf of gas. This emission factor is specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, dated 7/98, or use OAC rule 3745-18-04(G)(3). If required, the permittee shall demonstrate compliance with this emission limitation in accordance with the methods and procedures specified in Method 6 of 40 CFR Part 60, Appendix A. Alternate, equivalent methods may be used upon approval by the Toledo Division of Environmental Services.

f. Emission Limitation:

0.005 lb VOC/MMBtu of actual heat input for gas.

Applicable Compliance Method:

When firing natural gas, compliance shall be based upon an emission factor of 5.5 lb VOC/MM scf of gas and a higher heating value of 1,020 Btu/scf of gas. This emission factor is specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, dated 7/98. If required, the permittee shall demonstrate compliance with this emission limitation in accordance with the methods and procedures specified in Method 25 or 25A of 40 CFR Part 60, Appendix A. Alternate, equivalent methods may be used upon approval by the Toledo Division of Environmental Services.

g. Emission Limitation:

95.0 tons NO_x/yr as a rolling, 12-month summation.

Applicable Compliance Method:

The Monitoring and Record keeping requirements of Section A.III.2. and 3 shall be an adequate demonstration of compliance.

h. Emission Limitation:

41.3 tons CO, 1.0 ton PE, 0.3 tons SO₂, and 2.52 tons VOC per calendar year.

Perstorp Polyols Inc

PTI Application: 04-01225

Issued: To be entered upon final issuance

Facility ID: 0448010133

Emissions Unit ID: B002

Applicable Compliance Method:

The exclusive combustion of natural gas in this emissions unit will be considered adequate demonstration of compliance. These limits were established using the maximum burner capacity and operation at 8,760 hrs/yr.

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
B002 - 115 MMBtu natural gas fired boiler with low NOx burner and flue gas recirculation.	None	

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Record keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P804 - Acetaldehyde mfg. plt. and associated equipment.	3745-31-05(A)(3)	The requirements of this rule also include compliance with the requirements of OAC rules 3745-21-09(B)(4), 3745-21-09(EF) and 3745-21-08(B). 1.8 lbs CO/hr, 7.9 tons CO/yr, 0.02 lb TOC/hr; and, 0.1 ton TOC/yr.
	3745-21-09(B)(4)	See A.I.2.a.
	3745-21-09(EF)	See A.I.2.b.
	3745-21-08(B)	See A.I.2.f.
	40 CFR 60.61 subpart III	See A.I.2.c.
Thermal oxidizer combustion emissions.	3745-31-05(A)(3)	The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-10(B)(1). 0.009 lb PE/MMBtu, 0.04 ton PE/yr, 0.003 lb SO ₂ /hr, 0.013 ton SO ₂ /yr, 0.41 lb CO/hr, 1.8 tons CO/yr, 0.027 lb VOC/hr, 0.12 ton VOC/yr, 0.49 lb NO _x /hr, 2.15 tons NO _x /yr; and,

Fugitive VOC leaks (pumps, valves, etc.).	3745-17-07(A)(1)	5 percent opacity from the thermal oxidizer.
	3745-17-10(B)(1)	See A.I.2.d
	3745-18-06(A)	See A.I.2.e
	3745-21-08(B)	Exempt, see A.I.2.d.
	3745-23-06(A) and (B)	See A.I.2.f.
	3745-31-05(A)(3)	See A.I.2.g.
	3745-21-09(DD)	The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-09(DD). See A.I.2.h. 9.5 tons/yr VOC
	40 CFR 60.48 subpart VV	See A.I.2.e.
	40 CFR 63 subpart F and H	See A.I.2.h.
		See A.I.2.i.

2. Additional Terms and Conditions

- 2.a** The permittee shall establish record keeping and reporting requirements consistent with Sections A.III. and A.IV.
- 2.b** The requirements of this rule are equivalent to the requirements of 40 CFR 60.61 subpart III.
- 2.c** Reduce emissions of TOC (minus methane and ethane) by 98 weight percent, or to a TOC (minus methane and ethane) concentration of 20 ppmv on a dry basis corrected to 3 percent oxygen, whichever is less stringent.
- 2.d** The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
- 2.e** The requirements of this rule are equivalent to the requirements of OAC rule 3745-31-05(A)(3).
- 2.f** Minimize CO emissions by use of best available control techniques and operating practices in accordance with best current technology.

- 2.g Minimize NO_x emissions by use of best available control techniques and operating practices in accordance with best current technology.
- 2.h The permittee shall establish a leak detection and repair program consistent with Section III. and IV.
- 2.i The permittee shall comply with the appropriate sections of these regulations.

II. Operational Restrictions

- 1. The permittee shall burn only natural gas in this emissions unit.

III. Monitoring and/or Record keeping Requirements

- 1. The permittee shall keep up-to-date, readily accessible records of the following data measured during each performance test, and also include the following data in the report of the initial performance test required under 40 CFR Section 60.8. The same data specified in this section shall be submitted in the reports of all subsequently required performance tests where the emission control efficiency of a control device or the concentration of TOC is determined.
 - a. The average firebox temperature of the incinerator measured at least every 15 minutes and averaged over the same time period of the performance testing, and
 - b. The percent reduction of TOC determined as specified in subpart 60.614(b) achieved by the incinerator the concentration of TOC (ppm, by volume) determined as specified in 60.614(b) at the outlet of the control device on a dry basis corrected to 3 percent oxygen.
- 2. The permittee shall operate and maintain a continuous temperature monitor and recorder which measures and records the temperature in the firebox of the incinerator when the emissions unit is in operation. Units shall be in degrees Fahrenheit and have an accuracy of ± 1 percent of the temperature being monitored or $\pm 1^{\circ}\text{F}$, whichever is greater. The monitoring and recording device shall be capable of accurately measuring the desired parameter. The temperature monitor and recorder shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, with any modifications deemed necessary by the permittee.
- 3. The permittee shall collect and record the following information for each day for the control equipment:
 - a. A log of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.
 - b. All 3-hour blocks of time (when the emissions unit was in operation) during which the average combustion temperature was more than 50 degrees Fahrenheit below the average combustion temperature during the most recent performance test that demonstrated the emissions unit was in compliance.

4. The permittee shall install, calibrate, maintain, and operate a flow indicator that provides a record of vent stream flow to the incinerator at least once every hour for the affected facility. The flow indicator shall be installed in the vent stream from each affected facility at a point closest to the inlet of the incinerator and before being joined with any other vent stream.
5. The permittee shall keep up-to-date, readily accessible continuous records of the flow indication specified under subpart 60.613(a)(2), as well as up-to-date records of all periods when the vent stream is diverted from the control device or has no flow rate.
6. In order to comply with OAC rule 3745-21-09 (DD) and NSPS Subpart VV, a leak detection and repair program for equipment in the process unit shall be developed and implemented in accordance with the requirements specified in paragraphs (DD)(2)(b) to (DD)(2)(m) of OAC rule 3745-21-09 and NSPS Subpart VV.
7. For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

IV. Reporting Requirements

1. The permittee shall notify the Administrator of the USEPA (Administrator) of the specific provisions of 40 CFR 60.612(60.612(a)(b) or (c)) which the permittee has elected to comply. Notification shall be submitted with the notification of initial start-up required by subpart 60.7(a)(3). If the permittee elects at a later date to use an alternative provision of subpart 60.612 with which to comply, then the Administrator shall be notified by the permittee 90 days before implementing a change and, upon implementing the change, a performance test shall be performed as specified by subpart 60.614 within 180 days.
2. The permittee shall submit semiannual summaries of the following records:
 - a. A log of operating time for the capture (collection) system, control device, monitoring equipment, and the associated emissions unit.
 - b. All 3-hour blocks of time (when the emissions unit was in operation) during which the average combustion temperature was more than 50 degrees Fahrenheit below the average combustion temperature of the exhaust gases during the most recent performance test that demonstrated the emissions unit was in compliance.

These semiannual reports shall be submitted by January 31 and July 31 and shall cover the records for the previous semiannual period.

3. In order to maintain compliance with OAC rule 3745-21-09 (DD) semiannual reports shall be submitted to the TDES by January 31 and July 31 and shall include the following information for the preceding semiannual periods:

- a. the process unit identification;
 - b. the number of pumps in light liquid service excluding those pumps designated for no detectable emissions under the provision of paragraph (DD) (2) (d) (i) of this rule and those pumps complying with paragraph (DD) (2)(d)(iii) of this rule;
 - c. the number of valves in gas/vapor service or in light liquid service excluding those valves designated for no detectable emission under the provision of paragraph (DD) (2) (d) (iv) of this rule and those valves subject to the alternative standard for monitoring under the provision of paragraph (DD)(2)(d)(v) of this rule;
 - d. the number of compressors excluding those compressors designated for no detectable emissions under the provision of paragraph (DD) (3) (c) of this rule and those compressors complying with paragraph (DD) (3) (d) or (DD) (3) (e) of this rule;
 - e. for each month during the semiannual period:
 - i. the number of pumps in light liquid service for which leaks were detected as described in paragraph (DD) (2) (g) of this rule;
 - ii. the number of pumps in light liquid service for which leaks were not repaired within fifteen calendar days after the date of leak detection;
 - iii. the number of valves in gas/vapor service or in light liquid service for which leaks were detected as described in paragraph (DD) (2) (g) of this rule;
 - iv. the number of valves in gas/vapor service or in light liquid service for which leaks were not repaired within fifteen calendar days after the date of leak detection;
 - v. the number of compressors for which leaks were detected as described in paragraph (DD) of this rule;
 - vi. the number of compressors for which leaks were not repaired within fifteen calendar days after the date of leak detection; and
 - vii. the facts that explain each delay of repair allowed pursuant to paragraph (DD) (11) of this rule; and
 - viii. the dates of process unit shutdowns that occurred within the semiannual period.
4. The permittee shall submit to the Administrator semiannual reports of all periods recorded under subpart 60.615(d) when the vent stream is diverted from the control device or has no flow rate. The initial report shall be submitted within 6 months after the initial start-up-date. Subsequent reports shall be submitted to the Administrator by January 31 and July 31 and shall include information for the preceding semiannual period.

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

V. Testing Requirements

- 1. The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:
 - a. The emission testing shall be conducted within 60 days after achieving the maximum production rate at which the emission unit will be operated, but not later than 180 days after initial startup.
 - b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emissions limitations for CO along with the destruction efficiency of TOC (minus methane and ethane).
 - c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

<u>POLLUTANT</u>	<u>TEST METHOD</u>	<u>LOCATION</u>
CO	10	40 CFR Part 60, Appendix A

- d. The test methods which must be employed to determine TOC in the control device outlet and the concentration of TOC in the inlet when the reduction efficiency of the control device is to be determined are as follows:

<u>POLLUTANT</u>	<u>TEST METHOD</u>	<u>LOCATION</u>
TOC	1 or 1A	40 CFR Part 60, Appendix A and 60.614 2, 2A, 2C, or 2D 40 CFR Part 60, Appendix A and 60.614 340 CFR Part 60, Appendix A and 60.614 440 CFR Part 60, Appendix A and 60.614 1840 CFR Part 60, Appendix A and 60.614

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

- e. The test(s) shall be conducted while the emissions unit is operating at its maximum capacity and flows, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.
 - f. 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 OAC rule 3745-21-10. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration of the potential presence of interfering gases.
 - g. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).
 - h. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
 - i. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.
- 2.** In order to maintain compliance with OAC rule 3745-21-09 (DD), the permittee shall collect and report the following information to the TDES:
- a. for compliance tests required under paragraph (DD)(7)(c) and (DD)(9)(c) of this rule, the requirements of paragraphs (A)(3) and (A)(4) of rule 3745-21-10 of the Administrative Code (pertaining to notification of intent to test) shall be met. The results of such compliance tests shall be reported to the TDES within thirty days after the test date;
 - b. the results of compliance tests required under paragraph (DD)(4)(c) of this rule shall be reported semiannually to the TDES. The semiannual reports shall be submitted by January 31 and July 31 and shall include information for the preceding semiannual period.
- 3.** The test method for determining compliance with OAC rule 3745-21-09 (DD) is specified in OAC rule 3745-21-10 (F) except as otherwise provided in paragraphs (DD)(2)(c) and (DD)(2)(d) of OAC rule 3745-21-09.

4. Compliance with the emission limitation(s) of these terms and conditions shall be determined in accordance with the following method(s):

a. Emission Limitation:

1.8 lbs CO/hr process and 0.41 lb CO/hr combustion.

Applicable Compliance Method:

The permittee shall use the results of the initial compliance test conducted in accordance with the procedures in Method 10 of 40 CFR Part 60, Appendix A for determining CO emissions.

b. Emission Limitation:

7.9 tons CO/yr process and 1.8 tons CO/yr combustion.

Applicable Compliance Method:

The permittee shall multiply the CO emission rate (in lbs CO/hr) as determined by the last emission test that demonstrated compliance by the annual hours of operation in Section A III.3.a. for this emission unit and divide by 2,000 lbs/ton.

c. Emission Limitation:

0.02 lb TOC/hr.

Applicable Compliance Method:

The permittee shall use the results of the initial compliance test conducted in accordance with the procedures in Method 18 of 40 CFR Part 60, Appendix A for determining TOC emissions.

d. Emission Limitation:

0.1 ton TOC/yr.

Applicable Compliance Method:

The permittee shall multiply the TOC emission rate (in lbs TOC/hr) as determined by the last emission test that demonstrated compliance by the annual hours of operation in Section A III.3.a. for this emission unit and divide by 2,000 lbs/ton.

e. Emission Limitation:

Reduce emissions of TOC (minus methane and ethane) by 98 weight percent, or to a TOC (minus methane and ethane) concentration of 20 ppmv on a dry basis corrected to 3 percent oxygen, whichever is less stringent.

Applicable Compliance Method:

The permittee shall use the results of the initial compliance test conducted in accordance with the procedures in Method 18 of 40 CFR Part 60, Appendix A for determining TOC emissions (in lbs TOC/hr) for the inlet and outlet of the control system. The % reduction shall be determined by subtracting the outlet emission rate from the inlet emission rate and dividing that amount by the inlet emission rate and multiplying by 100%.

f. Emission Limitation:

0.009 lb PE/hr

Applicable Compliance Method:

When firing natural gas, compliance shall be based upon an emission factor of 1.90 lb PE/MM scf of gas and a higher heating value of 1,020 Btu/scf of gas. This emission factor is specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, dated 7/98. If required, the permittee shall demonstrate compliance with this emission limitation in accordance with the methods and procedures specified in OAC rule 3745-17-03(B)(9). Alternate, equivalent methods may be used upon approval by the Toledo Division of Environmental Services.

g. Emission Limitation:

0.003 lb of SO₂/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be based upon an emission factor of 0.6 lb SO₂ /MM scf of gas, a higher heating value of 1,020 Btu/scf of gas and the maximum capacity of the burner in MMBtu/hr. This emission factor is specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, dated 7/98, or use OAC rule 3745-18-04(G)(3). If required, the permittee shall demonstrate compliance with this

emission limitation in accordance with the methods and procedures specified in Method 6 of 40 CFR Part 60, Appendix A. Alternate, equivalent methods may be used upon approval by the Toledo Division of Environmental Services.

h. Emission Limitation:

0.027 lb of VOC/hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be based upon an emission factor of 5.5 lb VOC /MM scf of gas, a higher heating value of 1,020 Btu/scf of gas and the maximum capacity of the burner in MMBtu/hr. This emission factor is specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, dated 7/98, or use OAC rule 3745-18-04(G)(3). If required, the permittee shall demonstrate compliance with this emission limitation in accordance with the methods and procedures specified in Method 25 of 40 CFR Part 60, Appendix A. Alternate, equivalent methods may be used upon approval by the Toledo Division of Environmental Services.

i. Emission Limitation:

0.049 lb NO_x /hr.

Applicable Compliance Method:

When firing natural gas, compliance shall be based upon an emission factor of 100 lb NO_x/MM scf of gas, a higher heating value of 1,020 Btu/scf of gas and the maximum capacity of the burner in MMBtu/hr. This emission factor is specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, dated 7/98. If required, the permittee shall demonstrate compliance with this emission limitation in accordance with the methods and procedures specified in Method 7 of 40 CFR Part 60, Appendix A. Alternate, equivalent methods may be used upon approval by the Toledo Division of Environmental Services.

j. Emission Limitation:

0.04 ton PE, 0.013 ton SO₂, 0.12 ton VOC and 2.15 tons NO_x per calendar year.

Applicable Compliance Method:

The combustion of commercially available natural gas in this emissions unit will be considered adequate demonstration of compliance. These emission limits were based on maximum burner capacity and 8,760 hrs/yr of operation.

k. Emission Limitation:

5 percent opacity as, a 6 minute average except as provided by rule.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9. Alternate, equivalent methods may be used upon approval by the Toledo Division of Environmental Services.

1. Emission Limitation:

9.5 tons VOC/yr (fugitive).

Applicable Compliance Method:

The permittee shall use the emission factors from "Control Techniques for Fugitive VOC Emissions from Chemical Process Facilities" EPA/625/R-93/005 March 1994 Table 7-2 and the number of pumps, valves, flanges, etc. to calculate the lbs/hr of fugitive VOC emissions. The annual fugitive VOC emissions (in tons VOC/yr) shall be calculated by multiplying lbs/hr emission rate by the annual hours of operation of the equipment and dividing by 2000 lbs/ton.

VI. Miscellaneous Requirements

1. Due to the length of the following regulations they are incorporated by reference:

OAC rule 3745-21-09 (EE)
3745-21-09 (B) (4)
3745-21-09 (DD)

NSPS Subpart III
NSPS Subpart VV
40 CFR Section 63 Subparts F, G & H

2. It is Perstorp Polyols, Inc. responsibility to review these regulations to ensure compliance and to incorporate any requirements of the regulations into the design of P804. This includes any record keeping and reporting requirements.

Perstorp Polyols Inc

PTI Application: 04-01225

Issued: To be entered upon final issuance

Facility ID: 0448010133

Emissions Unit ID: P804

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
P804 - Acetaldehyde mfg. plt. with thermal incinerator and associated equipment.	None	

2. **Additional Terms and Conditions**

- 2.a None

II. Operational Restrictions

None

III. Monitoring and/or Record keeping Requirements

1. The permit to install for this emissions unit (P804) was evaluated based on the actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and the SCREEN 3.0 model. The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant:

Pollutant: Acetaldehyde

TLV (ug/m3): 33,200

Maximum Hourly Emission Rate (lbs/hr): 0.02

Predicted 1 Hour Maximum Ground-Level Concentration (ug/m3): 0.5360

MAGLC (ug/m3): 790

Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include 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 compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value 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 pollutant with a listed TLV that was proposed in the application and modeled; and
- c. any 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 "Air Toxic Policy" 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(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the "Air Toxic Policy":

- a. a description of the parameters changed (composition of materials, new pollutants emitted, change in stack/ exhaust parameters, etc.);
- b. documentation of its evaluation and determination that the changed emissions unit still satisfies the "Air Toxic Policy"; and
- c. where computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the "Air Toxic Policy" for the change.

IV. Reporting Requirements

None

Perstorp Polyols Inc

PTI Application: 04-01225

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Facility ID: 0448010133

Emissions Unit ID: P804

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

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

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
T022 - Ethanol storage tank with internal floating roof.	3745-31-05(A)(3)	The requirements of this rule also include compliance with the requirements of OAC rule 3745-21-07(D)(1). 0.11 ton VOC/yr.
	3745-21-09(L)(1)(a)(i)	See A.I.2.a
	3745-21-07(D)(1)	See A.I.2.b
	3745-21-07(D)(2)	See A.I.2.d
	40 CFR 60.111b subpart Kb	See A.I.2.c

2. Additional Terms and Conditions

- 2.a The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).
- 2.b The requirements of this rule are equivalent to the requirements of 40 CFR 60.111b subpart Kb
- 2.c The permittee shall install controls meeting the requirements of 40 CFR 60.112b, NSPS Subpart K_b.
- 2.d The permittee shall install a permanent submerged fill pipe with the discharge opening entirely submerged when the liquid level is six inches above the bottom of the tank; or when applied to a tank which is loaded from the side, a fill pipe with the discharge opening entirely submerged when the liquid level is eighteen inches above the bottom of the tank.

II. Operational Restrictions

None

III. Monitoring and/or Record keeping Requirements

1. The permittee shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel.
2. The permittee shall maintain a record of the volatile organic liquid (VOL) stored, the period of storage, and the maximum true vapor pressure of that VOL during the respective storage period.
3. Available data on the storage temperature may be used to determine the maximum true vapor pressure as determined below.
 - a. For vessels operated above or below ambient temperatures, the maximum true vapor pressure is calculated based upon the highest expected calendar-month average of the storage temperature. For vessels operated at ambient temperatures, the maximum true vapor pressure is calculated based upon the maximum local monthly average ambient temperature as reported by the National Weather Service.
 - b. For liquids, the vapor pressure:
 - i. May be obtained from standard reference texts; or
 - ii. Determined by ASTM Method D2879-83 (incorporated by reference - see 40 CFR 60.17); or
 - iii. Measured by an appropriate method approved by the Administrator; or
 - iv. Calculated by an appropriate method approved by the Administrator.
4. The permittee shall keep a record of each inspection performed as required by the *Testing and Procedures, NSPS Subpart K_b* (40 CFR 60.113b). Each record shall identify the storage vessel on which the inspection was performed and shall contain the date the vessel was inspected and the observed condition of each component of the control equipment (seals, internal floating roof, and fittings).
5. All records required shall be maintained by the permittee for at least 2 years, except the record required by Section A.III.1 which will be kept for the life of the source.

IV. Reporting Requirements

1. The permittee shall furnish the Administrator and the Toledo Division of Environmental Services (TDES) with a report that describes the control equipment and certifies that the control equipment meets the requirements listed under the *Standards for volatile organic compounds (VOC), NSPS K_b (40 CFR 60.112b)* and *Testing and procedures, NSPS K_b (40 CFR 60.113b)*. This report shall be an attachment to the notification required by 40 CFR 60.7(a)(3).
2. If any of the conditions described in Section A.V.1 are detected during the annual visual inspection required by Section A.V.1., a report shall be furnished by the permittee to the Administrator and the TDES within 30 days of the inspection. Each report shall identify the storage vessel, the nature of the defects, and the date the storage vessel was emptied or the nature of and date the repair was made.
3. After each inspection required by Section A.V.1 that finds holes or tears in the seal or seal fabric, or defects in the internal floating roof, or other control equipment defects, the permittee shall furnish a report to the Administrator and the TDES within 30 days of the inspection. The report shall identify the storage vessel and the reason it did not meet the specifications of *Standard for volatile organic compounds (VOC), NSPS K_b (40 CFR 60.112b)* or the *Testing and procedures, NSPS Subpart kb (40 CFR 60.113b)* and list each repair made.

V. Testing Requirements

1. The permittee shall comply with the *Tests and Procedures* of NSPS K_b, (40 CFR 60.113b).
2. Compliance with the emission limitation(s) and/or control measure(s) of these terms and conditions shall be determined in accordance with the following method(s):
 - a. Emission Limitation:

0.11 ton VOC/yr.

Applicable Compliance Method:

The permittee shall use the U.S. EPA program Tanks 4.0 using the actual annual throughput and annual average vapor pressure.
 - b. Control Measure:

Submerged fill pipe.

Perstorp Polyols Inc

PTI Application: 04-01225

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Emissions Unit ID: T022

Applicable Compliance Method:

A submerged fill pipe means any fill pipe with the discharge opening entirely submerged when the liquid level is six inches above the bottom of the tank; or when applied to a tank which is loaded from the side, shall mean any fill pipe with the discharge opening entirely submerged when the liquid level is eighteen inches above the bottom of the tank.

VI. Miscellaneous Requirements

None

B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
T022 - Ethanol storage tank with internal floating roof.	None	

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Record keeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

Modeling to demonstrate compliance with the Ohio EPA's "Air Toxic Policy" was not necessary because the emissions unit's maximum annual emissions for each toxic compound will be less than 1.0 ton. OAC Chapter 3745-31 requires permittees to apply for and obtain a new or modified permit to install prior to making a "modification" as defined by OAC rule 3745-31. The permittee is hereby advised that changes in the composition of the materials, or use of new materials, that would cause the emissions of any pollutant that has a listed TLV to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new permit to install.

NEW SOURCE REVIEW FORM B

PTI Number: 04-01225

Facility ID: 0448010133

Emissions Unit ID: T023

FACILITY NAME Perstorp Polyols, Inc.

FACILITY DESCRIPTION 1-115 MMBtu/hr natural gas fired boiler, 2 storage tanks and Acetaldehyde Mfg plant with associated equipment. CITY/TWP Toledo

SIC CODE 2869 SCC CODE 10300601 EMISSIONS UNIT ID B002

EMISSIONS UNIT DESCRIPTION 115 MMBtu natural gas fired boiler with low NOx burner and flue gas recirculation.

DATE INSTALLED 02/02

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter	N/A				
PM ₁₀	Unclassified	0.002 lb/MMBtu	1.0 ton/yr	0.002 lb/MMBtu	1.0 ton/yr
Sulfur Dioxide	Non-Attainment	0.0006 lb/MMBtu	0.3 ton/yr	0.0006 lb/MMBtu	0.3 ton/yr
Organic Compounds	Attainment	0.005 lb/MMBtu	2.52 tons/yr	0.005 lb/MMBtu	2.52 tons/yr
Nitrogen Oxides	Attainment	0.20 lb/MMBtu	95.0 tons/yr	0.20 lb/MMBtu	95.0 tons/yr
Carbon Monoxide	Attainment	0.082 lb/MMBtu	41.3 tons/yr	0.082 lb/MMBtu	41.3 tons/yr
Lead	Attainment	N/A	N/A	N/A	N/A
Other: Air Toxics	Unclassified	N/A	N/A	N/A	N/A

APPLICABLE FEDERAL RULES:

NSPS? **Db** NESHAP? No PSD? No OFFSET POLICY? No

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination Bat is firing natural gas, low NO_x burner with flue gas re-circulation. Compliance with NSPS Db.

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? No

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

NEW SOURCE REVIEW FORM B

PTI Number: 04-01225

Facility ID: 0448010133

FACILITY NAME Perstorp Polyols, Inc.

FACILITY DESCRIPTION 1-115 MMBtu/hr natural gas fired boiler, 2 storage tanks and Acetaldehyde Mfg plant with associated equipment. CITY/TWP Toledo

AIR TOXICS MODELING PERFORMED*? _____ YES _____ NO

IDENTIFY THE AIR CONTAMINANTS: _____

NEW SOURCE REVIEW FORM B

PTI Number: 04-01225

Facility ID: 0448010133

FACILITY NAME Perstorp Polyols, Inc.

FACILITY DESCRIPTION 1-115 MMBtu/hr natural gas fired boiler, 2 storage tanks and Acetaldehyde Mfg plant with associated equipment. CITY/TWP Toledo

SIC CODE 2869 SCC CODE 30112012 EMISSIONS UNIT ID P804

EMISSIONS UNIT DESCRIPTION Acetaldehyde mfg. plt. with thermal incinerator and associated equipment.

DATE INSTALLED 02/02

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter	N/A	N/A	N/A	N/A	N/A
PM ₁₀	Unclassified	0.009 lb/hr	0.04 ton/yr	0.009 lb/hr	0.04 ton/yr
Sulfur Dioxide	Non-Attainment	0.003 lb/hr	0.013 ton/yr	0.003 lb/hr	0.013 ton/yr
Organic Compounds	Attainment	0.02 lb/hr proc. 0.027 lb/hr comb.	0.1 ton/yr proc. 0.12 ton/yr comb. 9.5 tons/yr fug.	0.02 lb/hr proc. 0.027 lb/hr comb.	0.1 ton/yr proc. 0.12 ton/yr comb. 9.5 tons/yr fug.
Nitrogen Oxides	Attainment	0.49 lb/hr	2.19 tons/yr	0.49 lb/hr	2.19 tons/yr
Carbon Monoxide	Attainment	1.8 lb/hr proc. 0.41 lb/hr comb.	7.9 ton/yr proc. 1.8 tons/yr comb.	1.8 lb/hr proc. 0.41 lb/hr comb.	7.9 ton/yr proc. 1.8 tons/yr comb.
Lead	Attainment	N/A	N/A	N/A	N/A
Other: Air Toxics	Unclassified				

APPLICABLE FEDERAL RULES:

NSPS? **III, VV,**

NESHAP? **40 CFR 63**

PSD? No

OFFSET POLICY? No

subpart F, G & H

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination Bat is thermal incineration and compliance with NSPS III and a leak detection and repair program that complies with NSPS VV.

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? Yes

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$ _____

NEW SOURCE REVIEW FORM B

PTI Number: 04-01225

Facility ID: 0448010133

FACILITY NAME Perstorp Polyols, Inc.

FACILITY DESCRIPTION	1-115 MMBtu/hr natural gas fired boiler, 2 storage tanks and Acetaldehyde Mfg plant with associated equipment.	CITY/TWP	Toledo
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IDENTIFY THE AIR CONTAMINANTS: _____

NEW SOURCE REVIEW FORM B

PTI Number: 04-01225

Facility ID: 0448010133

FACILITY NAME Perstorp Polyols, Inc.

FACILITY DESCRIPTION 1-115 MMBtu/hr natural gas fired boiler, 2 storage tanks and Acetaldehyde Mfg plant with associated equipment. CITY/TWP Toledo