



Michigan Department Of Environmental Quality
Air Quality Division

EFFECTIVE DATE: December 1, 2003

REVISION DATE: September 14, 2005, January 8, 2007

ISSUED TO

BASF Corporation, Chemical Plants

State Registration Number (SRN): B4359

LOCATED AT

1609 Biddle Avenue, Wyandotte, Michigan 48192

RENEWABLE OPERATING PERMIT

Permit Number: MI-ROP-B4359-2003b

Expiration Date: December 1, 2008

Administratively Complete ROP Renewal Application Due Between June 1, 2007 & June 1, 2008

This Renewable Operating Permit (ROP) is issued in accordance with and subject to Section 5506(3) of Article II, Chapter 1, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Pursuant to Michigan Air Pollution Control Rule 210(1), this ROP constitutes the permittee's authority to operate the stationary source identified above in accordance with the general conditions, special conditions and attachments contained herein. Operation of the stationary source and all emission units listed in the permit are subject to all applicable future or amended rules and regulations pursuant to PA 451 and the federal Clean Air Act.

SOURCE-WIDE PERMIT TO INSTALL

Permit Number: MI-PTI-B4359-2003b

This Permit to Install (PTI) is issued in accordance with and subject to Section 5505(5) of Article II, Chapter 1, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Pursuant to Michigan Air Pollution Control Rule 214a, the terms and conditions herein, identified by the underlying applicable requirement citation of Rule 201(1)(a), constitute a federally enforceable PTI. The PTI terms and conditions do not expire and remain in effect unless the criteria of Rule 201(6) are met. Operation of all emission units identified in the PTI is subject to all applicable future or amended rules and regulations pursuant to PA 451 and the federal Clean Air Act.

Michigan Department of Environmental Quality

Lynn Fiedler, Permit Section Supervisor

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**STATE OF MICHIGAN
RENEWABLE OPERATING PERMIT**

BASF Corporation, Chemical Plants

SECTION 01

STEAM FACILITY

SRN: B4359

LOCATED AT

1609 Biddle Avenue, Wyandotte, Michigan

Permit Number: MI-ROP-B43259-2003b

Effective Date: December 1, 2003

Revision Date: January 4, 2007

Expiration Date: December 1, 2008

AUTHORITY AND ENFORCEABILITY

For the purpose of this permit, the **permittee** is defined as any person who owns or operates an emission unit at a stationary source for which this permit has been issued. The department is defined in Rule 104(d) as the Director of the Michigan Department of Environmental Quality (MDEQ) or his or her designee.

The permittee shall comply with all specific details in the permit terms and conditions and the cited underlying applicable requirements. All terms and conditions in this ROP are both federally enforceable and state enforceable unless otherwise footnoted. Certain terms and conditions are applicable to most stationary sources for which an ROP has been issued. These general conditions are included in Part A of this ROP. Other terms and conditions may apply to a specific emission unit, several emission units which are represented as a flexible group, or the entire stationary source which is represented as a source-wide group. Special conditions are identified in Parts B, C, D and/or the appendices.

In accordance with Rule 213(2)(a), all underlying applicable requirements will be identified for each ROP term or condition. All terms and conditions that are included in a Permit to Install (PTI), are streamlined or subsumed, or are state-only enforceable will be noted as such.

In accordance with Section 5507 of Article II, Chapter 1, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, the permittee has included in the ROP application a compliance certification, a schedule of compliance, and a compliance plan. For applicable requirements with which the source is in compliance, the source will continue to comply with these requirements. For applicable requirements with which the source is not in compliance, the source will comply with the detailed schedule of compliance requirements that are incorporated as an appendix in this ROP. Furthermore, for any applicable requirements effective after the date of issuance of this ROP, the stationary source will meet the requirements on a timely basis, unless the underlying applicable requirement requires a more detailed schedule of compliance.

Issuance of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.

A-1. GENERAL CONDITIONS

Permit Enforceability

- All conditions in this permit are both federally enforceable and state enforceable unless otherwise noted. **(R 336.1213(5))**
- Those conditions that are hereby incorporated in a state-only enforceable Source-wide Permit to Install (PTI) pursuant to Rule 201(2)(d) are designated by Footnote 1. **(R 336.1213(5)(a), R336.1214a(5))**
- Those conditions that are hereby incorporated in federal enforceable Source-wide PTI No. MI-PTI-B4359-2003 pursuant to Rule 201(2)(c) are designated by Footnote 2. **(R 336.1213(5)(b), R 336.1214a(3))**

General Provisions

1. The permittee shall comply with all conditions of this ROP. Any ROP noncompliance constitutes a violation of Article II, Chapter 1, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451), and is grounds for enforcement action, for ROP revocation or revision, or for denial of the renewal of the ROP. All terms and conditions of this ROP that are designated as federally enforceable are enforceable by the Administrator of the United States Environmental Protection Agency (EPA) and by citizens under the provisions of the federal Clean Air Act (CAA). Any terms and conditions based on applicable requirements which are designated as "state only" are not enforceable by the EPA or citizens pursuant to the CAA. **(R 336.1213(1)(a))**
2. 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 conditions of this ROP. **(R 336.1213(1)(b))**
3. This ROP may be modified, revised, or revoked for cause. The filing of a request by the permittee for a permit modification, revision, or termination, or a notification of planned changes or anticipated noncompliance does not stay any ROP term or condition. This does not supersede or affect the ability of the permittee to make changes, at the permittee's own risk, pursuant to Rules 215 and 216. **(R 336.1213(1)(c))**
4. The permittee shall allow the department, or an authorized representative of the department, upon presentation of credentials and other documents as may be required by law and upon stating the authority for and purpose of the investigation, to perform any of the following activities **(R 336.1213(1)(d))**:
 - a. Enter, at reasonable times, a stationary source or other premises where emissions-related activity is conducted or where records must be kept under the conditions of the ROP.
 - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the ROP.
 - c. Inspect, at reasonable times, any of the following:
 - i. Any stationary source.
 - ii. Any emission unit.
 - iii. Any equipment, including monitoring and air pollution control equipment.
 - iv. Any work practices or operations regulated or required under the ROP.
 - d. As authorized by Section 5526 of Act 451, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the ROP or applicable requirements.
5. The permittee shall furnish to the department, within a reasonable time, any information the department may request, in writing, to determine whether cause exists for modifying, revising, or revoking the ROP or to determine compliance with this ROP. Upon request, the permittee shall also furnish to the department copies of any records that are required to be kept as a term or condition of this ROP. For information which is claimed by the permittee to be confidential, consistent with the requirements of 1976 PA 442, MCL §15.231 et seq., and

known as the Freedom of Information Act, the person may also be required to furnish the records directly to the EPA together with a claim of confidentiality. **(R 336.1213(1)(e))**

6. A challenge by any person, the Administrator of the EPA, or the department to a particular condition or a part of this ROP shall not set aside, delay, stay, or in any way affect the applicability or enforceability of any other condition or part of this ROP. **(R 336.1213(1)(f))**
7. The permittee shall pay fees consistent with the fee schedule and requirements pursuant to Section 5522 of Act 451. **(R 336.1213(1)(g))**
8. This ROP does not convey any property rights or any exclusive privilege. **(R 336.1213(1)(h))**

Equipment & Design

9. Any collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in Rule 370(2). **(R 336.1370)**
10. Any air cleaning device shall be installed, maintained, and operated in a satisfactory manner and in accordance with the Michigan Air Pollution Control rules and existing law. **(R 336.1910)**

Emission Limits

11. Except as provided in subrules 2, 3, and 4 of Rule 301, a person shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of a density greater than the most stringent of Rule 301(1)(a) or (b) unless otherwise specified in this ROP. The grading of visible emissions shall be determined in accordance with Rule 303. **(R 336.1301(1) in pertinent part):**
 - a. A 6-minute average of 20% opacity, except for one 6-minute average per hour of not more than 27% opacity.
 - b. A limit specified by an applicable federal new source performance standard.
12. The permittee shall not cause or permit the emission of an air contaminant or water vapor in quantities that cause, alone or in reaction with other air contaminants, either of the following:
 - a. Injurious effects to human health or safety, animal life, plant life of significant economic value, or property. **¹(R 336.1901(a))**
 - b. Unreasonable interference with the comfortable enjoyment of life and property. **¹(R 336.1901(b))**

Testing/Sampling

13. The department may require the owner or operator of any source of an air contaminant to conduct acceptable performance tests, at the owner's or operator's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001(1). **(R 336.2001)**
14. Any required performance testing shall be conducted in accordance with Rule 1001(2), Rule 1001(3) and Rule 1003. **(R 336.2001(2), R 336.2001(3), R 336.2003(1))**
15. Any required test results shall be submitted to the Air Quality Division (AQD) in the format prescribed by the applicable reference test method within 60 days following the last date of the test. **(R 336.2001(4))**

Monitoring/Recordkeeping

16. Records of any periodic emission or parametric monitoring required in this ROP shall include the following information specified in Rule 213(3)(b)(i), where appropriate **(R 336.1213(3)(b))**:
 - a. The date, location, time, and method of sampling or measurements.
 - b. The dates the analyses of the samples were performed.
 - c. The company or entity that performed the analyses of the samples.
 - d. The analytical techniques or methods used.
 - e. The results of the analyses.
 - f. The related process operating conditions or parameters that existed at the time of sampling or measurement.
17. All required monitoring data, support information and all reports, including reports of all instances of deviation from permit requirements, shall be kept and furnished to the department upon request for a period of not less than 5 years from the date of the monitoring sample, measurement, report or application. Support information includes all calibration and maintenance records and all original strip-chart recordings, or other original data records, for continuous monitoring instrumentation and copies of all reports required by the ROP. **(R 336.1213(1)(e), R 336.1213(3)(b)(ii))**

Certification & Reporting

18. Except for the alternate certification schedule provided in Rule 213(3)(c)(iii)(B), any document required to be submitted to the department as a term or condition of this ROP shall contain an original certification by a responsible official which states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. **(R 336.1213(3)(c))**
19. A responsible official shall certify to the appropriate District Office of the AQD and the EPA that the stationary source is and has been in compliance with all terms and conditions contained in the ROP except for deviations that have been or are being reported to the appropriate District Office of the AQD pursuant to Rule 213(3)(c). This certification shall include all the information specified in Rule 213(4)(c)(i) through (v) and shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the certification are true, accurate, and complete. The EPA address is: US EPA, Air Compliance Data - Michigan, Air and Radiation Division, 77 West Jackson Boulevard, Chicago, IL, 60604. **(R 336.1213(4)(c))**
20. The certification of compliance shall be submitted annually for the term of this ROP as detailed in the special conditions, or more frequently if specified in an applicable requirement or in this ROP. **(R 336.1213(4)(c))**
21. The permittee shall promptly report any deviations from ROP requirements and certify the reports. The prompt reporting of deviations from ROP requirements is defined in Rule 213(3)(c)(ii) as follows, unless otherwise described in this ROP **(R 336.1213(3)(c))**:
 - a. For deviations that exceed the emissions allowed under the ROP, prompt reporting means reporting consistent with the requirements of Rule 912 as detailed in Condition 25. All reports submitted pursuant to this paragraph shall be promptly certified as specified in Rule 213(3)(c)(iii).
 - b. For deviations which exceed the emissions allowed under the ROP and which are not reported pursuant to Rule 912 due to the duration of the deviation, prompt reporting means the reporting of all deviations in the semiannual reports required by Rule 213(3)(c)(i). The report shall describe reasons for each deviation and the actions taken to minimize or correct each deviation.
 - c. For deviations that do not exceed the emissions allowed under the ROP, prompt reporting means the reporting of all deviations in the semiannual reports required by Rule 213(3)(c)(i). The report shall describe the reasons for each deviation and the actions taken to minimize or correct each deviation.
22. For reports required pursuant to Rule 213(3)(c)(ii), prompt certification of the reports is described in Rule 213(3)(c)(iii) as either of the following **(R 336.1213(3)(c))**:

- a. Submitting a certification by a responsible official with each report which states that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.
 - b. Submitting, within 30 days following the end of a calendar month during which one or more prompt reports of deviations from the emissions allowed under the ROP were submitted to the department pursuant to Rule 213(3)(c)(ii), a certification by a responsible official which states that, based on information and belief formed after reasonable inquiry, the statements and information contained in each of the reports submitted during the previous month were true, accurate, and complete. The certification shall include a listing of the reports that are being certified. Any report submitted pursuant to Rule 213(3)(c)(ii) that will be certified on a monthly basis pursuant to this paragraph shall include a statement that certification of the report will be provided within 30 days following the end of the calendar month.
23. Semiannually for the term of the ROP as detailed in the special conditions, or more frequently if specified, the permittee shall submit certified reports of any required monitoring to the appropriate District Office of the AQD. All instances of deviations from ROP requirements during the reporting period shall be clearly identified in the reports. **(R 336.1213(3)(c)(i))**
24. On an annual basis, the permittee shall report the actual emissions, or the information necessary to determine the actual emissions, of each regulated air pollutant as defined in Rule 212(6) for each emission unit utilizing the emissions inventory forms provided by the department. **(R 336.1212(6))**
25. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the appropriate District Office of the AQD. The notice shall be provided not later than two business days after the start-up, shutdown, or discovery of the abnormal conditions or malfunction. Notice shall be by any reasonable means, including electronic, telephonic, or oral communication. Written reports, if required under Rule 912, must be submitted to the appropriate District Supervisor within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal conditions or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5) and shall be certified by a responsible official in a manner consistent with the CAA. **(R 336.1912)**

Permit Shield

26. Compliance with the conditions of the ROP shall be considered compliance with any applicable requirements as of the date of ROP issuance, if either of the following provisions is satisfied **(R 336.1213(6)(a)(i), R 336.1213(6)(a)(ii))**:
- a. The applicable requirements are included and are specifically identified in the ROP.
 - b. The permit includes a determination or concise summary of the determination by the department that other specifically identified requirements are not applicable to the stationary source.
- Any requirements identified in Part E of this ROP have been identified as non-applicable to this ROP and are included in the permit shield.
27. Nothing in this ROP shall alter or affect any of the following:
- a. The provisions of Section 303 of the CAA, emergency orders, including the authority of the EPA under Section 303 of the CAA. **(R 336.1213(6)(b)(i))**
 - b. The liability of the owner or operator of this source for any violation of applicable requirements prior to or at the time of this ROP issuance. **(R 336.1213(6)(b)(ii))**
 - c. The applicable requirements of the acid rain program, consistent with Section 408(a) of the CAA. **(R 336.1213(6)(b)(iii))**
 - d. The ability of the EPA to obtain information from a source pursuant to Section 114 of the CAA. **(R 336.1213(6)(b)(iv))**

28. The permit shield shall not apply to provisions incorporated into this ROP through procedures for any of the following:
- Operational flexibility changes made pursuant to Rule 215. **(R 336.1215(5))**
 - Administrative amendments made pursuant to Rule 216(1)(a)(i)-(iv). **(R 336.1216(1)(b)(iii))**
 - Administrative amendments made pursuant to Rule 216(1)(a)(v) until the amendment has been approved by the department. **(R 336.1216(1)(c)(iii))**
 - Minor permit modifications made pursuant to Rule 216(2). **(R 336.1216(2)(f))**
 - State-only modifications made pursuant to Rule 216(4) until the changes have been approved by the department. **(R 336.1216(4)(e))**
29. Expiration of this ROP results in the loss of the permit shield. If a timely and administratively complete application for renewal is submitted not more than 18 months, but not less than 6 months, before the expiration date of the ROP, but the department fails to take final action before the end of the ROP term, the existing ROP does not expire until the renewal is issued or denied, and the permit shield shall extend beyond the original ROP term until the department takes final action. **(R 336.1217(1)(c), R 336.1217(1)(a))**

Revisions

30. For changes to any process or process equipment covered by this ROP that does not require a revision of the ROP pursuant to Rule 216, the permittee must comply with Rule 215. **(R 336.1215, R 336.1216)**
31. A change in ownership or operational control of a stationary source covered by this ROP shall be made pursuant to Rule 216(1). **(R 336.1219(3))**
32. For revisions to this ROP, an administratively complete application shall be considered timely if it is received by the department in accordance with the time frames specified in Rule 216. **(R 336.1210(9))**
33. Pursuant to Rule 216(1)(b)(iii), Rule 216(2)(d) and Rule 216(4)(d), after a change has been made, and until the department takes final action, the permittee shall comply with both the applicable requirements governing the change and the ROP terms and conditions proposed in the application for the modification. During this time period, the permittee may choose to not comply with the existing ROP terms and conditions that the application seeks to change. However, if the permittee fails to comply with the ROP terms and conditions proposed in the application during this time period, the terms and conditions in the ROP are enforceable. **(R 336.1216(1)(c)(3), R 336.1216(2)(d), R 336.1216(4)(d))**

Reopenings

34. A ROP shall be reopened by the department prior to the expiration date and revised by the department under any of the following circumstances:
- If additional requirements become applicable to this stationary source with three or more years remaining in the term of the ROP, but not if the effective date of the new applicable requirement is later than the ROP expiration date. **(R 336.1217(2)(a)(i))**
 - If additional requirements pursuant to Title IV of the CAA become applicable to this stationary source. **(R 336.1217(2)(a)(ii))**
 - If the department determines that the ROP contains a material mistake, information required by any applicable requirement was omitted, or inaccurate statements were made in establishing emission limits or the terms or conditions of the ROP. **(R 336.1217(2)(a)(iii))**
 - If the department determines that the ROP must be revised to ensure compliance with the applicable requirements. **(R 336.1217(2)(a)(iv))**

Renewals

35. For renewal of this ROP, an administratively complete application shall be considered timely if it is received by the department not more than 18 months, but not less than 6 months, before the expiration date of the ROP. **(R 336.1210(7))**

Stratospheric Ozone Protection

36. If the permittee is subject to 40 CFR Part 82 and services, maintains, or repairs appliances except for motor vehicle air conditioners (MVAC), or disposes of appliances containing refrigerant, including MVAC and small appliances, or if the permittee is a refrigerant reclaimer, appliance owner or a manufacturer of appliances or recycling and recovery equipment, the permittee shall comply with all applicable standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F.
37. If the permittee is subject to 40 CFR Part 82 and performs a service on motor (fleet) vehicles when this service involves refrigerant in the MVAC, the permittee is subject to all the applicable requirements as specified in 40 CFR Part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed by the original equipment manufacturer. The term MVAC as used in Subpart B does not include the air-tight sealed refrigeration system used for refrigerated cargo or an air conditioning system on passenger buses using Hydrochlorofluorocarbon-22 refrigerant.

Risk Management Plan

38. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall register and submit to the EPA the required data related to the risk management plan for reducing the probability of accidental releases of any regulated substances listed pursuant to Section 112(r)(3) of the CAA as amended in 68.130. The list of substances, threshold quantities, and accident prevention regulations promulgated under Part 68 do not limit in any way the general duty provisions under Section 112(r)(1).
39. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall comply with the requirements of Part 68 no later than the latest of the following dates as provided in 68.10(a):
- June 21, 1999,
 - Three years after the date on which a regulated substance is first listed under 68.130, or
 - The date on which a regulated substance is first present above a threshold quantity in a process.
40. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall submit any additional relevant information requested by any regulatory agency necessary to ensure compliance with the requirements of 40 CFR Part 68.
41. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall annually certify compliance with all applicable requirements of Section 112(r) as detailed in Rule 213(4)(c)). **(40 CFR Part 68)**

Emission Trading

42. Emission averaging and emission reduction credit trading are allowed pursuant to any applicable interstate or regional emission trading program that has been approved by the Administrator of the EPA as a part of Michigan's State Implementation Plan. Such activities must comply with Rule 215 and Rule 216. **(R 336.1213(12))**

Permit To Install (PTI)

43. The process or process equipment included in this permit shall not be reconstructed, relocated, or modified unless a PTI authorizing such action is issued by the department, except to the extent such action is exempt from the PTI requirements by any applicable rule. ²**(R 336.1201(1))**
44. The department may, after notice and opportunity for a hearing, revoke PTI terms or conditions if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of the PTI or is violating the department's rules or the CAA. ²**(R 336.1201(8), Section 5510 of Act 451, PA 1994)**
45. The terms and conditions of a PTI shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by the PTI. If a new owner or operator submits a written request to the department pursuant to Rule 219 and the department approves the request, this PTI will be amended to reflect the change of ownership or operational control. The request must include all of the information required by subrules (1)(a), (b) and (c) of Rule 219. The written request shall be sent to the appropriate AQD District Supervisor, MDEQ. ²**(R 336.1219)**
46. If the installation, reconstruction, relocation, or modification of the equipment for which PTI terms and conditions have been approved has not commenced within 18 months, or has been interrupted for 18 months, the applicable terms and conditions from that PTI shall become void unless otherwise authorized by the department. Furthermore, the person to whom that PTI was issued, or the designated authorized agent, shall notify the department via the Supervisor, Permit Section, MDEQ, AQD, P. O. Box 30260, Lansing, MI 48909, if it is decided not to pursue the installation, reconstruction, relocation, or modification of the equipment allowed by the terms and conditions from that PTI. ²**(R 336.1201(4))**

Footnotes:

¹This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

B-1. SOURCE-WIDE CONDITIONS

Part B outlines the source-wide terms and conditions that apply to this stationary source. The permittee is subject to these special conditions for the stationary source in addition to the General Conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply to this source, NA (not applicable) has been used in the table. If there are no source-wide conditions, this section will be left blank.

For the purpose of the contiguous site being a synthetic minor for HAPs, all process equipment at the site including equipment covered by other permits, grand-fathered equipment and exempt equipment shall encompass the Chemical Production Plants (SRN B4359), Secondary Plastic Production Plants (SRN M4777), and R&D/Application Centers (SRN M4808) stationary sources.

TABLE B-1.1					
SOURCE-WIDE REQUIREMENTS [for Conditions II.B.1.1, II.B.2.2, III.A.3.2, III.A.3.3 and associated certifications and deviations for these conditions, the term SOURCE-WIDE comprises all process equipment at the site including equipment covered by other permits, grand-fathered equipment and exempt equipment. The site encompasses the Chemical Production Plants (SRN B4359), Secondary Plastic Production Plants (SRN M4777), and R&D/Application Centers (SRN M4808) stationary sources]					
EMISSION UNIT	NA				
Flexible Group ID	NA				
I. DESIGN PARAMETERS					
A. Pollution Control Equipment	NA				
B. Stack/Vent Parameters					
Stack/Vent ID	a. Minimum Height (feet)	b. Maximum Exhaust Dimension (inches)	c. Temp. (°F)	d. Air Flow Rate (acfm)	Applicable Requirement
C. Other Design Parameters					
NA					
II. MATERIAL USAGE/EMISSION LIMITS					
A. Material			Maximum Usage Rate		
NA			NA		
B. Pollutant			Maximum Emission Limit		
1. Each Individual HAP			1. Less than 10.0 tons per 12-month rolling time period as determined at the end of each calendar month, including the individual HAPs emissions from the BASF Corporation M4777, M4808, and B4359 contiguous sites. (R336.1205(1))		
2. Total HAPs			2. Less than 25.0 tons per 12-month rolling time period as determined at the end of each calendar month, including the total HAPs emissions from the BASF Corporation M4777, M4808, and B4359 contiguous sites. (R336.1205(1))		
III. COMPLIANCE EVALUATION					
Records of all of the following shall be maintained on file for a period of 5 years. (R 336.1213(3)(b)(ii))					
A. MONITORING/RECORDKEEPING (R 336.1213(3))					
In Addition To General Requirements in Part A					
1. Continuous Emission Monitoring (CEM) System and Recordkeeping	NA				

TABLE B-1.1	
SOURCE-WIDE REQUIREMENTS [for Conditions II.B.1.1, II.B.2.2, III.A.3.2, III.A.3.3 and associated certifications and deviations for these conditions, the term SOURCE-WIDE comprises all process equipment at the site including equipment covered by other permits, grand-fathered equipment and exempt equipment. The site encompasses the Chemical Production Plants (SRN B4359), Secondary Plastic Production Plants (SRN M4777), and R&D/Application Centers (SRN M4808) stationary sources]	
2. Process Monitoring System and Recordkeeping	
3. Other Monitoring and/or Recordkeeping	<ol style="list-style-type: none"> 1. Permittee shall comply with the applicable requirements of 40 CFR Part 61, Subpart FF, Section 61.356 (Recordkeeping requirements.) (40 CFR 61, Subparts A and FF) 2. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any recordkeeping, reporting or notification special condition. (R336.1205(1)) 3. The permittee shall keep in a satisfactory manner, monthly and previous 12-month emission calculation records for individual HAPs and total HAPs. (R336.1205(1))
B. TESTING/RECORDKEEPING (R 336.1213(3)) In Addition to General Requirements in Part A	
1. Parameter to be Tested/Recorded	
2. Method/Analysis	
3. Frequency and Schedule of Testing/Recordkeeping	
IV. REPORTING	
Reports and Schedules	<ol style="list-style-type: none"> 1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii)) 2. Semiannual reporting of any deviations pursuant to General Condition 23 of Part A. Due March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i)) 3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. Due annually by March 15 for the previous calendar year. (R 336.1213(4)(c)) 4. Permittee shall comply with the applicable requirements of 40 CFR Part 61, Subpart FF, Section 61.357 (Reporting requirements.)(40 CFR 61, Subparts A and FF) <p>See Appendix 2-8.</p>
V. OPERATIONAL PARAMETERS	
NA	

TABLE B-1.1

SOURCE-WIDE REQUIREMENTS [for Conditions II.B.1.1, II.B.2.2, III.A.3.2, III.A.3.3 and associated certifications and deviations for these conditions, the term SOURCE-WIDE comprises all process equipment at the site including equipment covered by other permits, grand-fathered equipment and exempt equipment. The site encompasses the Chemical Production Plants (SRN B4359), Secondary Plastic Production Plants (SRN M4777), and R&D/Application Centers (SRN M4808) stationary sources]

VI. OTHER REQUIREMENTS

1. Permittee shall comply with the applicable requirements of 40 CFR 61, Subparts A (General Provisions) and FF (National Emission Standard for Benzene Waste Operations). The applicable sections of Subpart FF include, but are not necessarily limited to: **(40 CFR 61, Subparts A and FF)**
 - A. 61.342 (Standards: General)
 - B. 61.355 (Test methods, procedures, and compliance methods)
2. Permittee shall comply with the applicable requirements of 40 CFR 61, Subparts A (General Provisions) and M (National Emission Standard for Asbestos). The applicable sections of Subpart M include, but are not necessarily limited to: **(40 CFR 61, Subparts A and M)**
 - A. 61.145 (Standard for demolition and renovation)
 - B. 61.150 (Standard for waste disposal for manufacturing, fabricating, demolition, renovation, and spraying operations)

Footnotes:

¹This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

C-1. EMISSION UNIT CONDITIONS

Part C outlines terms and conditions that are specific to individual emission units listed in the Emission Unit Summary Table. The permittee is subject to the special conditions for each emission unit in addition to the General Conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply, NA (not applicable) has been used in the table. If there are no conditions specific to individual emission units, this section will be left blank.

EMISSION UNIT SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Requirement Table Number
EUSTEBOILER#1	Boiler #1 and associated stack. 49.9 MM BTU/hr maximum heat input boiler with gas/No. 6 fuel oil capacity.	4/1/1981	D-1.1
EUSTEBOILER #2	Boiler #2 and associated stack. 49.9 MM BTU/hr maximum heat input boiler with gas/ No. 6 fuel oil capacity.	4/1/1981	D-1.1
EUSTEBOILER#3	Boiler #3 and associated stack. 49.9 MM BTU/hr maximum heat input boiler with gas/ No. 6 fuel oil/butane capacity.	4/1/1981	D-1.1
EUSTEBOILER #4	Boiler #4 and associated stack. 49.9 MM BTU/hr maximum heat input boiler with gas/ No. 6 fuel oil/butane capacity.	4/1/1981	D-1.1
EUSTENWORKSGR OUNDWATER	The North Works Groundwater Pump and Treat System utilized for on-site groundwater remediation.	12/31/1986	D-1.2

D-1. FLEXIBLE GROUP CONDITIONS

Part D outlines terms and conditions that apply to more than one emission unit. The permittee is subject to the special conditions for each flexible group in addition to the General Conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply, NA (not applicable) has been used in the table. If there are no special conditions that apply to more than one emission unit, this section will be left blank.

FLEXIBLE GROUP SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Flexible Group ID	Emission Unit included in Flexible Group	Requirement Table Number
FGSTEFACILITY	EUSTEBOILER#1, EUSTEBOILER#2, EUSTEBOILER#3, EUSTEBOILER#4	D-1.1
FGSTERULE290	EUSTENWORKSGROUNDWATER	D-1.2

TABLE D-1.1 FGSTEFACILITY FLEXIBLE GROUP REQUIREMENTS					
FLEXIBLE GROUP	Four boilers at the steam facility.				
Emission Units	EUSTEBOILER#1, EUSTEBOILER#2, EUSTEBOILER#3, EUSTEBOILER#4				
I. DESIGN PARAMETERS					
A. Pollution Control Equipment	None				
B. Stack/Vent Parameters	Exhaust gases shall be discharged unobstructed vertically upwards unless otherwise noted.				
Stack/Vent ID	a. Minimum Height (feet)	b. Maximum Exhaust Dimension (inches)	c. Temp. (F)	d. Air Flow Rate (acfm)	Applicable Requirement
NA	NA	NA	NA	NA	NA
C. Other Design Parameters					
NA					
II. MATERIAL USAGE/EMISSION LIMITS					
A. Material		Maximum Usage Rate			
1. Sulfur	0.70 percent sulfur in fuel (percent by weight) (R336.1213(3), 40 CFR 52.1170)				
2. No. 6 Fuel Oil	10,000,000 gallons per year (cumulative for all four boilers) (R336.1213(3))				
B. Pollutants		Maximum Emission Limit			
1. Sulfur Dioxide (SO ₂) emissions from burning No. 6 Fuel Oil.	280 ppmv corrected to 50 percent excess air. Compliance with this requirement/limit shall be considered compliance with all of the following applicable requirement/limits which have been subsumed under this streamlined requirement: (R336.1402(1), R336.1213(3), 40 CFR 52.1170)				
2. PM emissions from any boiler during No. 6 fuel oil usage.	4.50 pounds per hour ² (R336.1201(3))				
III. COMPLIANCE EVALUATION					
Records of all of the following shall be maintained on file for a period of 5 years. (R 336.1213(3)(b)(ii))					
A. MONITORING/RECORDKEEPING (R 336.1213(3)) In Addition to General Requirements in Part A					
1. Continuous Emission Monitoring (CEM) System and Recordkeeping	NA				
2. Process Monitoring System and Recordkeeping	NA				
3. Other Monitoring and/or Recordkeeping	1. Amount of No. 6 fuel oil used annually (R336.1213(3)) 2. Sulfur content analysis of the No. 6 fuel oil for each shipment. (R336.1213(3))				

B. TESTING/RECORDKEEPING (R 336.1213(3)) In Addition to General Requirements in Part A	
1. Parameter to be Tested/Recorded	1. Sulfur content of the No. 6 fuel oil as received (suppliers analysis may be used, but independent analysis must be performed at least once per calendar year when a shipment is received.) (R336.1213(3)) 2. PM emissions while burning No. 6 fuel oil (R336.1213(3))
2. Method/Analysis	1. ASTM Approved Methods (R336.1213(3)) 2. US EPA Reference Method 5 or an appropriate method acceptable to the Department (R336.1213(3))
3. Frequency & Schedule of Testing/Recordkeeping	1. As shipments are received (R336.1213(3)) 2. Within 12 months after burning fuel oil for the first time after the issuance date of this permit (R336.1213(3))
IV. REPORTING	
Reports and Schedules	1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii)) 2. Semiannual reporting of any deviations pursuant to General Condition 23 of Part A. Due March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i)) 3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. Due annually by March 15 for the previous calendar year. (R 336.1213(4)(c)) See Appendix 1-8.
V. OPERATIONAL PARAMETERS	
NA	
VI. OTHER REQUIREMENTS	
NA	

Footnotes:

¹This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).
²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

TABLE D-1.2: FGSTERULE290 FLEXIBLE GROUP REQUIREMENTS					
FLEXIBLE GROUP	EUSTERULE290: Any existing or future emission unit that emits air contaminants which are exempt from the requirements of R336.1201 pursuant to R336.1290. EUSTENWORKSGROUNDWATER: The North Works Groundwater Pump and Treat System utilized for on-site groundwater remediation.				
Emission Units	Each EUSTERULE290, EUSTENWORKSGROUNDWATER				
I. DESIGN PARAMETERS					
A. Pollution Control Equipment					
B. Stack/Vent Parameters	NA				
Stack/Vent ID	a. Minimum Height (feet)	b. Maximum Exhaust Dimension (inches)	c. Temp. (°F)	d. Air Flow Rate (acfm)	Applicable Requirement
NA	NA	NA	NA	NA	NA
C. Other Design Parameters					
NA					
II. MATERIAL USAGE/EMISSION LIMITS					
A. Material	Maximum Usage Rate				
NA	NA				
B. Pollutants	Maximum Emission Limit				
The type of pollutants are categorized below:	This flexible group applies to each emission unit that meets any of the listed emission limit descriptions in one, two and/or three below:				
1. Noncarcinogenic VOCs or non-carcinogenic materials listed in R 336.1122(f).	1. Each emission unit emits only noncarcinogenic volatile organic compounds or noncarcinogenic materials which are listed in R336.1122(f) as not contributing appreciably to the formation of ozone if the total uncontrolled or controlled emissions of air contaminants are not more than 1,000 or 500 pounds per month, respectively. (R336.1290(a)(i))				
2. Other air contaminants with ITSLs or IRSLS greater than or equal to 0.04 µg/m ³ .	2. Each emission unit that the total uncontrolled or controlled emissions of air contaminants are not more than 1,000 or 500 pounds per month (total means the sum of emission limit number one, above, and emission limit no. 2, including parts a, b and c below), respectively, and all the following criteria listed below are met: (R336.1290(a)(ii))				
a. Noncarcinogenic air contaminants with ITSLs greater than or equal to 2.0 µg/m ³ , excluding those listed in emission limit no. 1, above.	a. For noncarcinogenic air contaminants, excluding noncarcinogenic volatile organic compounds and noncarcinogenic materials which are listed in R336.1122(f) as not contributing appreciably to the formation of ozone, with initial threshold screening levels greater than or equal to 2.0 micrograms per cubic meter, the total uncontrolled or controlled emissions shall not exceed 1,000 or 500 pounds per month, respectively. (R336.1290(a)(ii)(A))				
b. Noncarcinogenic air contaminants with ITSLs greater than or equal to 0.04 µg/m ³ and less than 2.0 µg/m ³ , excluding those listed	b. For noncarcinogenic air contaminants, excluding noncarcinogenic volatile organic compounds and noncarcinogenic materials which are listed in R336.1122(f) as not contributing appreciably to the formation of ozone, with initial threshold screening levels greater than or equal to 0.04 microgram per cubic meter and less than 2.0 micrograms per				

**TABLE D-1.2: FGSTERULE290
 FLEXIBLE GROUP REQUIREMENTS**

<p>in emission limit no. 1, above.</p> <p>c. Carcinogenic air contaminants with IRSLS greater than or equal to 0.04 $\mu\text{g}/\text{m}^3$.</p> <p>d. Air contaminants with ITSLs or IRSLS less than 0.04 $\mu\text{g}/\text{m}^3$.</p>	<p>cubic meter, the uncontrolled or controlled emissions shall not exceed 20 or 10 pounds per month, respectively. (R336.1290(a)(ii)(B))</p> <p>c. For carcinogenic air contaminants with initial risk screening levels greater than or equal to 0.04 microgram per cubic meter, the uncontrolled or controlled emissions shall not exceed 20 or 10 pounds per month, respectively. (R336.1290(a)(ii)(C))</p> <p>d. The emission unit shall not emit any air contaminants, excluding noncarcinogenic volatile organic compounds and noncarcinogenic materials which are listed in R336.1122(f) as not contributing appreciably to the formation of ozone, with an initial threshold screening level or initial risk screening level less than 0.04 microgram per cubic meter. (R336.1290(a)(ii)(D))</p>
<p>3. Noncarcinogenic particulate air contaminants with ITSLs greater than 2.0 $\mu\text{g}/\text{m}^3$, excluding nuisance particulate.</p>	<p>3. Each emission unit that emits noncarcinogenic particulate air contaminants and other air contaminants that are exempted under emission limit number one or emission limit number two, above, and all of the following provisions are met: (R336.1290(a)(iii))</p> <p>a. The particulate emissions are controlled by an appropriately designed and operated fabric filter collector or an equivalent control system which is designed to control particulate matter to a concentration of less than or equal to 0.01 pound of particulate per 1,000 pounds of exhaust gases and which does not have an exhaust gas flow rate more than 30,000 actual cubic feet per minute. (R336.1290(a)(iii)(A))</p> <p>b. The visible emissions from the emission unit are not more than 5% opacity in accordance with the methods contained in R 336.1303. (R336.1290(a)(iii)(B))</p> <p>c. The initial threshold screening level for each particulate air contaminant, excluding nuisance particulate, is more than 2.0 micrograms per cubic meter. (R336.1290(a)(iii)(C))</p>
<p>III. COMPLIANCE EVALUATION</p>	
<p>Records of all of the following shall be maintained on file for a period of 5 years. (R336.1213(3)(b)(ii))</p>	
<p>A. MONITORING/RECORDKEEPING (R336.1213(3)) In Addition to General Requirements in Part A</p>	
<p>1. Continuous Emission Monitoring (CEM) System and Recordkeeping</p>	<p>NA</p>
<p>2. Process Monitoring System and Recordkeeping</p>	<p>NA</p>

<p>3. Other Monitoring and/or Recordkeeping</p>	<p>1. The permittee shall maintain records of the following information for each emission unit included in FGSTERULE290 for each calendar month using the methods outlined in Appendix 4. (R336.1213(3))</p> <ul style="list-style-type: none"> a. Records identifying each air contaminant that is emitted. (R336.1213(3)) b. Records identifying if each air contaminant is controlled or uncontrolled. (R336.1213(3)) c. Records identifying if each air contaminant is either carcinogenic or non-carcinogenic. (R336.1213(3)) d. Records identifying the ITSL and IRSL, if established, of each air contaminant that is emitted. (R336.1213(3)) e. Material use and calculations identifying the quality, nature, and quantity of the air contaminant emissions in sufficient detail to demonstrate that the actual emissions of the emission unit meet the emission limits outlined in this table and R336.1290. (R336.1213(3), R 336.1290(c)) <p>2. The permittee shall maintain an inventory of each emission unit that is covered by FGSTERULE290. This inventory shall include the following information. (R336.1213(3))</p> <ul style="list-style-type: none"> a. The permittee shall maintain a written description of each emission unit as it is maintained and operated throughout the life of the emission unit. (R336.1290(b), R336.1213(3)) b. For each emission unit that emits noncarcinogenic particulate air contaminants pursuant to R336.1290(a)(iii), the permittee shall maintain a written description of the control device, including the designed control efficiency and the designed exhaust gas flow rate. (R336.1213(3)) <p>3. For each emission unit that emits noncarcinogenic particulate air contaminants pursuant to R336.1290(a)(iii), the permittee shall perform a monthly visible emission observation of each stack or vent during routine operating conditions. This observation need not be performed using Method 9. The permittee shall keep a written record of the results of each observation. (R336.1213(3))</p> <p>See Appendix 2-4a</p>
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<p>B. TESTING/RECORDKEEPING (R336.1213(3)) In Addition to General Requirements in Part A</p>	
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1. Parameter to be Tested/Recorded	NA
2. Method/Analysis	NA
3. Frequency and Schedule of Testing/Recordkeeping	NA

IV. REPORTING	
Reports and Schedules	<ol style="list-style-type: none"> 1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R336.1213(3)(c)(ii)) 2. Semiannual reporting of deviations pursuant to General Condition 23 of Part A. Due March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R336.1213(3)(c)(i)) 3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. Due annually by March 15 for the previous calendar year. (R336.1213(4)(c)) See Appendix 2-8.
V. OPERATIONAL PARAMETERS	
<ol style="list-style-type: none"> 1. The provisions of FGSTERULE290 apply to each emission unit which is operating pursuant to R336.1290. (R336.1290) 	
VI. OTHER REQUIREMENTS	
NA	

Footnotes:

¹This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

E-1. NON-APPLICABLE REQUIREMENTS

At the time of ROP issuance, the AQD has determined that the requirements identified in the table below are not applicable to this stationary source. This determination is incorporated into the permit shield provisions set forth in the General Conditions in Part A pursuant to Rule 213(6)(a)(ii).

Emission Unit/Flexible Group ID	Non-Applicable Requirement	Justification
FGSTEFACILITY	40 CFR 60, Subpart Dc, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units	The 4 boilers at the steam generating facility are each 49.9 MMBtu/Hr maximum heat input and were installed in 1981 which was prior to the applicable date of June 9, 1989. Therefore these do not meet the installation date requirement in 40 CFR 60, Subpart Dc.

APPENDICES

Appendix 1-1: Abbreviations & Acronyms

The following is an alphabetical listing of abbreviations/acronyms that may be used in this permit.

AQD	Air Quality Division	MM	Million
acfm	Actual cubic feet per minute	MSDS	Material Safety Data Sheet
BACT	Best Available Control Technology	MW	Megawatts
BTU	British Thermal Unit	NA	Not Applicable
°C	Degrees Celsius	NAAQS	National Ambient Air Quality Standards
CAA	Federal Clean Air Act	NESHAP	National Emission Standard for Hazardous Air Pollutants
CAM	Compliance Assurance Monitoring	NMOC	Non-methane Organic Compounds
CEM	Continuous Emission Monitoring	NOx	Oxides of Nitrogen
CFR	Code of Federal Regulations	NSPS	New Source Performance Standards
CO	Carbon Monoxide	NSR	New Source Review
COM	Continuous Opacity Monitoring	PM	Particulate Matter
department	Michigan Department of Environmental Quality	PM-10	Particulate Matter less than 10 microns in diameter
dscf	Dry standard cubic foot	pph	Pound per hour
dscm	Dry standard cubic meter	ppm	Parts per million
EPA	United States Environmental Protection Agency	ppmv	Parts per million by volume
EU	Emission Unit	ppmw	Parts per million by weight
°F	Degrees Fahrenheit	PS	Performance Specification
FG	Flexible Group	PSD	Prevention of Significant Deterioration
GACS	Gallon of Applied Coating Solids	psia	Pounds per square inch absolute
gr	Grains	psig	Pounds per square inch gauge
HAP	Hazardous Air Pollutant	PTE	Permanent Total Enclosure
Hg	Mercury	PTI	Permit to Install
hr	Hour	RACT	Reasonable Available Control Technology
HP	Horsepower	ROP	Renewable Operating Permit
H ₂ S	Hydrogen Sulfide	SC	Special Condition
HVLP	High Volume Low Pressure *	scf	Standard cubic feet
ID	Identification (Number)	sec	Seconds
IRSL	Initial Risk Screening Level	SCR	Selective Catalytic Reduction
ITSL	Initial Threshold Screening Level	SO ₂	Sulfur Dioxide
LAER	Lowest Achievable Emission Rate	SRN	State Registration Number
lb	Pound	TAC	Toxic Air Contaminant
m	Meter	Temp	Temperature
MACT	Maximum Achievable Control Technology	THC	Total Hydrocarbons
MAERS	Michigan Air Emissions Reporting System	tpy	Tons per year
MAP	Malfuction Abatement Plan	µg	Microgram
MDEQ	Michigan Department of Environmental Quality	VE	Visible Emissions
mg	Milligram	VOC	Volatile Organic Compounds
mm	Millimeter	yr	Year

*For High Volume Low Pressure (HVLP) applicators, the pressure measured at the HVLP gun air cap shall not exceed ten (10) pounds per square inch gauge (psig).

Appendix 1-2. Schedule of Compliance

The permittee has certified that this source is in compliance with all applicable requirements as of the date of issuance of this ROP and the permittee shall continue to comply with all applicable requirements listed in this ROP. A detailed Schedule of Compliance is not required. (R336.1213(4)(a), R336.1119(a)(ii))

Appendix 1-3. Monitoring Requirements

Specific monitoring requirement procedures, methods or specifications are detailed in Part A or the appropriate Requirement Tables. Therefore, this appendix is not applicable.

Appendix 1-4. Recordkeeping

Specific recordkeeping requirement formats and procedures are detailed in Part A or the appropriate Requirement Tables. Therefore, this appendix is not applicable.

Appendix 1-5. Testing Procedures

There are no specific testing requirement plans or procedures for this ROP. Therefore, this appendix is not applicable.

Appendix 1-6. Permits to Install/Operate

The following table lists the Permits to Install and/or operate, which relate to the identified Emission Units or Flexible Groups:

Permit to Install/Operate Number	Description of Equipment	Corresponding Emission Unit or Flexible Group ID
C-5639	#1 Steam Generator (Boiler)	FGSTEFACILITY
C-5640	#2 Steam Generator (Boiler)	FGSTEFACILITY
C-5641	#3 Steam Generator (Boiler)	FGSTEFACILITY
C-5642	#4 Steam Generator (Boiler)	FGSTEFACILITY

Appendix 1-7. Emission Calculations

There are no specific emission calculations to be used for this ROP. Therefore, this appendix is not applicable.

Appendix 1-8. Reporting

A. Annual and Deviation Certification Reporting

The permittee shall use the attached approved format for the annual certification of compliance and deviation certification reporting referenced in Section IV of the Requirement Tables. Alternative formats must meet the provisions of R336.1213(4)(c) and R336.1213(3)(c)(i), respectively, and be approved by the AQD District Supervisor.

B. Other Reporting

Specific reporting requirement formats and procedures are detailed in Part A or the appropriate Requirement Tables. Therefore, Part B of this appendix is not applicable.

**STATE OF MICHIGAN
RENEWABLE OPERATING PERMIT**

BASF Corporation, Chemical Plants

SECTION 02

POLYOL MANUFACTURING PLANT

SRN: B4359

LOCATED AT

1609 Biddle Avenue, Wyandotte, Michigan

Permit Number: MI-ROP-B4359-2003b

Effective Date: December 1, 2003

Revision Date: September 14, 2005, January 4, 2007

Expiration Date: December 1, 2008

AUTHORITY AND ENFORCEABILITY

For the purpose of this permit, the **permittee** is defined as any person who owns or operates an emission unit at a stationary source for which this permit has been issued. The department is defined in Rule 104(d) as the Director of the Michigan Department of Environmental Quality (MDEQ) or his or her designee.

The permittee shall comply with all specific details in the permit terms and conditions and the cited underlying applicable requirements. All terms and conditions in this ROP are both federally enforceable and state enforceable unless otherwise footnoted. Certain terms and conditions are applicable to most stationary sources for which an ROP has been issued. These general conditions are included in Part A of this ROP. Other terms and conditions may apply to a specific emission unit, several emission units which are represented as a flexible group, or the entire stationary source which is represented as a source-wide group. Special conditions are identified in Parts B, C, D and/or the appendices.

In accordance with Rule 213(2)(a), all underlying applicable requirements will be identified for each ROP term or condition. All terms and conditions that are included in a Permit to Install (PTI), are streamlined or subsumed, or are state-only enforceable will be noted as such.

In accordance with Section 5507 of Article II, Chapter 1, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, the permittee has included in the ROP application a compliance certification, a schedule of compliance, and a compliance plan. For applicable requirements with which the source is in compliance, the source will continue to comply with these requirements. For applicable requirements with which the source is not in compliance, the source will comply with the detailed schedule of compliance requirements that are incorporated as an appendix in this ROP. Furthermore, for any applicable requirements effective after the date of issuance of this ROP, the stationary source will meet the requirements on a timely basis, unless the underlying applicable requirement requires a more detailed schedule of compliance.

Issuance of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.

A-2. GENERAL CONDITIONS

Permit Enforceability

- All conditions in this permit are both federally enforceable and state enforceable unless otherwise noted. **(R 336.1213(5))**
- Those conditions that are hereby incorporated in a state-only enforceable Source-wide Permit to Install (PTI) pursuant to Rule 201(2)(d) are designated by Footnote 1. **(R 336.1213(5)(a), R336.1214a(5))**
- Those conditions that are hereby incorporated in federal enforceable Source-wide PTI No. MI-PTI-B4359-2003 pursuant to Rule 201(2)(c) are designated by Footnote 2. **(R 336.1213(5)(b), R 336.1214a(3))**

General Provisions

1. The permittee shall comply with all conditions of this ROP. Any ROP noncompliance constitutes a violation of Article II, Chapter 1, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451), and is grounds for enforcement action, for ROP revocation or revision, or for denial of the renewal of the ROP. All terms and conditions of this ROP that are designated as federally enforceable are enforceable by the Administrator of the United States Environmental Protection Agency (EPA) and by citizens under the provisions of the federal Clean Air Act (CAA). Any terms and conditions based on applicable requirements which are designated as "state only" are not enforceable by the EPA or citizens pursuant to the CAA. **(R 336.1213(1)(a))**
2. 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 conditions of this ROP. **(R 336.1213(1)(b))**
3. This ROP may be modified, revised, or revoked for cause. The filing of a request by the permittee for a permit modification, revision, or termination, or a notification of planned changes or anticipated noncompliance does not stay any ROP term or condition. This does not supersede or affect the ability of the permittee to make changes, at the permittee's own risk, pursuant to Rules 215 and 216. **(R 336.1213(1)(c))**
4. The permittee shall allow the department, or an authorized representative of the department, upon presentation of credentials and other documents as may be required by law and upon stating the authority for and purpose of the investigation, to perform any of the following activities **(R 336.1213(1)(d))**:
 - a. Enter, at reasonable times, a stationary source or other premises where emissions-related activity is conducted or where records must be kept under the conditions of the ROP.
 - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the ROP.
 - c. Inspect, at reasonable times, any of the following:
 - i. Any stationary source.
 - ii. Any emission unit.
 - iii. Any equipment, including monitoring and air pollution control equipment.
 - iv. Any work practices or operations regulated or required under the ROP.
 - d. As authorized by Section 5526 of Act 451, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the ROP or applicable requirements.
5. The permittee shall furnish to the department, within a reasonable time, any information the department may request, in writing, to determine whether cause exists for modifying, revising, or revoking the ROP or to determine compliance with this ROP. Upon request, the permittee shall also furnish to the department copies of any records that are required to be kept as a term or condition of this ROP. For information which is claimed by the permittee to be confidential, consistent with the requirements of 1976 PA 442, MCL §15.231 et seq., and

known as the Freedom of Information Act, the person may also be required to furnish the records directly to the EPA together with a claim of confidentiality. **(R 336.1213(1)(e))**

6. A challenge by any person, the Administrator of the EPA, or the department to a particular condition or a part of this ROP shall not set aside, delay, stay, or in any way affect the applicability or enforceability of any other condition or part of this ROP. **(R 336.1213(1)(f))**
7. The permittee shall pay fees consistent with the fee schedule and requirements pursuant to Section 5522 of Act 451. **(R 336.1213(1)(g))**
8. This ROP does not convey any property rights or any exclusive privilege. **(R 336.1213(1)(h))**

Equipment & Design

9. Any collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in Rule 370(2). **(R 336.1370)**
10. Any air cleaning device shall be installed, maintained, and operated in a satisfactory manner and in accordance with the Michigan Air Pollution Control rules and existing law. **(R 336.1910)**

Emission Limits

11. Except as provided in subrules 2, 3, and 4 of Rule 301, a person shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of a density greater than the most stringent of Rule 301(1)(a) or (b) unless otherwise specified in this ROP. The grading of visible emissions shall be determined in accordance with Rule 303. **(R 336.1301(1) in pertinent part):**
 - a. A 6-minute average of 20% opacity, except for one 6-minute average per hour of not more than 27% opacity.
 - b. A limit specified by an applicable federal new source performance standard.
12. The permittee shall not cause or permit the emission of an air contaminant or water vapor in quantities that cause, alone or in reaction with other air contaminants, either of the following:
 - a. Injurious effects to human health or safety, animal life, plant life of significant economic value, or property. **¹(R 336.1901(a))**
 - b. Unreasonable interference with the comfortable enjoyment of life and property. **¹(R 336.1901(b))**

Testing/Sampling

13. The department may require the owner or operator of any source of an air contaminant to conduct acceptable performance tests, at the owner's or operator's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001(1). **(R 336.2001)**
14. Any required performance testing shall be conducted in accordance with Rule 1001(2), Rule 1001(3) and Rule 1003. **(R 336.2001(2), R 336.2001(3), R 336.2003(1))**
15. Any required test results shall be submitted to the Air Quality Division (AQD) in the format prescribed by the applicable reference test method within 60 days following the last date of the test. **(R 336.2001(4))**

Monitoring/Recordkeeping

16. Records of any periodic emission or parametric monitoring required in this ROP shall include the following information specified in Rule 213(3)(b)(i), where appropriate **(R 336.1213(3)(b))**:
 - a. The date, location, time, and method of sampling or measurements.
 - b. The dates the analyses of the samples were performed.
 - c. The company or entity that performed the analyses of the samples.
 - d. The analytical techniques or methods used.
 - e. The results of the analyses.
 - f. The related process operating conditions or parameters that existed at the time of sampling or measurement.
17. All required monitoring data, support information and all reports, including reports of all instances of deviation from permit requirements, shall be kept and furnished to the department upon request for a period of not less than 5 years from the date of the monitoring sample, measurement, report or application. Support information includes all calibration and maintenance records and all original strip-chart recordings, or other original data records, for continuous monitoring instrumentation and copies of all reports required by the ROP. **(R 336.1213(1)(e), R 336.1213(3)(b)(ii))**

Certification & Reporting

18. Except for the alternate certification schedule provided in Rule 213(3)(c)(iii)(B), any document required to be submitted to the department as a term or condition of this ROP shall contain an original certification by a responsible official which states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. **(R 336.1213(3)(c))**
19. A responsible official shall certify to the appropriate District Office of the AQD and the EPA that the stationary source is and has been in compliance with all terms and conditions contained in the ROP except for deviations that have been or are being reported to the appropriate District Office of the AQD pursuant to Rule 213(3)(c). This certification shall include all the information specified in Rule 213(4)(c)(i) through (v) and shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the certification are true, accurate, and complete. The EPA address is: US EPA, Air Compliance Data - Michigan, Air and Radiation Division, 77 West Jackson Boulevard, Chicago, IL, 60604. **(R 336.1213(4)(c))**
20. The certification of compliance shall be submitted annually for the term of this ROP as detailed in the special conditions, or more frequently if specified in an applicable requirement or in this ROP. **(R 336.1213(4)(c))**
21. The permittee shall promptly report any deviations from ROP requirements and certify the reports. The prompt reporting of deviations from ROP requirements is defined in Rule 213(3)(c)(ii) as follows, unless otherwise described in this ROP **(R 336.1213(3)(c))**:
 - a. For deviations that exceed the emissions allowed under the ROP, prompt reporting means reporting consistent with the requirements of Rule 912 as detailed in Condition 25. All reports submitted pursuant to this paragraph shall be promptly certified as specified in Rule 213(3)(c)(iii).
 - b. For deviations which exceed the emissions allowed under the ROP and which are not reported pursuant to Rule 912 due to the duration of the deviation, prompt reporting means the reporting of all deviations in the semiannual reports required by Rule 213(3)(c)(i). The report shall describe reasons for each deviation and the actions taken to minimize or correct each deviation.
 - c. For deviations that do not exceed the emissions allowed under the ROP, prompt reporting means the reporting of all deviations in the semiannual reports required by Rule 213(3)(c)(i). The report shall describe the reasons for each deviation and the actions taken to minimize or correct each deviation.
22. For reports required pursuant to Rule 213(3)(c)(ii), prompt certification of the reports is described in Rule 213(3)(c)(iii) as either of the following **(R 336.1213(3)(c))**:

- a. Submitting a certification by a responsible official with each report which states that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.
 - b. Submitting, within 30 days following the end of a calendar month during which one or more prompt reports of deviations from the emissions allowed under the ROP were submitted to the department pursuant to Rule 213(3)(c)(ii), a certification by a responsible official which states that, based on information and belief formed after reasonable inquiry, the statements and information contained in each of the reports submitted during the previous month were true, accurate, and complete. The certification shall include a listing of the reports that are being certified. Any report submitted pursuant to Rule 213(3)(c)(ii) that will be certified on a monthly basis pursuant to this paragraph shall include a statement that certification of the report will be provided within 30 days following the end of the calendar month.
23. Semiannually for the term of the ROP as detailed in the special conditions, or more frequently if specified, the permittee shall submit certified reports of any required monitoring to the appropriate District Office of the AQD. All instances of deviations from ROP requirements during the reporting period shall be clearly identified in the reports. **(R 336.1213(3)(c)(i))**
24. On an annual basis, the permittee shall report the actual emissions, or the information necessary to determine the actual emissions, of each regulated air pollutant as defined in Rule 212(6) for each emission unit utilizing the emissions inventory forms provided by the department. **(R 336.1212(6))**
25. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the appropriate District Office of the AQD. The notice shall be provided not later than two business days after the start-up, shutdown, or discovery of the abnormal conditions or malfunction. Notice shall be by any reasonable means, including electronic, telephonic, or oral communication. Written reports, if required under Rule 912, must be submitted to the appropriate District Supervisor within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal conditions or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5) and shall be certified by a responsible official in a manner consistent with the CAA. **(R 336.1912)**

Permit Shield

26. Compliance with the conditions of the ROP shall be considered compliance with any applicable requirements as of the date of ROP issuance, if either of the following provisions is satisfied **(R 336.1213(6)(a)(i), R 336.1213(6)(a)(ii))**:
- a. The applicable requirements are included and are specifically identified in the ROP.
 - b. The permit includes a determination or concise summary of the determination by the department that other specifically identified requirements are not applicable to the stationary source.
- Any requirements identified in Part E of this ROP have been identified as non-applicable to this ROP and are included in the permit shield.
27. Nothing in this ROP shall alter or affect any of the following:
- a. The provisions of Section 303 of the CAA, emergency orders, including the authority of the EPA under Section 303 of the CAA. **(R 336.1213(6)(b)(i))**
 - b. The liability of the owner or operator of this source for any violation of applicable requirements prior to or at the time of this ROP issuance. **(R 336.1213(6)(b)(ii))**
 - c. The applicable requirements of the acid rain program, consistent with Section 408(a) of the CAA. **(R 336.1213(6)(b)(iii))**
 - d. The ability of the EPA to obtain information from a source pursuant to Section 114 of the CAA. **(R 336.1213(6)(b)(iv))**

28. The permit shield shall not apply to provisions incorporated into this ROP through procedures for any of the following:
- Operational flexibility changes made pursuant to Rule 215. **(R 336.1215(5))**
 - Administrative amendments made pursuant to Rule 216(1)(a)(i)-(iv). **(R 336.1216(1)(b)(iii))**
 - Administrative amendments made pursuant to Rule 216(1)(a)(v) until the amendment has been approved by the department. **(R 336.1216(1)(c)(iii))**
 - Minor permit modifications made pursuant to Rule 216(2). **(R 336.1216(2)(f))**
 - State-only modifications made pursuant to Rule 216(4) until the changes have been approved by the department. **(R 336.1216(4)(e))**
29. Expiration of this ROP results in the loss of the permit shield. If a timely and administratively complete application for renewal is submitted not more than 18 months, but not less than 6 months, before the expiration date of the ROP, but the department fails to take final action before the end of the ROP term, the existing ROP does not expire until the renewal is issued or denied, and the permit shield shall extend beyond the original ROP term until the department takes final action. **(R 336.1217(1)(c), R 336.1217(1)(a))**

Revisions

30. For changes to any process or process equipment covered by this ROP that does not require a revision of the ROP pursuant to Rule 216, the permittee must comply with Rule 215. **(R 336.1215, R 336.1216)**
31. A change in ownership or operational control of a stationary source covered by this ROP shall be made pursuant to Rule 216(1). **(R 336.1219(3))**
32. For revisions to this ROP, an administratively complete application shall be considered timely if it is received by the department in accordance with the time frames specified in Rule 216. **(R 336.1210(9))**
33. Pursuant to Rule 216(1)(b)(iii), Rule 216(2)(d) and Rule 216(4)(d), after a change has been made, and until the department takes final action, the permittee shall comply with both the applicable requirements governing the change and the ROP terms and conditions proposed in the application for the modification. During this time period, the permittee may choose to not comply with the existing ROP terms and conditions that the application seeks to change. However, if the permittee fails to comply with the ROP terms and conditions proposed in the application during this time period, the terms and conditions in the ROP are enforceable. **(R 336.1216(1)(c)(3), R 336.1216(2)(d), R 336.1216(4)(d))**

Reopenings

34. A ROP shall be reopened by the department prior to the expiration date and revised by the department under any of the following circumstances:
- If additional requirements become applicable to this stationary source with three or more years remaining in the term of the ROP, but not if the effective date of the new applicable requirement is later than the ROP expiration date. **(R 336.1217(2)(a)(i))**
 - If additional requirements pursuant to Title IV of the CAA become applicable to this stationary source. **(R 336.1217(2)(a)(ii))**
 - If the department determines that the ROP contains a material mistake, information required by any applicable requirement was omitted, or inaccurate statements were made in establishing emission limits or the terms or conditions of the ROP. **(R 336.1217(2)(a)(iii))**
 - If the department determines that the ROP must be revised to ensure compliance with the applicable requirements. **(R 336.1217(2)(a)(iv))**

Renewals

35. For renewal of this ROP, an administratively complete application shall be considered timely if it is received by the department not more than 18 months, but not less than 6 months, before the expiration date of the ROP. **(R 336.1210(7))**

Stratospheric Ozone Protection

36. If the permittee is subject to 40 CFR Part 82 and services, maintains, or repairs appliances except for motor vehicle air conditioners (MVAC), or disposes of appliances containing refrigerant, including MVAC and small appliances, or if the permittee is a refrigerant reclaimer, appliance owner or a manufacturer of appliances or recycling and recovery equipment, the permittee shall comply with all applicable standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F.
37. If the permittee is subject to 40 CFR Part 82 and performs a service on motor (fleet) vehicles when this service involves refrigerant in the MVAC, the permittee is subject to all the applicable requirements as specified in 40 CFR Part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed by the original equipment manufacturer. The term MVAC as used in Subpart B does not include the air-tight sealed refrigeration system used for refrigerated cargo or an air conditioning system on passenger buses using Hydrochlorofluorocarbon-22 refrigerant.

Risk Management Plan

38. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall register and submit to the EPA the required data related to the risk management plan for reducing the probability of accidental releases of any regulated substances listed pursuant to Section 112(r)(3) of the CAA as amended in 68.130. The list of substances, threshold quantities, and accident prevention regulations promulgated under Part 68 do not limit in any way the general duty provisions under Section 112(r)(1).
39. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall comply with the requirements of Part 68 no later than the latest of the following dates as provided in 68.10(a):
- June 21, 1999,
 - Three years after the date on which a regulated substance is first listed under 68.130, or
 - The date on which a regulated substance is first present above a threshold quantity in a process.
40. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall submit any additional relevant information requested by any regulatory agency necessary to ensure compliance with the requirements of 40 CFR Part 68.
41. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall annually certify compliance with all applicable requirements of Section 112(r) as detailed in Rule 213(4)(c)). **(40 CFR Part 68)**

Emission Trading

42. Emission averaging and emission reduction credit trading are allowed pursuant to any applicable interstate or regional emission trading program that has been approved by the Administrator of the EPA as a part of Michigan's State Implementation Plan. Such activities must comply with Rule 215 and Rule 216. **(R 336.1213(12))**

Permit To Install (PTI)

43. The process or process equipment included in this permit shall not be reconstructed, relocated, or modified unless a PTI authorizing such action is issued by the department, except to the extent such action is exempt from the PTI requirements by any applicable rule.² **(R 336.1201(1))**
44. The department may, after notice and opportunity for a hearing, revoke PTI terms or conditions if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of the PTI or is violating the department's rules or the CAA.² **(R 336.1201(8), Section 5510 of Act 451, PA 1994)**
45. The terms and conditions of a PTI shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by the PTI. If a new owner or operator submits a written request to the department pursuant to Rule 219 and the department approves the request, this PTI will be amended to reflect the change of ownership or operational control. The request must include all of the information required by subrules (1)(a), (b) and (c) of Rule 219. The written request shall be sent to the appropriate AQD District Supervisor, MDEQ.² **(R 336.1219)**
46. If the installation, reconstruction, relocation, or modification of the equipment for which PTI terms and conditions have been approved has not commenced within 18 months, or has been interrupted for 18 months, the applicable terms and conditions from that PTI shall become void unless otherwise authorized by the department. Furthermore, the person to whom that PTI was issued, or the designated authorized agent, shall notify the department via the Supervisor, Permit Section, MDEQ, AQD, P. O. Box 30260, Lansing, MI 48909, if it is decided not to pursue the installation, reconstruction, relocation, or modification of the equipment allowed by the terms and conditions from that PTI.² **(R 336.1201(4))**

Footnotes:

¹This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

B-2. SOURCE-WIDE CONDITIONS

Part B outlines the source-wide terms and conditions that apply to this stationary source. The permittee is subject to these special conditions for the stationary source in addition to the General Conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply to this source, NA (not applicable) has been used in the table. If there are no source-wide conditions, this section will be left blank.

For the purpose of the contiguous site being a synthetic minor for HAPs, all process equipment at the site including equipment covered by other permits, grand-fathered equipment and exempt equipment shall encompass the Chemical Production Plants (SRN B4359), Secondary Plastic Production Plants (SRN M4777), and R&D/Application Centers (SRN M4808) stationary sources.

TABLE B-1.1					
SOURCE-WIDE REQUIREMENTS [for Conditions II.B.1.1, II.B.2.2, III.A.3.2, III.A.3.3 and associated certifications and deviations for these conditions, the term SOURCE-WIDE comprises all process equipment at the site including equipment covered by other permits, grand-fathered equipment and exempt equipment. The site encompasses the Chemical Production Plants (SRN B4359), Secondary Plastic Production Plants (SRN M4777), and R&D/Application Centers (SRN M4808) stationary sources]					
EMISSION UNIT	NA				
Flexible Group ID	NA				
I. DESIGN PARAMETERS					
A. Pollution Control Equipment	NA				
B. Stack/Vent Parameters					
Stack/Vent ID	a. Minimum Height (feet)	b. Maximum Exhaust Dimension (inches)	c. Temp. (°F)	d. Air Flow Rate (acfm)	Applicable Requirement
C. Other Design Parameters					
NA					
II. MATERIAL USAGE/EMISSION LIMITS					
A. Material			Maximum Usage Rate		
NA			NA		
B. Pollutant			Maximum Emission Limit		
1. Each Individual HAP			1. Less than 10.0 tons per 12-month rolling time period as determined at the end of each calendar month, including the individual HAPs emissions from the BASF Corporation M4777, M4808, and B4359 contiguous sites. (R336.1205(1))		
2. Total HAPs			2. Less than 25.0 tons per 12-month rolling time period as determined at the end of each calendar month, including the total HAPs emissions from the BASF Corporation M4777, M4808, and B4359 contiguous sites. (R336.1205(1))		
III. COMPLIANCE EVALUATION					
Records of all of the following shall be maintained on file for a period of 5 years. (R 336.1213(3)(b)(ii))					
A. MONITORING/RECORDKEEPING (R 336.1213(3))					
In Addition To General Requirements in Part A					
1. Continuous Emission Monitoring (CEM) System and Recordkeeping			NA		

TABLE B-1.1

SOURCE-WIDE REQUIREMENTS [for Conditions II.B.1.1, II.B.2.2, III.A.3.2, III.A.3.3 and associated certifications and deviations for these conditions, the term SOURCE-WIDE comprises all process equipment at the site including equipment covered by other permits, grand-fathered equipment and exempt equipment. The site encompasses the Chemical Production Plants (SRN B4359), Secondary Plastic Production Plants (SRN M4777), and R&D/Application Centers (SRN M4808) stationary sources]

2. Process Monitoring System and Recordkeeping	
3. Other Monitoring and/or Recordkeeping	<ol style="list-style-type: none"> 1. Permittee shall comply with the applicable requirements of 40 CFR Part 61, Subpart FF, Section 61.356 (Recordkeeping requirements.)(40 CFR 61, Subparts A and FF) 2. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any recordkeeping, reporting or notification special condition. (R336.1205(1)) 3. The permittee shall keep in a satisfactory manner, monthly and previous 12-month emission calculation records for individual HAPs and total HAPs. (R336.1205(1))
B. TESTING/RECORDKEEPING (R 336.1213(3)) In Addition to General Requirements in Part A	
1. Parameter to be Tested/Recorded	
2. Method/Analysis	
3. Frequency and Schedule of Testing/Recordkeeping	

IV. REPORTING	
Reports and Schedules	<ol style="list-style-type: none"> 1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii)) 2. Semiannual reporting of any deviations pursuant to General Condition 23 of Part A. Due March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i)) 3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. Due annually by March 15 for the previous calendar year. (R 336.1213(4)(c)) 4. Permittee shall comply with the applicable requirements of 40 CFR Part 61, Subpart FF, Section 61.357 (Reporting requirements.)(40 CFR 61, Subparts A and FF) <p>See Appendix 2-8.</p>
V. OPERATIONAL PARAMETERS	
NA	
VI. OTHER REQUIREMENTS	
<ol style="list-style-type: none"> 1. Permittee shall comply with the applicable requirements of 40 CFR 61, Subparts A (General Provisions) and FF (National Emission Standard for Benzene Waste Operations). The applicable sections of Subpart FF include, but are not necessarily limited to: (40 CFR 61, Subparts A and FF) <ol style="list-style-type: none"> A. 61.342 (Standards: General) B. 61.355 (Test methods, procedures, and compliance methods) 2. Permittee shall comply with the applicable requirements of 40 CFR 61, Subparts A (General Provisions) and M (National Emission Standard for Asbestos). The applicable sections of Subpart M include, but are not necessarily limited to: (40 CFR 61, Subparts A and M) <ol style="list-style-type: none"> A. 61.145 (Standard for demolition and renovation) B. 61.150 (Standard for waste disposal for manufacturing, fabricating, demolition, renovation, and spraying operations) 	

Footnotes:

¹This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

C-2. EMISSION UNIT CONDITIONS

Part C outlines terms and conditions that are specific to individual emission units listed in the Emission Unit Summary Table. The permittee is subject to the special conditions for each emission unit in addition to the General Conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply, NA (not applicable) has been used in the table. If there are no conditions specific to individual emission units, this section will be left blank.

EMISSION UNIT SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Emission Unit ID	Emission Unit Description (Including Process Equipment and Control Device(s))	Installation/ Modification Date	Requirement Table Number
EUPOLRULE 290	Any existing or future emission unit that emits air contaminants which are exempt from the requirements of R 336.1201 pursuant to R 336.1290.	NA	D-2.1
EUPOLCOLDCLEANERS	Any new cold cleaner (placed into operation after 7/1/79) that is exempt from NSR permitting by R 336.1281(h) or R 336.1285 (r)(iv).	NA	D-2.2
EUPOLCONV	This emission group contains the conventional polyol manufacturing process. Conventional Polyols manufacturing including the propylene oxide (PO) and ethylene oxide (EO) storage tanks and reactor train numbers 7, 8, and 9. Emissions are controlled by vapor balance for storage tank loading, the water scrubber (T-408), baghouses with cartridge type filters, and the thermal oxidizer.	1/1/1957 3/14/1997	C-2.1
EUPOLGRAFTINDEXFILTER	This emission group includes all equipment utilized in the filtration of finished graft polyol. This emission unit is exempt from Rule 201 reporting requirements pursuant to Rule 290.	3/14/2003	D2.1
EUPOLEMCON	This emission group contains the emissions control device that is common to both the conventional and graft polyol manufacturing process: the thermal oxidizer.	2/1/1982 3/14/1997 9/7/2001	D-2.3
EUPOLFUGCONV	This emission group contains the fugitive emissions from the conventional polyol manufacturing process. Control includes filter, fabric, mat or panel baghouse.	1/1/1957 3/14/1997	D-2.4
EUPOLFUGGRAFT	This emission unit contains the fugitive emissions from the Graft Polyol Manufacturing Process.	1/1/1968 10/1/1996	D-2.4

Emission Unit ID	Emission Unit Description (Including Process Equipment and Control Device(s))	Installation/ Modification Date	Requirement Table Number
EUPOLGRAFT	Graft Polyol Manufacturing including Acrylonitrile (ACN), alcohol, and styrene storage tank and Reactor Train 10. Emissions are controlled by a vapor balance for storage tank loading and a thermal oxidizer.	1/1/1968 10/1/1966	C-2.2
EUPOLTKFARM	This emission group contains the TDI (TK-536) storage tank as well as the associated carbon adsorption canister.	1/1/1967 21/1995	C-2.3

TABLE C-2.1 EUPOLCONV EMISSION UNIT/PROCESS GROUP REQUIREMENTS					
EMISSION UNIT	This emission group contains the conventional polyol manufacturing process. Conventional Polyols manufacturing including the propylene oxide (PO) and ethylene oxide (EO) storage tanks and reactor train numbers 7, 8, and 9. Emissions are controlled by vapor balance for storage tank loading, the water scrubber (T-408), baghouses with cartridge type filters, and the thermal oxidizer.				
Flexible Group ID	NA				
I. DESIGN PARAMETERS					
A. Pollution Control Equipment	Water scrubber (T-408), baghouse with cartridge-type fabric filters, and vapor balance system.				
B. Stack/Vent Parameters	Exhaust gases shall be discharged unobstructed vertically upwards unless otherwise noted.				
Stack/Vent ID	a. Minimum Height (feet)	b. Maximum Exhaust Dimension (inches)	c. Temp. (°F)	d. Air Flow Rate (acfm)	Applicable Requirement
1. SVPOLSUGARFEED	32 ¹	24 ¹	NA	NA	R336.1225
2. SVPOLT-408	55 ¹	3 ¹	NA	NA	R336.1225
3. SVPolMagSil7	30 ¹	9.75x11.5 ¹	NA	NA	R336.1225
C. Other Design Parameters					
NA					
II. MATERIAL USAGE/EMISSION LIMITS					
A. Material	Maximum Usage Rate				
1. Magnesium Silicate	1. 2,500 tons per year, based on a 12-month rolling time period as determined at the end of each calendar month ¹ (R336.1225)				
B. Pollutant	Maximum Emission Limit				
1. Volatile Organic Compounds (VOC) from Sugar Feed	1. 1.27 pph based on a daily average ² (R336.1225) 2. 2.24 tpy based on 12-month rolling time period determined at the end of each calendar month ² (R336.1225, R336.1702(a))				
2. Propylene Oxide (PO) from Sugar Feed	0.18 tpy based on a 12-month rolling time period determined at the end of each calendar month ² (R336.1205(1), R336.1225, R336.1702(a))				
3. Particulate Matter (PM) emissions from each solid raw materials conveying system	1. 0.10 lb per 1,000 pound of exhaust gas ² (R336.1201(3), R336.1331(a)) 2. 1 tpy based on a 12-month rolling time period determined at the end of each calendar month ² (R336.1201(3), R336.1205(a))				
4. VOC from equipment vented through water scrubber	2.4 pph based upon a daily average ² (R336.1201(3), R336.1225, R336.1702(a))				
5. Propylene Oxide (PO) from equipment vented through water scrubber	0.13 tpy based on a 12-month rolling time period determined at the end of each calendar month ² (R336.1201(3), R336.1205(1), R336.1225, R336.1702(a))				
6. Ethylene Oxide (EO) from equipment vented through water scrubber	0.02 tpy based on a 12-month rolling time period determined at the end of each calendar month ² (R336.1201(3), R336.1205(1), R336.1225, R336.1702(a))				

III. COMPLIANCE EVALUATION Records of all of the following shall be maintained on file for a period of 5 years. (R 336.1213(3)(b)(ii))	
A. MONITORING/RECORDKEEPING (R 336.1213(3)) In Addition To General Requirements in Part A	
1. Continuous Emission Monitoring (CEM) System and Recordkeeping	NA
2. Process Monitoring System and Recordkeeping	<ol style="list-style-type: none"> 1. Permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor the liquid flow rate of the water scrubber on a daily basis. Any request for a change in the monitoring frequency shall be submitted to the AQD District Supervisor for review and approval.² (R336.1205(1), R336.1225, R336.1702(a), R336.1910) 2. Permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor the pressure drop across each fabric filter on a daily basis. Any request for a change in the monitoring frequency shall be submitted to the AQD District Supervisor for review and approval.² (R336.1205(1), R336.1225, R336.1702(a), R336.1910) 3. The permittee shall conduct regular inspections for the purpose of determining the operation of the baghouse. Details of the inspection are given in Appendix 2-3.
3. Other Monitoring and/or Recordkeeping	<ol style="list-style-type: none"> 1. Permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period records of the amount of polyol produced in each EUPOLCONV reactor train. All records shall be kept on file for at least five years and made available to the Department upon request.² (R336.1205(1), R336.1225, (R336.1702(a)) 2. Permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period records of the number of times pressure is relieved from TK-405B, TK-405C, and TK-405D for the purpose of adding solid raw materials. All records shall be kept on file for at least five years and made available to the Department upon request.² (R336.1205(1), R336.1225, R336.1702(a), R336.1910, 40 CFR 63 Subpart A and PPP) 3. Permittee shall keep, in a satisfactory manner, records of the monitored water scrubber liquid flow rate. All records shall be kept on file for a period of at least five years and made available to the Department upon request.² (R336.1205(1), R336.1225, R336.1702(a), R336.1910) 4. Permittee shall keep, in a satisfactory manner, records of the monitored pressure drop across each fabric filter. All records shall be kept on file for a period of at least five years and made available to the Department upon request.² (R336.1205(1), R336.1331(a), R336.1910) 5. Permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period calculations of the Volatile Organic Compound (VOC) and Propylene Oxide (PO) emission rates from EUPOLCONV sugar feed. All records are shall be kept on file for a period of at least five years and made available to the Department upon request.² (R336.1205(1), R336.1225, R336.1702(a))

	<p>6. Permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period calculations of the Particulate Matter (PM) emission rates from EUPOLCONV solid raw materials conveying. All records shall be kept on file for a period of at least five years and made available to the Department upon request.² (R336.1205(1), R336.1331(a))</p> <p>7. Permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period calculations of the VOC, PO and Ethylene Oxide (EO) emission rates from EUPOLCONV equipment vented through the water scrubber. All records shall be kept on file for a period of at least five years and made available to the Department upon request.² (R336.1205(1), R336.1225, R336.1702(a))</p> <p>8. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period records of the magnesium silicate throughput for EUPOLCONV. The permittee shall keep all records on file for a period of at least five years and make them available to the Department upon request.¹ (R336.1225)</p>
B. TESTING/RECORDKEEPING (R 336.1213(3)) In Addition to General Requirements in Part A	
1. Parameter to be Tested/Recorded	NA
2. Method/Analysis	NA
3. Frequency and Schedule of Testing/Recordkeeping	NA
IV. REPORTING	
Reports and Schedules	<p>1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))</p> <p>2. Semiannual reporting of any deviations pursuant to General Condition 23 of Part A. Due March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))</p> <p>3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. Due annually by March 15 for the previous calendar year. (R 336.1213(4)(c))</p> <p>See Appendix 2-8.</p>

V. OPERATIONAL PARAMETERS

1. The polyol production rate for the Reactor 7 Train shall not exceed 100,000,000 pounds per 12-month rolling time period determined at the end of each calendar month.² **(R336.1205(1), R336.1225, R336.1702(a))**
2. The polyol production rate for the Reactor 8 Train shall not exceed 72,000,000 pounds per 12-month rolling time period determined at the end of each calendar month.² **(R336.1205(1), R336.1225, R336.1702(a))**
3. The polyol production rate for the Reactor 9 Train shall not exceed 191,000,000 pounds per 12-month rolling time period determined at the end of each calendar month.² **(R336.1205(1), R336.1225, R336.1702(a))**
4. Permittee shall not operate EUPOLCONV equipment normally vented through the thermal oxidizer, except as allowed in Special Conditions E2.1 V 6, 7, and 8, unless such equipment is vented through the thermal oxidizer and the thermal oxidizer is installed, maintained and operated in a satisfactory manner. Satisfactory operation shall include a minimum temperature of 1700°F for the operation of the thermal oxidizer, a minimum residence time of 0.8 seconds and limit the flow rate of EO and PO from the thermal oxidizer to the following limits:
 - a. EO = 1.13 pph
 - b. PO = 0.96 pph**(R336.1205(1), R336.1225, R336.1702(a), R336.1910, 40 CFR 63, Subpart A and PPP)**
5. Permittee shall not operate the EUPOLCONV vacuum jet systems unless they are vented through the thermal oxidizer.² **(R336.1205(1), R336.1225, R336.1702(a), R336.1910, 40 CFR 63, Subpart A and PPP)**
6. Permittee shall not relieve pressure from TK-405B, TK-405C, and TK-405D for the purpose of adding solid raw materials more than 24 times per day nor more than 800 times, for all three vessels, combined, per 12-month rolling time period, as determined at the end of each calendar month.² **(R336.1201(3), R336.1205(1), R336.1225, R336.1702(a), R336.1910, 40 CFR 63, Subpart A and PPP)**
7. Permittee may vent the following equipment through water scrubber:²
 - a. TK-410A and TK-408C except during filling and transfer operations
 - b. TK-534 after un-reacted materials have been removed
 - c. Filter Press
 - d. TK-532**(R336.1205(1), R336.1225, R336.1702(a), R336.1910)**
8. Permittee shall not fill the EO storage tank (TK-101B) or the PO storage tank (TK-101C and TK-102) unless these tanks are vented through a vapor balance system that is installed, maintained, and operated in a satisfactory manner or the filling emissions are vented to thermal oxidizer. Satisfactory operation of the vapor balance system includes following the procedures specified below:²
 - a. Vapor-tight collection line shall be connected to the delivery vessel before any volatile organic liquid is transferred.
 - b. Vapor-tight collection line shall be purged with nitrogen prior to disconnection so as to minimize release of VOC vapors.

- c. Hatch and other openings on the delivery vessel shall be closed to prevent emission of displaced vapors during transfer operation, except under emergency conditions.
- d. Liquid transfer line shall be purged with nitrogen prior to disconnection and equipped with a device to minimize liquid drainage from the line when it is disconnected and not in use.
- e. The permittee shall develop written procedures for the operation of all the control measures described above, and such procedures shall be made available to the Department in an accessible location.
(R336.1205(1), R336.1225, R336.1702(a), R336.1910, 40 CFR 63, Subpart A and PPP)
9. Permittee shall not operate EUPOLCONV equipment vented to the water scrubber unless the water scrubber is installed, maintained, and operated in a satisfactory manner. Satisfactory operation of the scrubber includes maintaining the water flow rate through the scrubber as specified in the water scrubber operating procedures, which shall be kept on site and made available to the Department upon request.² **(R336.1205(1), (R336.1225), (R336.1702(a)), (R336.1910)**
10. Permittee shall not operate any solid raw materials conveying system unless the associated fabric filter is installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes maintaining a pressure drop across the filter as specified in the fabric filter operating procedures, which shall be kept on site and made available to the Department upon request.² **(R336.1201(3), R336.1205(1), R336.1331(a), R336.1702(a), R336.1910)**

VI. OTHER REQUIREMENTS

1. Permittee shall comply with the applicable requirements of 40 CFR 63, Subpart PPP-National Emission Standards for Hazardous Air Pollutant Emissions for Polyether Polyol Production. **(R336.1213(3), 40 CFR 60.1420, 40 CFR 60.480)**

Footnotes:

¹This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

TABLE C-2.2 EUPOLGRAFT EMISSION UNIT/PROCESS GROUP REQUIREMENTS					
EMISSION UNIT	Graft Polyol Manufacturing including Acrylonitrile (ACN), alcohol, and styrene storage tank and Reactor Train 10. Emissions are controlled by a vapor balance for storage tank loading and a thermal oxidizer.				
Flexible Group ID	NA				
I. DESIGN PARAMETERS					
A. Pollution Control Equipment	Vapor balance system				
B. Stack/Vent Parameters	Exhaust gases shall be discharged unobstructed vertically upwards unless otherwise noted.				
Stack/Vent ID	a. Minimum Height (feet)	b. Maximum Exhaust Dimension (inches)	c. Temp. (°F)	d. Air Flow Rate (acfm)	Applicable Requirement
1. SVPOL115	23 ¹	24 ¹	NA	NA	R336.1225 R336.1901
C. Other Design Parameters					
NA					
II. MATERIAL USAGE/EMISSION LIMITS					
A. Material	Maximum Usage Rate				
1. Styrene	60,300,000 pounds of styrene toTK-500 per 12-month rolling time period as determined at the end of each calendar month ² (R336.12105(1), R336.1225, R336.1702(a))				
B. Pollutant	Maximum Emission Limit				
1. Styrene emissions from styrene storage tank (TK-500)	1. 9.8 pph based on a daily average ¹ (R336.1225) 2. 0.24 tpy based on 12-month rolling time period determined at the end of each calendar month ² (R336.1205(1), R336.1225, R336.1702(a))				
III. COMPLIANCE EVALUATION					
Records of all of the following shall be maintained on file for a period of 5 years. (R 336.1213(3)(b)(ii))					
A. MONITORING/RECORDKEEPING (R 336.1213(3)) In Addition To General Requirements in Part A					
1. Continuous Emission Monitoring (CEM) System and Recordkeeping	NA				
2. Process Monitoring System and Recordkeeping	NA				

<p>3. Other Monitoring and/or Recordkeeping</p>	<ol style="list-style-type: none"> 1. Permittee shall keep, in an acceptable manner, monthly and 12-month rolling time period records of the amount of polyol produced in EUPOLGRAFT reactor train. All records are for the purpose of compliance demonstration and shall be kept on file for a period of at least five years and made available to the Department upon request.² (R336.1205(1), R336.1225, R336.1702(a)) 2. Permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period records of the amount of styrene charged to TK-500. All records are for the purpose of compliance demonstration and shall be kept on file for a period of at least five years and made available to the Department upon request.² (R336.1205(1), R336.1225, R336.1702(a)) 3. Permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period calculations of the styrene emission rates from TK-500. All records are for the purpose of compliance demonstration and shall be kept on file for a period of at least five years and made available to the Department upon request.² (R336.1205(1), R336.1225, R336.1702(a))
<p>B. TESTING/RECORDKEEPING (R 336.1213(3)) In Addition to General Requirements in Part A</p>	
<p>1. Parameter to be Tested/Recorded</p>	<p>NA</p>
<p>2. Method/Analysis</p>	<p>NA</p>
<p>3. Frequency and Schedule of Testing/Recordkeeping</p>	<p>NA</p>
<p>IV. REPORTING</p>	
<p>Reports and Schedules</p>	<ol style="list-style-type: none"> 1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii)) 2. Semiannual reporting of any deviations pursuant to General Condition 23 of Part A. Due March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i)) 3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. Due annually by March 15 for the previous calendar year. (R 336.1213(4)(c)) <p>See Appendix 2-8.</p>

V. OPERATIONAL PARAMETERS

1. Permittee shall not operate EUPOLGRAFT equipment normally vented through the thermal oxidizer unless such equipment is vented through the thermal oxidizer and the thermal oxidizer is installed, maintained and operated in a satisfactory manner. Satisfactory operation of the thermal oxidizer includes maintaining a minimum temperature of 1700°F, a minimum residence time of 0.8 seconds, and maximum emission rates from the thermal oxidizer as follows:²
 Acrylonitrile (ACN): 0.88 pph
 Styrene: 0.74 pph
(R336.12105(1), R336.1225, R336.1702(a), R336.1910)
2. Permittee shall not operate the EUPOLGRAFT vacuum system unless it is vented through the thermal oxidizer² **(R336.12105(1), R336.1225, R336.1702(a), R336.1910)**
3. Permittee shall not charge styrene to styrene storage tank (TK-500) unless the unloading system is installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes following the procedures specified below:²
 - a. After unloading, the system shall be shut down and the lines blown back to the rail car to minimize release of VOC vapors and liquid drainage from the line when it is disconnected and not in use.
 - b. Hatch and openings of the delivery vessel shall be closed to prevent emission of displaced VOC vapors during transfer operation, except under emergency conditions.
 - c. Liquid transfer line shall be equipped with a device (e.g. a valve), or a procedure shall be implemented, to prevent, liquid drainage from the line when it is disconnected and not in use.
 - d. Permittee shall develop written procedures for the operation of the control measures described above, and such procedures shall be made available to the Department in an accessible location.
(R336.12105(1), R336.1225, R336.1702(a), R336.1910)
4. Permittee shall not fill ACN storage tank (TK-524) unless the vapor balance system is installed, maintained and operated in a satisfactory manner or the filling emissions are vented to the thermal oxidizer. Satisfactory operation of the vapor balance system includes following the procedures specified below:²
 - a. Vapor-tight collection line shall be connected to the delivery vessel before any volatile organic liquid is transferred.
 - b. Vapor-tight collection shall be purged with nitrogen prior to disconnection so as to minimize release of VOC vapors.
 - c. Hatch and other openings on the delivery vessel shall be closed to prevent emission of displaced vapors during transfer operation, except under emergency conditions.
 - d. Liquid transfer line shall be purged with nitrogen prior to disconnection and equipped with a device to minimize liquid drainage from the line when it is disconnected and not in use.
 - e. Permittee shall develop written procedures for the operation of all control measures described above, and such procedures shall be made available to the Department in an accessible location.
(R336.12105(1), R336.1225, R336.1702(a), R336.1910)
5. The polyol production rate for EUPOLGRAFT (Reactor Train 10) shall not exceed 150,000,000 pounds per 12-month rolling time period as determined at the end of each calendar month. **(R336.1205(1), R336.1225, R336.1702(a))**

VI. OTHER REQUIREMENTS

NA

Footnotes:¹This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

TABLE C-2.3 EUPOLTKFARM EMISSION UNIT/PROCESS GROUP REQUIREMENTS					
EMISSION UNIT		This emission group contains the TDI (TK-536) storage tank as well as the associated carbon adsorption canister.			
Flexible Group ID		NA			
I. DESIGN PARAMETERS					
A. Pollution Control Equipment		Activated Carbon Adsorber			
B. Stack/Vent Parameters		Exhaust gases shall be discharged unobstructed vertically upwards unless otherwise noted.			
Stack/Vent ID	a. Minimum Height (feet)	b. Maximum Exhaust Dimension (inches)	c. Temp. (°F)	d. Air Flow Rate (acfm)	Applicable Requirement
1. SVPOL019	35 ¹	3 ¹	NA	NA	R336.1901
C. Other Design Parameters					
NA					
II. MATERIAL USAGE/EMISSION LIMITS					
A. Material		Maximum Usage Rate			
1. Toluene Diisocyanate (TDI) throughput		5,000,000 gallons per year based on a 12-month rolling average as determined at the end of each calendar month ² (R336.1702(a), R336.1901)			
B. Pollutant		Maximum Emission Limit			
1. Toluene diisocyanate (TDI) emission rate from the storage tank, TK-536, controlled by the carbon adsorption canister		1. 0.0031 pound per hour ² (R336.1702(a), R336.1901) 2. 0.18 pound per year ² (R336.1702(a), R336.1901)			
III. COMPLIANCE EVALUATION					
Records of all of the following shall be maintained on file for a period of 5 years. (R 336.1213(3)(b)(ii))					
A. MONITORING/RECORDKEEPING (R336.1213(3)) In Addition To General Requirements in Part A					
1. Continuous Emission Monitoring (CEM) System and Recordkeeping		NA			
2. Process Monitoring System and Recordkeeping		NA			
3. Other Monitoring and/or Recordkeeping		1. Keep written record of the installation dates for each carbon adsorption canister which shall be kept on file for the life of the process ² (R336.1702(a), R336.1901) 2. Keep readily accessible records showing the dimensions of the storage tank (TK-536) and analysis showing the capacity of the storage tank for the life of the storage tank ² (40 CFR 60.116b(b)) 3. Keep written log of the amount of TDI stored on a monthly basis and the 12-month rolling average throughput ² (R336.1702(a), R336.1901)			
B. TESTING/RECORDKEEPING (R 336.1213(3)) In Addition to General Requirements in Part A					
1. Parameter to be Tested/ Recorded		1. TDI emissions (R336.1213(3))			
2. Method/Analysis		1. Scientific calculations acceptable to the Department (R336.1213(3)) 2. Scientific calculations acceptable to the Department (R336.1213(3))			
3. Frequency and Schedule of Testing/Recordkeeping		1. a. Hourly emission rate for TDI emissions (R336.1213(3)) b. Annual emission rate for TDI emissions (R336.1213(3))			

IV. REPORTING	
Reports and Schedules	<ol style="list-style-type: none"> 1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii)) 2. Semiannual reporting of any deviations pursuant to General Condition 23 of Part A. Due March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i)) 3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. Due annually by March 15 for the previous calendar year. (R 336.1213(4)(c)) <p>See Appendix 2-8.</p>
V. OPERATIONAL PARAMETERS	
<ol style="list-style-type: none"> 1. Permittee shall replace the carbon adsorption canister controlling the TDI storage tank (TK-536), every five years after initial installation to ensure that emission limits in Table E-2.3 (Section II (B), items 1 and 2) are not exceeded.² (R336.1702(a), R336.1901) 2. Permittee shall incorporate a dry air or nitrogen gas pad as a means of moisture control for the TDI storage and transfer facilities.² (R336.1702(a), R336.1901) 3. Permittee shall store any residual or spilled material in closed containers capable of preventing escape of TDI vapors to the ambient air.² (R336.1702(a), R336.1901) 4. Permittee shall immediately contain, neutralize and store in a manner consistent with Condition 3 above.² (R336.1702(a), R336.1901) 5. Permittee shall not store more than 50,000 gallons of TDI at any given time.² (R336.1702(a), R336.1901) 6. Permittee shall not operate storage tank TK-536 unless the carbon adsorption canister is installed and operating properly.² (R336.1702(a), R336.1901) 7. Permittee shall not transfer TDI to other delivery vessels unless the emissions from the delivery vessels are controlled by the carbon adsorption canister, installed and operating properly.² (R336.1702(a), R336.1901) 	
VI. OTHER REQUIREMENTS	
<ol style="list-style-type: none"> 1. Permittee shall comply with applicable requirements of 40 CFR 60, Subpart Kb- Standards of Performance for Volatile Organic Liquid Storage Vessels (including Petroleum Liquid Storage Vessels) for which Construction, Reconstruction or Modification Commenced After July 23, 1994.² (R336.1213(3)), (40 CFR 60, Subparts A and Kb) 	

Footnotes:

¹This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

D-2. FLEXIBLE GROUP CONDITIONS

Part D outlines terms and conditions that apply to more than one emission unit. The permittee is subject to the special conditions for each flexible group in addition to the General Conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply, NA (not applicable) has been used in the table. If there are no special conditions that apply to more than one emission unit, this section will be left blank.

FLEXIBLE GROUP SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Flexible Group ID	Emission Units Included in Flexible Group	Requirement Table No.
FGPOLRULE290	EUPOLRULE290, FGPOLTKEEMPT, EUPOLGRAFTINDEXFILTER	D-2.1
FGPOLCOLDCLEANERS	EUPOLCOLDCLEANERS	D-2.2
FGPOLEMCON	EUPOLEMCON	D-2.3
FGPOLFUG	EUPOLFUGCONV, EUPOLFUGGRAFT	D-2.4
FGPOLFACILITY	All equipment at the polyol plant including equipment covered by other permits, grand-fathered equipment, and exempt equipment.	D-2.6
FGPOLTKEXEMPT	This flexible group includes volatile organic material storage tank emission units that are exempt from permitting pursuant to Michigan Rule 290. Including: EUDVPOLTK122, EUDVPOLTK473, EUDVPOLTK451, EUDVPOLTK452, EUDVPOLTK453, EUDVPOLTK454, EUDVPOLTK455, EUDVPOLTK456, EUDVPOLTK470, EUDVPOLTK450, EUDVPOLTK472, EUDVPOLTK516, EUDVPOLTK474, EUDVPOLTK475, EUDVPOLTK502, EUDVPOLTK503, EUDVPOLTK504, EUDVPOLTK505, EUDVPOLTK506, EUDVPOLTK507, EUDVPOLTK508, EUDVPOLTK513, EUDVPOLTK518, EUDVPOLTK471	D-2.6
FGPOLNSPSKBTANKS	This flexible group contains those storage tank emission units that are exempt from the permit to install program but are subject to the requirements of 40 CFR 60, Subpart Kb. EUDVPOLTK-518, EUDVPOLTK-527, EUDVPOLTK-526, EUDVPOLTK-413c, EUDVPOLTK-521, EUDVPOLTK524, DVPOLTK-301, and any VOL storage tanks installed in the future	D-2.5

TABLE D-2.1: FGPOLRULE290 FLEXIBLE GROUP REQUIREMENTS					
FLEXIBLE GROUP		<p>EUPOLRULE290: Any existing or future emission unit that emits air contaminants which are exempt from the requirements of R336.1201 pursuant to R336.1290.</p> <p>FGPOLTKEXEMPT: This flexible group includes volatile organic material storage tank emission units that are exempt from permitting pursuant to Michigan Rule 290.</p> <p>EUPOLGRAFTINDEXFILTER: This emission group includes all equipment utilized in the filtration of finished graft polyol.</p>			
Emission Units		Each EUPOLRULE290, FGPOLTKEXEMPT, EUPOLGRAFTINDEXFILTER			
I. DESIGN PARAMETERS					
A. Pollution Control Equipment		Knock-Out Box, Catalytic Direct Oxidizer, Packed Bed Scrubber,			
B. Stack/Vent Parameters		NA			
Stack/Vent ID	a. Minimum Height (feet)	b. Maximum Exhaust Dimension (inches)	c. Temp. (°F)	d. Air Flow Rate (acfm)	Applicable Requirement
NA	NA	NA	NA	NA	NA
C. Other Design Parameters					
NA					
II. MATERIAL USAGE/EMISSION LIMITS					
A. Material		Maximum Usage Rate			
NA		NA			
B. Pollutants		Maximum Emission Limit			
The type of pollutants are categorized below:		This flexible group applies to each emission unit that meets any of the listed emission limit descriptions in one, two and/or three below:			
1. Noncarcinogenic VOCs or non-carcinogenic materials listed in R 336.1122(f).		1. Each emission unit emits only noncarcinogenic volatile organic compounds or noncarcinogenic materials which are listed in R336.1122(f) as not contributing appreciably to the formation of ozone if the total uncontrolled or controlled emissions of air contaminants are not more than 1,000 or 500 pounds per month, respectively. (R336.1290(a)(i))			
2. Other air contaminants with ITSLs or IRSLS greater than or equal to 0.04 µg/m ³ .		2. Each emission unit that the total uncontrolled or controlled emissions of air contaminants are not more than 1,000 or 500 pounds per month (total means the sum of emission limit number one, above, and emission limit no. 2, including parts a, b and c below), respectively, and all the following criteria listed below are met: (R336.1290(a)(ii))			
a. Noncarcinogenic air contaminants with ITSLs greater than or equal to 2.0 µg/m ³ , excluding those listed in emission limit no. 1, above.		a. For noncarcinogenic air contaminants, excluding noncarcinogenic volatile organic compounds and noncarcinogenic materials which are listed in R336.1122(f) as not contributing appreciably to the formation of ozone, with initial threshold screening levels greater than or equal to 2.0 micrograms per cubic meter, the total uncontrolled or controlled emissions shall not exceed 1,000 or 500 pounds per month, respectively. (R336.1290(a)(ii)(A))			
b. Noncarcinogenic air contaminants with ITSLs greater than or equal to 0.04		b. For noncarcinogenic air contaminants, excluding noncarcinogenic volatile organic compounds and noncarcinogenic materials which are listed in R336.1122(f) as not contributing appreciably to the formation of ozone,			

TABLE D-2.1: FGPOLRULE290 FLEXIBLE GROUP REQUIREMENTS	
<p>$\mu\text{g}/\text{m}^3$ and less than 2.0 $\mu\text{g}/\text{m}^3$, excluding those listed in emission limit no. 1, above.</p> <p>c. Carcinogenic air contaminants with IRSLS greater than or equal to 0.04 $\mu\text{g}/\text{m}^3$.</p> <p>d. Air contaminants with ITSLs or IRSLS less than 0.04 $\mu\text{g}/\text{m}^3$.</p>	<p>with initial threshold screening levels greater than or equal to 0.04 microgram per cubic meter and less than 2.0 micrograms per cubic meter, the uncontrolled or controlled emissions shall not exceed 20 or 10 pounds per month, respectively. (R336.1290(a)(ii)(B))</p> <p>c. For carcinogenic air contaminants with initial risk screening levels greater than or equal to 0.04 microgram per cubic meter, the uncontrolled or controlled emissions shall not exceed 20 or 10 pounds per month, respectively. (R336.1290(a)(ii)(C))</p> <p>d. The emission unit shall not emit any air contaminants, excluding non-carcinogenic volatile organic compounds and noncarcinogenic materials which are listed in R336.1122(f) as not contributing appreciably to the formation of ozone, with an initial threshold screening level or initial risk screening level less than 0.04 microgram per cubic meter. (R336.1290(a)(ii)(D))</p>
<p>3. Noncarcinogenic particulate air contaminants with ITSLs greater than 2.0 $\mu\text{g}/\text{m}^3$, excluding nuisance particulate.</p>	<p>3. Each emission unit that emits noncarcinogenic particulate air contaminants and other air contaminants that are exempted under emission limit number one or emission limit number two, above, and all of the following provisions are met: (R336.1290(a)(iii))</p> <p>a. The particulate emissions are controlled by an appropriately designed and operated fabric filter collector or an equivalent control system which is designed to control particulate matter to a concentration of less than or equal to 0.01 pound of particulate per 1,000 pounds of exhaust gases and which does not have an exhaust gas flow rate more than 30,000 actual cubic feet per minute. (R336.1290(a)(iii)(A))</p> <p>b. The visible emissions from the emission unit are not more than 5% opacity in accordance with the methods contained in R 336.1303. (R336.1290(a)(iii)(B))</p> <p>c. The initial threshold screening level for each particulate air contaminant, excluding nuisance particulate, is more than 2.0 micrograms per cubic meter. (R336.1290(a)(iii)(C))</p>
<p>III. COMPLIANCE EVALUATION</p> <p>Records of all of the following shall be maintained on file for a period of 5 years. (R336.1213(3)(b)(ii))</p>	
<p>A. MONITORING/RECORDKEEPING (R336.1213(3)) In Addition to General Requirements in Part A</p>	
<p>1. Continuous Emission Monitoring (CEM) System and Recordkeeping</p>	<p>NA</p>
<p>2. Process Monitoring System and Recordkeeping</p>	<p>NA</p>

<p>3. Other Monitoring and/or Recordkeeping</p>	<p>1. The permittee shall maintain records of the following information for each emission unit included in FGPOLRULE290 for each calendar month using the methods outlined in Appendix 4. (R336.1213(3))</p> <ul style="list-style-type: none"> a. Records identifying each air contaminant that is emitted. (R336.1213(3)) b. Records identifying if each air contaminant is controlled or uncontrolled. (R336.1213(3)) c. Records identifying if each air contaminant is either carcinogenic or non-carcinogenic. (R336.1213(3)) d. Records identifying the ITSL and IRSL, if established, of each air contaminant that is emitted. (R336.1213(3)) e. Material use and calculations identifying the quality, nature, and quantity of the air contaminant emissions in sufficient detail to demonstrate that the actual emissions of the emission unit meet the emission limits outlined in this table and R336.1290. (R336.1213(3), R 336.1290(c)) <p>2. The permittee shall maintain an inventory of each emission unit that is covered by FGPOLRULE290. This inventory shall include the following information. (R336.1213(3))</p> <ul style="list-style-type: none"> a. The permittee shall maintain a written description of each emission unit as it is maintained and operated throughout the life of the emission unit. (R336.1290(b), R336.1213(3)) b. For each emission unit that emits noncarcinogenic particulate air contaminants pursuant to R336.1290(a)(iii), the permittee shall maintain a written description of the control device, including the designed control efficiency and the designed exhaust gas flow rate. (R336.1213(3)) <p>3. For each emission unit that emits noncarcinogenic particulate air contaminants pursuant to R336.1290(a)(iii), the permittee shall perform a monthly visible emission observation of each stack or vent during routine operating conditions. This observation need not be performed using Method 9. The permittee shall keep a written record of the results of each observation. (R336.1213(3)) See Appendix 2-4a</p>
<p>B. TESTING/RECORDKEEPING (R336.1213(3)) In Addition to General Requirements in Part A</p>	
<p>Parameter to be Tested/Recorded</p>	<p>NA</p>
<p>Method/Analysis</p>	<p>NA</p>
<p>Frequency and Schedule of Testing/Recordkeeping</p>	<p>NA</p>

IV. REPORTING	
Reports and Schedules	<ol style="list-style-type: none"> 1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R336.1213(3)(c)(ii)) 2. Semiannual reporting of deviations pursuant to General Condition 23 of Part A. Due March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R336.1213(3)(c)(i)) 3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. Due annually by March 15 for the previous calendar year. (R336.1213(4)(c)) <p>See Appendix 2-8.</p>
V. OPERATIONAL PARAMETERS	
<ol style="list-style-type: none"> 1. The provisions of FGPOLRULE290 apply to each emission unit which is operating pursuant to R336.1290. (R336.1290) 	
VI. OTHER REQUIREMENTS	
NA	

Footnotes:

¹This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

TABLE D-2.2: FGPOLCOLDCLEANERS					
FLEXIBLE GROUP REQUIREMENTS					
FLEXIBLE GROUP	EUPOLCOLDCLEANERS - Any new cold cleaner (placed into operation after 7/1/79) that is exempt from NSR permitting by R 336.1281(h) or R 336.1285(r)(iv).				
Emission Units	EUPOLCOLDCLEANERS				
I. DESIGN PARAMETERS					
A. Pollution Control Equipment	NA				
B. Stack/Vent Parameters	Exhaust gases shall be discharged unobstructed vertically upwards unless otherwise noted.				
Stack/Vent ID	a. Minimum Height (feet)	b. Maximum Exhaust Dimension (inches)	c. Temp (°F)	d. Air Flow Rate (acfm)	Applicable Requirement
NA	NA	NA	NA	NA	NA
C. Other Design Parameters					
1. A cover shall be installed and the cover shall be closed whenever parts are not being handled in the cleaner. (R 336.1707(3)(a))					
2. The cover shall be mechanically assisted if the Reid vapor pressure of the solvent is more than 0.3 psia, or if the solvent is agitated or heated. (R 336.1707(3)(a))					
3. A device shall be available for draining cleaned parts. (R 336.1707(3b))					
II. MATERIAL USAGE/EMISSION LIMITS					
A. Material	Maximum Usage Rate				
1. Cleaning Solvents	1. The permittee shall not use cleaning solvents containing more than 5 percent by weight of the following halogenated compounds: methylene chloride, perchloroethylene, trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride, chloroform, or any combination thereof. (R 336.1213(3))				
B. Pollutant	Maximum Emission Limit				
NA	NA				
III. COMPLIANCE EVALUATION					
Records of all of the following shall be maintained on file for a period of 5 years. (R 336.1213(3)(b)(ii))					
A. MONITORING/RECORDKEEPING (R 336.1213(3))					
In Addition To General Requirements in Part A					
1. Continuous Emission Monitoring (CEM) System and Recordkeeping	NA				
2. Process Monitoring System and Recordkeeping	NA				

<p>3. Other Monitoring and/or Recordkeeping</p>	<ol style="list-style-type: none"> 1. The date of installation of each cold cleaner. (R 336.1213(3)) 2. The identification name/number, air/vapor interface area and type of solvent used (including Reid vapor pressure and VOC content) shall be maintained for each cold cleaner. (R 336.1213(3)) 3. As noted in R 336.1707(3)(c), if applicable, an initial demonstration that the waste solvent is a safety hazard shall be made prior to storage in non-closed containers. If the waste solvent is a safety hazard and is stored in non-closed containers, verification that the waste solvent is disposed of so that not more than 20%, by weight, is allowed to evaporate into the atmosphere shall be made on a monthly basis. (R 336.1213(3)) 4. If the solvent is heated, the solvent temperature shall be monitored and recorded on a monthly basis, during peak operating conditions. (R 336.1213(3)) 5. As noted in R 336.1707(2), if applicable, the option chosen to comply with R 336.1707(2) shall be recorded. (R 336.1213(3))
<p>B. TESTING/RECORDKEEPING (R 336.1213(3)) In Addition to General Requirements in Part A</p>	
<p>1. Parameter to be Tested/Recorded</p>	<p>NA</p>
<p>2. Method/Analysis</p>	<p>NA</p>
<p>3. Frequency and Schedule of Testing/Recordkeeping</p>	<p>NA</p>
<p>IV. REPORTING</p>	
<p>Reports and Schedules</p>	<ol style="list-style-type: none"> 1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A, using the format in Appendix 8. (R 336.1213(3)(c)(ii)) 2. Semi-annual reporting of any deviations pursuant to General Condition 23 of Part A, using the format in Appendix 8. Due March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i)) 3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A, using the format in Appendix 8. Due annually by March 15 for the previous calendar year. (R 336.1213(4)(c)) <p>See Appendix 2-8.</p>
<p>V. OPERATIONAL PARAMETERS</p>	
<ol style="list-style-type: none"> 1. The permittee may install or construct an unlimited number of new cold cleaners that meet one of the following requirements: <ol style="list-style-type: none"> a. The air/vapor interface of the cold cleaner is no more than 10 square feet. (R 336.1281(h)) b. The cold cleaner is used for cleaning metal parts and the emissions are released to the general in-plant environment. (R 336.1285(r)(iv)) 2. Waste solvent shall be stored only in closed containers, unless the stored solvent is demonstrated to be a safety hazard and is disposed so that not more than 20%, by weight, is allowed to evaporate into the atmosphere. (R 336.1707(3)(c)) 3. Parts shall be drained for not less than 15 seconds or until dripping ceases. (R 336.1707(3)(b)) 	

- 4. The permittee shall perform routine maintenance on each cold cleaning machine as recommended by the manufacturer. **(R 336.1213(3))**
- 5. Each new cold cleaner shall not be operated using a solvent having a Reid vapor pressure of more than 0.6 psia or heated above 120 degrees Fahrenheit, unless at least one of the following is met: **(R 336.1707(2))**
 - a. The cold cleaner is designed such that the ratio of the freeboard height to the width of the cleaner is equal to or greater than 0.7. **(R 336.1707(2)(a))**
 - b. The solvent bath is covered with water if the solvent is insoluble and has a specific gravity of more than 1.0. **(R 336.1707(2)(b))**
 - c. The cold cleaner is controlled by a carbon adsorption system, condensation system, or other method of equivalent control approved by the AQD. **(R 336.1707(2)(c))**

VI. OTHER REQUIREMENTS

- 1. The permittee shall maintain written procedures to demonstrate compliance with the requirements of R 336.1707. Such procedures shall be posted in an accessible, conspicuous location near each machine. **(R 336.1707(4))**

Footnotes:

¹This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

TABLE D-2.3 FGPOLEMCON FLEXIBLE GROUP REQUIREMENTS					
FLEXIBLE GROUP	This flexible group contains the emissions control device that is common to both the conventional and graft polyol manufacturing process: the thermal oxidizer.				
Emission Units	EUPOLEMCON				
I. DESIGN PARAMETERS					
A. Pollution Control Equipment	Thermal Oxidizer (Direct)				
B. Stack/Vent Parameters	Exhaust gases shall be discharged unobstructed vertically upwards unless otherwise noted.				
Stack/Vent ID	a. Minimum Height (feet)	b. Maximum Exhaust Dimension (inches)	c. Temp. (F)	d. Air Flow Rate (acfm)	Applicable Requirement
1. SVPOL80	100 ²	30 ²	NA	NA	R336.1225, 40 CFR 52.21 (c) & (d)
C. Other Design Parameters					
NA					
II. MATERIAL USAGE/EMISSION LIMITS					
A. Material		Maximum Usage Rate			
NA		NA			
B. Pollutants		Maximum Emission Limit			
1. Volatile Organic Compounds (VOC) from equipment vented through the thermal oxidizer		1. 6.4 pph based on a daily average ² (R336.1225, R336.1702(a)) 2. 16 tpy based on a 12-month rolling time period determined at the end of each calendar month ² (R336.1201(3), R336.1702(a))			
2. Propylene Oxide (PO) from equipment vented through the thermal oxidizer		2.2 tpy based on a 12-month rolling time period determined at the end of each calendar month ² (R336.1205(1), R336.1225, R336.1702(a))			
3. Ethylene Oxide (EO) from equipment vented through the thermal oxidizer		0.89 tpy based on a 12-month rolling time period determined at the end of each calendar month ² (R336.1205(1), R336.1225, R336.1702(a))			
4. Acrylonitrile (ACN) from equipment vented through the thermal oxidizer		0.72 tpy based on a 12-month rolling time period determined at the end of each calendar month ² (R336.1205(1), R336.1225, R336.1702(a))			
5. Styrene from equipment vented through the thermal oxidizer		0.41 tpy based on a 12-month rolling time period determined at the end of each calendar month ² (R336.1205(1), R336.1225, R336.1702(a))			
6. Nitrogen Oxides (NOx) from thermal oxidizer		15.3 tpy based on a 12-month rolling time period determined at the end of each calendar month ² (R336.1205(1), 40CFR 52.21 (c)&(d))			

III. COMPLIANCE EVALUATION	
Records of all of the following shall be maintained on file for a period of 5 years. (R 336.1213(3)(b)(ii))	
A. MONITORING/RECORDKEEPING (R 336.1213(3))	
In Addition to General Requirements in Part A	
1. Continuous Emission Monitoring (CEM) System and Recordkeeping	NA
2. Process Monitoring System and Recordkeeping	See Appendix 2-3
3. Other Monitoring and/or Recordkeeping	1. See Appendix 2-4 2. a. The permittee shall conduct regular inspections of the thermal oxidizer for the purpose of determining the operation condition of the thermal oxidizer. Details of these inspections are given in Appendix 2-3. (R336.1213(3)) b. Permittee shall monitor and record continuously the combustion temperature of the combustion chamber in the thermal oxidizer serving the polyol manufacturing process. (R336.1213(3)) c. Log of the inspection, cause(s) of malfunction or failure, repairs made and corrective actions taken shall be maintained on file for a period of at least five years. (R336.1213(3))
B. TESTING/RECORDKEEPING (R 336.1213(3))	
In Addition to General Requirements in Part A	
1. Parameter to be Tested/Recorded	1. Ethylene Oxide (EO) and Propylene Oxide (PO) emission rates from equipment vented through the thermal oxidizer ² (R336.1213(3), R336.1205(1), R336.1225, R336.1702(a), R336.1910, 40 CFR 63, Subpart PPP) 2. Acrylonitrile (ACN) and styrene emission rates from equipment vented through the thermal oxidizer (R336.1213(3), R336.1205(1), R336.1225, R336.1702(a), R336.1910)
2. Method/Analysis	1. US EPA Reference Method 18, 25, 25A, 25B or a method acceptable to the Department (R336.1213(3)) 2. US EPA Reference Method 18, 25, 25A, 25B or a method acceptable to the Department (R336.1213(3))
3. Frequency and Schedule of Testing/Recordkeeping	1. Once within the last six months prior to the expiration date of this ROP, unless permittee demonstrates to the satisfaction of the Department that the most recent test is still valid. (R336.1213(3)) 2. Once within the last six months prior to the expiration date of this ROP, unless permittee demonstrates to the satisfaction of the Department that the most recent test is still valid. (R336.1213(3))

IV. REPORTING	
Reports and Schedules	<ol style="list-style-type: none"> 1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii)) 2. Semiannual reporting of any deviations pursuant to General Condition 23 of Part A. Due March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i)) 3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. Due annually by March 15 for the previous calendar year. (R 336.1213(4)(c)) <p>See Appendix 2-8.</p>
V. OPERATIONAL PARAMETERS	
<ol style="list-style-type: none"> 1. Permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor the operating temperature of the thermal oxidizer on a continuous basis. For the purpose of this condition, “on a continuous basis” is defined as an instantaneous data point recorded at least once every 15 minutes. Permittee may record block average values for 15 minutes or shorter periods calculated from all measured data values during each period.² (R336.1205(1), R336.1225, R336.1702(a), R336.1910, 40 CFR 63, Subparts A and PPP) 2. Permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor the position of the waste gas inlet control valves of the thermal oxidizer on a continuous basis.² (R336.1205(1), R336.1225, R336.1702(a), R336.1910, 40 CFR 63, Subparts A and PPP) 	
VI. OTHER REQUIREMENTS	
<ol style="list-style-type: none"> 1. Permittee shall comply with the applicable requirements of 40 CFR 63, Subpart PPP-National Emission Standards for Hazardous Air Pollutant Emissions for Polyether Polyol Production as they apply to FGPOLEMCON. (R336.1213(3), 40 CFR 60.1420, 40 CFR 60.480) 2. Permittee shall calibrate, maintain, and operate the instrument, used for measuring the liquid flowrate of the scrubber, according to the manufacture’s recommendation. (R336.1213(3)) 3. Permittee shall calibrate, maintain, and operate the instrument used for measuring the liquid flow rate of the scrubber liquid according to the manufacture’s recommendations. (R336.1213(3)) 	

Footnotes:

¹This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

TABLE D-2.4 FGPOLFUG FLEXIBLE GROUP REQUIREMENTS					
FLEXIBLE GROUP		Fugitive emissions from EUPOLCONV and EUPOLGRAFT			
Emission Units		EUPOLFUGCONV, EUPOLFUGGRAFT			
I. DESIGN PARAMETERS					
A. Pollution Control Equipment		NA			
B. Stack/Vent Parameters		NA			
Stack/Vent ID	a. Minimum Height (feet)	b. Maximum Exhaust Dimension (inches)	c. Temp. (F)	d. Air Flow Rate (acfm)	Applicable Requirement
NA	NA	NA	NA	NA	NA
C. Other Design Parameters					
NA					
II. MATERIAL USAGE/EMISSION LIMITS					
A. Material		Maximum Usage Rate			
NA		NA			
B. Pollutants		Maximum Emission Limit			
1. Fugitive emissions of ethylene oxide (EO) from conventional polyol manufacturing		0.16 tpy based on 12-month rolling time period determined at the end of each calendar month (R336.1205(1))			
2. Fugitive emissions of propylene oxide (PO) from conventional polyol manufacturing		0.6 tpy based on a 12-month rolling time period determined at the end of each calendar month (R336.1205(1))			
3. Fugitive emissions of acrylonitrile from graft polyol manufacturing		0.12 tpy based on a 12-month rolling time period determined at the end of each calendar month (R336.1205(1), R336.1225)			
4. Fugitive emissions of styrene from graft polyol manufacturing		0.12 tpy based on a 12-month rolling time period determined at the end of each calendar month (R336.1205(1), R336.1225)			
III. COMPLIANCE EVALUATION					
Records of all of the following shall be maintained on file for a period of 5 years. (R 336.1213(3)(b)(ii))					
A. MONITORING/RECORDKEEPING (R336.1213(3)) In Addition to General Requirements in Part A					
1. Continuous Emission Monitoring (CEM) System and Recordkeeping		NA			
2. Process Monitoring System and Recordkeeping		1. Permittee shall perform periodic leak detection, and repair (LDAR) monitoring of reactor train numbers 7, 8 and 9 as specified in 40 CFR 63, Subparts A and PPP. ² (R336.1205(1), R336.1225, 40 CFR 63, Subpart PPP) 2. Permittee shall perform periodic leak detection, and repair (LDAR) monitoring of reactor train number 10, equivalent to the program identified in R336.1629, in a manner acceptable to the AQD District Supervisor, with semi-annual (not quarterly) reporting and the LDAR report submitted within 60 days following the end of the reporting period (not 25 days). (R336.1213(3))			

3. Other Monitoring and/or Recordkeeping	<ol style="list-style-type: none"> 1. Permittee shall keep, in a satisfactory manner, results of LDAR monitoring and records of repairs made for EUPOLCONV. All records are for the purpose of compliance demonstration and shall be kept on file for a period of at least five years and made available to the Department upon request.² R336.1205(1), R336.1225, 40 CFR 63, Subpart PPP) 2. Permittee shall keep, in a satisfactory manner, monthly and monthly and 12-month rolling time period calculations of the fugitive EO and PO emission rates from EUPOLCONV. All records shall be kept on file for a period of at least five years and made available to the Department upon request.² (R336.1205(1), (R336.1225) 3. Permittee shall keep, in a satisfactory manner, results of LDAR monitoring and records of repairs made for EUPOLGRAFT. All records shall be kept on file for a period of at least five years and made available to the Department upon request.² (R336.1205(1), (R336.1225) 4. Permittee shall keep, in a satisfactory manner, monthly and monthly and 12-month rolling time period calculations of the fugitive ACN, and styrene emission rates from EUPOLGRAFT. All records shall be kept on file for a period of at least five years and made available to the Department upon request.² (R336.1205(1), R336.1225)
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**B. TESTING/RECORDKEEPING (R336.1213(3))
In Addition to General Requirements in Part A**

1. Parameter to be Tested/Recorded	NA
2. Method/Analysis	NA
3. Frequency and Schedule of Testing/Recordkeeping	NA

IV. REPORTING

Reports and Schedules	<ol style="list-style-type: none"> 1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R336.1213(3)(c)(ii)) 2. Semiannual reporting of any deviations pursuant to General Condition 23 of Part A. Due March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R336.1213(3)(c)(i)) 3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. Due annually by March 15 for the previous calendar year. (R336.1213(4)(c)) <p>See Appendix 2-8.</p>
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V. OPERATIONAL PARAMETERS

<ol style="list-style-type: none"> 1. Permittee shall comply with all the applicable requirements of 40 CFR 60, Subpart V V-Standards of performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for the Reactor #9 involved in the manufacturing of conventional polyol. (R336.1213(3)), (40 CFR 60.480) NOTE: In accordance with 40 CFR 63.160(c), compliance with 40 CFR 63 Subpart PPP requirements constitutes compliance with 40 CFR 60 Subpart V V. 2. Permittee shall comply with the applicable requirements of 40 CFR 63, Subpart PPP-National Emission Standards for Hazardous Air Pollutant Emissions for Polyether Polyol Production. (R336.1213(3)), (40 CFR 60.1420)
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VI. OTHER REQUIREMENTS

NA

Footnotes:

¹This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

TABLE D-2.5 FGPNLNSPSKBTANKS					
FLEXIBLE GROUP REQUIREMENTS					
FLEXIBLE GROUP	This emission group contains those storage tank emission units that are exempt from the permit to install program but are subject to the applicable requirements of 40 CFR 60, Subpart Kb.				
Emission Units	EUDVPOLTK-518, EUDVPOLTK-536, EUDVPOLTK-526, EUDVPOLTK-413c, EUDVPOLTK-521, EUDVPOLTK524, DVPOLTK-301				
I. DESIGN PARAMETERS					
A. Pollution Control Equipment	Thermal oxidizer				
B. Stack/Vent Parameters	Exhaust gases shall be discharged unobstructed vertically upwards unless otherwise noted.				
Stack/Vent ID	a. Minimum Height (feet)	b. Maximum Exhaust Dimension (inches)	c. Temp. (°F)	d. Air Flow Rate (acfm)	Applicable Requirement
NA	NA	NA	NA	NA	NA
C. Other Design Parameters					
NA					
II. MATERIAL USAGE/EMISSION LIMITS					
A. Material		Maximum Usage Rate			
NA		NA			
B. Pollutants		Maximum Emission Limit			
NA		NA			
III. COMPLIANCE EVALUATION					
Records of all of the following shall be maintained on file for a period of 5 years. (R 336.1213(3)(b)(ii))					
A. MONITORING/RECORDKEEPING (R 336.1213(3))					
In Addition to General Requirements in Part A					
1. Continuous Emission Monitoring (CEM) System and Recordkeeping	NA				
2. Process Monitoring System and Recordkeeping	NA				
3. Other Monitoring and/or Recordkeeping	1. Permittee, for each storage vessel as specified in 40 CFR 60.110b(a) shall keep readily accessible records showing the dimensions of the storage tank and analysis showing the capacity of the storage tank for the life of the storage tank. (40 CFR 60.116b((b))				
B. TESTING/RECORDKEEPING (R 336.1213(3))					
In Addition to General Requirements in Part A					
1. Parameter to be Tested/ Recorded	NA				
2. Method/Analysis	NA				
3. Frequency and Schedule of Testing/Recordkeeping	NA				
IV. REPORTING					
Reports and Schedules	1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R336.1213(3)(c)(ii)) 2. Semiannual reporting of any deviation pursuant to General Condition 23 of Part A. Due March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R336.1213(3)(c)(i))				

TABLE D-2.5 FGPOLNSPSKBTANKS FLEXIBLE GROUP REQUIREMENTS	
	3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. Due annually by March 15 for the previous calendar year. (R336.1213(4)(c)) See Appendix 2-8.
V. OPERATIONAL PARAMETERS	
1. Permittee shall comply with all applicable requirements of 40 CFR 60, Subpart Kb, Standards of Performance for Volatile Organic Liquid Storage Vessels (including Petroleum Liquid Storage Vessels) for which Construction, Reconstruction, or Modification Commenced After July 23, 1984. (R336.1213(3)), (40 CFR 60.110b(a))	
VI. OTHER REQUIREMENTS	
NA	

Footnotes:

¹This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

TABLE D-2.6 FGPOLFACILITY FLEXIBLE GROUP REQUIREMENTS					
FLEXIBLE GROUP	All equipment at the polyol plant including equipment covered by other permits, grand-fathered equipment, and exempt equipment.				
Emission Units	EUPOLFUGCONV, EUPOLFUGGRAFT, EUPOLCONV, EUPOLEMCON, EUPOLGRAFT, FGPOLTKEEMPT, EUPOLTKFARM, FGPOLRULE290, FGPOLCOLDCLEANERS, FGPOLEMCON, FGPOLFUG, FGPOLNPSKBTANKS				
I. DESIGN PARAMETERS					
A. Pollution Control Equipment	NA				
B. Stack/Vent Parameters	Exhaust gases shall be discharged unobstructed vertically upwards unless otherwise noted.				
Stack/Vent ID	a. Minimum Height (feet)	b. Maximum Exhaust Dimension (inches)	c. Temp. (°F)	d. Air Flow Rate (acfm)	Applicable Requirement
NA	NA	NA	NA	NA	NA
C. Other Design Parameters					
NA					
II. MATERIAL USAGE/EMISSION LIMITS					
A. Material		Maximum Usage Rate			
NA		NA			
B. Pollutants		Maximum Emission Limit			
1. Styrene		0.76 tpy based on a 12-month rolling time period determined at the end of each calendar month. (R336.1205(1))			
2. Ethylene Oxide (EO)		1.08 tpy based on a 12-month rolling time period determined at the end of each calendar month. (R336.1205(1))			
3. Propylene Oxide (PO)		3.11 tpy based on a 12-month rolling time period determined at the end of each calendar month. (R336.1205(1))			
4. Acrylonitrile (ACN)		0.84 tpy based on a 12-month rolling time period determined at the end of each calendar month. (R336.1205(1))			
5. Total HAPS		6.47 tpy based on a 12-month rolling time period determined at the end of each calendar month. (R336.1205(1))			
III. COMPLIANCE EVALUATION					
Records of all of the following shall be maintained on file for a period of 5 years. (R 336.1213(3)(b)(ii))					
A. MONITORING/RECORDKEEPING (R 336.1213(3)) In Addition to General Requirements in Part A					
1. Continuous Emission Monitoring (CEM) System and Recordkeeping		NA			
2. Process Monitoring System and Recordkeeping		NA			
3. Other Monitoring and/or Recordkeeping		1. Permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period calculations of each individual Hazardous Air Pollutant (HAP) and total HAP emission rates from the Polyol Manufacturing Facility. All records shall be kept on file for at least five years and made available to the Department upon request. ² (R336.1205(1), (R336.1702(a)) 2. The permittee shall comply with all applicable monitoring requirements as specified in 40 CFR 63.1429. (40CFR63.1429)			

B. TESTING/RECORDKEEPING (R 336.1213(3)) In Addition to General Requirements in Part A	
1. Parameter to be Tested/Recorded	NA
2. Method/Analysis	NA
3. Frequency and Schedule of Testing/Recordkeeping	NA
IV. REPORTING	
Reports and Schedules	<p>1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))</p> <p>2. Semiannual reporting of any deviations pursuant to General Condition 23 of Part A. Due March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))</p> <p>3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. Due annually by March 15 for the previous calendar year. (R 336.1213(4)(c))</p> <p>4. The permittee shall comply with all applicable reporting requirements as specified in 40 CFR 63.1430 and 63.1439. (40 CFR 63.1430, 63.1439)</p> <p>See Appendix 2-8.</p>
V. OPERATIONAL PARAMETERS	
<p>1. Permittee shall comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants (NESHAP) as specified in 40 CFR 63, Subpart A (General Provisions) and Subpart PPP (National Emission Standards for Hazardous Air Pollutant Emissions for Polyether Polyols Production), as they apply to the Polyol Manufacturing Facility. (R336.1201(3)). (40 CFR 63, Subparts A and PPP)</p> <p>2. Permittee, upon promulgation, shall comply with all applicable provisions of the Federal Standards for New Stationary Sources as specified in 40 CFR 60, Subparts A (General Provisions) and Subpart YYY (Standards of Performance for New Stationary Sources: Volatile Organic Compound Emissions From the Synthetic Organic Chemical Manufacturing Industry Wastewater), as they apply to the Polyol Manufacturing Facility. (R336.1201(3)), (40 CFR 60, Subparts A and YYY)</p> <p>3. Permittee shall comply with all applicable provisions of the Federal Standards of Performance for New Stationary Sources, as specified in 40 CFR 63, Subpart A and Subpart Kb (Standards of Performance for Volatile Organic Liquid Storage Vessels (including Petroleum Liquid Storage Vessels) for which Construction, Reconstruction, or Modification commenced after July 23, 1984), as they apply to the Polyol Manufacturing Facility. (R336.1201(3)). (40 CFR 63, Subparts A and Kb)</p>	
VI. OTHER REQUIREMENTS	
NA	

Footnotes:

¹This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

E-2. NON-APPLICABLE REQUIREMENTS

At the time of ROP issuance, the AQD has determined that the requirements identified in the table below are not applicable to this stationary source. This determination is incorporated into the permit shield provisions set forth in the General Conditions in Part A pursuant to Rule 213(6)(a)(ii).

Emission Unit ID	Rule/Regulation Citation	Requirement Description	Justification
EUPOLCONV	40 CFR 60, Subpart V V	Standards of Performance for Equipments Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Facility	Applicable only to Reactor Train #9 in the Conventional Polyol Manufacturing (Reactor #9, Letter to EPA/WAQMD dated 9/15/1999)
EUPOLEMCON	40 CFR 60, Subpart V V	Standards of Performance for Equipments Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Facility	Applicable only to Reactor Train #9 in the Conventional Polyol Manufacturing (Reactor #9, Letter to EPA/WAQMD dated 9/15/1999)
EUPOLFUGCONV	40 CFR 60, Subpart V V	Standards of Performance for Equipments Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Facility	Applicable only to Reactor Train #9 in the Conventional Polyol Manufacturing (Reactor #9, Letter to EPA/WAQMD dated 9/15/1999)
EUPOLFUGGRAFT	40 CFR 60, Subpart V V	Standards of Performance for Equipments Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Facility	Not applicable to Graft Polyol Manufacturing.
EUPOLFUGGRAFT	40 CFR 63, Subpart PPP	National Emission Standards for Hazardous Air Pollutant Emissions for Polyether Polyols Production	Not applicable to Graft Polyol Manufacturing.
EUPOLGRAFT	40 CFR 63, Subpart PPP	National Emission Standards for Hazardous Air Pollutant Emissions for Polyether Polyols Production	Not applicable to Graft Polyol Manufacturing.

APPENDICES

Appendix 2-1: Abbreviations & Acronyms

The following is an alphabetical listing of abbreviations/acronyms that may be used in this permit.

AQD	Air Quality Division	MM	Million
acfm	Actual cubic feet per minute	MSDS	Material Safety Data Sheet
BACT	Best Available Control Technology	MW	Megawatts
BTU	British Thermal Unit	NA	Not Applicable
°C	Degrees Celsius	NAAQS	National Ambient Air Quality Standards
CAA	Federal Clean Air Act	NESHAP	National Emission Standard for Hazardous Air Pollutants
CAM	Compliance Assurance Monitoring	NMOC	Non-methane Organic Compounds
CEM	Continuous Emission Monitoring	NOx	Oxides of Nitrogen
CFR	Code of Federal Regulations	NSPS	New Source Performance Standards
CO	Carbon Monoxide	NSR	New Source Review
COM	Continuous Opacity Monitoring	PM	Particulate Matter
department	Michigan Department of Environmental Quality	PM-10	Particulate Matter less than 10 microns in diameter
dscf	Dry standard cubic foot	pph	Pound per hour
dscm	Dry standard cubic meter	ppm	Parts per million
EPA	United States Environmental Protection Agency	ppmv	Parts per million by volume
EU	Emission Unit	ppmw	Parts per million by weight
°F	Degrees Fahrenheit	PS	Performance Specification
FG	Flexible Group	PSD	Prevention of Significant Deterioration
GACS	Gallon of Applied Coating Solids	psia	Pounds per square inch absolute
gr	Grains	psig	Pounds per square inch gauge
HAP	Hazardous Air Pollutant	PeTE	Permanent Total Enclosure
Hg	Mercury	PTI	Permit to Install
hr	Hour	RACT	Reasonable Available Control Technology
HP	Horsepower	ROP	Renewable Operating Permit
H ₂ S	Hydrogen Sulfide	SC	Special Condition
HVLP	High Volume Low Pressure *	scf	Standard cubic feet
ID	Identification (Number)	sec	Seconds
IRSL	Initial Risk Screening Level	SCR	Selective Catalytic Reduction
ITSL	Initial Threshold Screening Level	SO ₂	Sulfur Dioxide
LAER	Lowest Achievable Emission Rate	SRN	State Registration Number
lb	Pound	TAC	Toxic Air Contaminant
m	Meter	Temp	Temperature
MACT	Maximum Achievable Control Technology	THC	Total Hydrocarbons
MAERS	Michigan Air Emissions Reporting System	tpy	Tons per year
MAP	Malfunction Abatement Plan	µg	Microgram
MDEQ	Michigan Department of Environmental Quality	VE	Visible Emissions
mg	Milligram	VOC	Volatile Organic Compounds
mm	Millimeter	yr	Year

*For High Volume Low Pressure (HVLP) applicators, the pressure measured at the HVLP gun air cap shall not exceed ten (10) pounds per square inch gauge (psig).

Appendix 2-2. Schedule of Compliance

The permittee has certified that this source is in compliance with all applicable requirements as of the date of issuance of this ROP and the permittee shall continue to comply with all applicable requirements listed in this ROP. A detailed Schedule of Compliance is not required. **(R 336.1213(4)(a), R 336.1119(a)(ii))**

Appendix 2-3. Monitoring Requirements

The following monitoring procedures, methods, or specifications are the details to the monitoring requirements identified and referenced in Table **C-2.1: EUPOLCONV**.

1. The regular inspections of the baghouse shall be conducted during scheduled outages or downtime, or after observing visible emissions but not less frequently than every 12 months. **(R336.1213(3))**
2. The operational condition, and if necessary, reasons for the failure or malfunction of the bags, metal housings, fans, blowers, hopper bottom discharge valve, reverse air dampers or pulse jets (which ever is applicable), access doors, and gaskets shall be determined during the inspection. **(R336.1213(3))**
3. Any repairs and corrective actions, needed to address the causes of malfunction or failure shall be performed within one hour. If the problem is not corrected within one hour, the facility shall promptly discontinue the source of particulate matter to the baghouse until any repairs and corrective actions needed to address the causes of malfunction or failure is performed. **(R336.1213(3))**

The following monitoring procedures, methods, or specifications are the details to the monitoring requirements identified and referenced in Table **D-2.3: FGPOLEMCON**.

1. Regular inspections of the thermal oxidizer shall be conducted during scheduled outages or downtime, but not less frequently than every 12 months. **(R336.1213(3))**
2. The operational condition, and if necessary, reasons for the failure or malfunction of the different components of the thermal oxidizer shall be determined during the inspection. **(R336.1213(3))**
3. Any repairs and corrective actions, needed to address the causes of malfunction or failure shall be performed within one hour. If the problem is not corrected within one hour, the facility shall promptly discontinue the source of emissions to the thermal oxidizer until any repairs and corrective actions needed to address the causes of malfunction or failure is performed. **(R336.1213(3))**

Appendix 2-4. Recordkeeping

The permittee shall use the following approved formats and procedures for the recordkeeping requirements referenced in Table **D-2.3: FGPOLEMCON**. Alternative formats must be approved by the AQD District Supervisor.

1. Permittee shall keep, in a satisfactory manner, records of the monitored thermal oxidizer operating temperature and the date and time of each position change of the waste gas inlet control valves. All records shall be kept on file for a period of at least five years and made available to the Department upon request.² **(R336.1205(1), R336.1225, R336.1702(a), R336.1910, 40 CFR 63, Subpart PPP)**
2. Permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period calculations of the VOC, PO, EO, ACN and Styrene emission rates from EUPOLCONV and EUPOLGRAFT equipment vented through the thermal oxidizer. All records shall be kept on file for a period of at least five years and made available to the Department upon request.² **(R336.1205(1), R336.1225, R336.1702(a))**

3. Permittee shall keep, in a satisfactory manner, monthly and 12-month rolling time period calculations of the NOx emission rates from the thermal oxidizer. All records shall be kept on file for a period of at least five years and made available to the Department upon request.² **(R336.1205(1), 40 CFR 52.21(c) & (d))**

Appendix 2-4a. Recordkeeping

The permittee shall use the DEQ Rule 290 Permit to Install Exemption Record form (EQP3558) or an alternative format as approved by the AQD District Supervisor to document monthly records as required by R336.1290 and Table D-1.1: FGPOLRULE290.

Appendix 2-5. Testing Procedures

There are no specific testing requirement plans or procedures for this ROP. Therefore, this appendix is not applicable.

Appendix 2-6. Permits to Install/Operate

The following table lists the Permits to Install and/or operate, which relate to the identified Emission Units or Flexible Groups:

Permit to Install/Operate Number	Description of Equipment	Corresponding Emission Unit or Flexible Group ID
229-01	-Conventional polyol manufacturing process -Fugitive emissions from the conventional polyol manufacturing process -Fugitive emissions from the graft polyol manufacturing process -Graft polyol manufacturing process -Emissions control devices for both conventional polyol and graft polyol manufacturing process - Fugitive emissions from conventional polyol manufacturing and graft polyol manufacturing	EUPOLCONV FGPOLFUG EUPOLFUGCONV EUPOLGRAFT FGPOLEMCON EUPOLFUGGRAFT
C-10733 and C-10735	Tank TK-536 for storage of toluene diisocyanate controlled by a carbon adsorption canister	EUPOLTNKFARM

Appendix 2-7. Emission Calculations

There are no specific emission calculations to be used for this ROP. Therefore, this appendix is not applicable.

Appendix 2-8. Reporting

A. Annual and Deviation Certification Reporting

The permittee shall use the DEQ Report Certification form (EQP5736) and DEQ Deviation Report form (EQP5737) for the annual and deviation certification reporting referenced in Section IV of the Requirement Tables. Alternative formats must meet the provisions of R336.1213(4)(c) and R336.1213(3)(c)(i), respectively, and be approved by the AQD District Supervisor.

B. Other Reporting

Specific reporting requirement formats and procedures are detailed in Part A or the appropriate Requirement Tables. Therefore, Part B of this appendix is not applicable.

Footnotes:

¹This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

**STATE OF MICHIGAN
RENEWABLE OPERATING PERMIT**

BASF Corporation, Chemical Plants

SECTION 03

ANALYTICAL CHEMISTRY AND CHEMICAL ENGINEERING

SRN: B4359

LOCATED AT

1609 Biddle Avenue, Wyandotte, Michigan

Permit Number: MI-ROP-B4359-2003b

Effective Date: December 1, 2003

Revision Date: September 14, 2005, January 4, 2007

Expiration Date: December 1, 2008

AUTHORITY AND ENFORCEABILITY

For the purpose of this permit, the **permittee** is defined as any person who owns or operates an emission unit at a stationary source for which this permit has been issued. The department is defined in Rule 104(d) as the Director of the Michigan Department of Environmental Quality (MDEQ) or his or her designee.

The permittee shall comply with all specific details in the permit terms and conditions and the cited underlying applicable requirements. All terms and conditions in this ROP are both federally enforceable and state enforceable unless otherwise footnoted. Certain terms and conditions are applicable to most stationary sources for which an ROP has been issued. These general conditions are included in Part A of this ROP. Other terms and conditions may apply to a specific emission unit, several emission units which are represented as a flexible group, or the entire stationary source which is represented as a source-wide group. Special conditions are identified in Parts B, C, D and/or the appendices.

In accordance with Rule 213(2)(a), all underlying applicable requirements will be identified for each ROP term or condition. All terms and conditions that are included in a Permit to Install (PTI), are streamlined or subsumed, or are state-only enforceable will be noted as such.

In accordance with Section 5507 of Article II, Chapter 1, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, the permittee has included in the ROP application a compliance certification, a schedule of compliance, and a compliance plan. For applicable requirements with which the source is in compliance, the source will continue to comply with these requirements. For applicable requirements with which the source is not in compliance, the source will comply with the detailed schedule of compliance requirements that are incorporated as an appendix in this ROP. Furthermore, for any applicable requirements effective after the date of issuance of this ROP, the stationary source will meet the requirements on a timely basis, unless the underlying applicable requirement requires a more detailed schedule of compliance.

Issuance of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.

A-3. GENERAL CONDITIONS

Permit Enforceability

- All conditions in this permit are both federally enforceable and state enforceable unless otherwise noted. **(R 336.1213(5))**
- Those conditions that are hereby incorporated in a state-only enforceable Source-wide Permit to Install (PTI) pursuant to Rule 201(2)(d) are designated by Footnote 1. **(R 336.1213(5)(a), R336.1214a(5))**
- Those conditions that are hereby incorporated in federal enforceable Source-wide PTI No. MI-PTI-B4359-2003 pursuant to Rule 201(2)(c) are designated by Footnote 2. **(R 336.1213(5)(b), R 336.1214a(3))**

General Provisions

1. The permittee shall comply with all conditions of this ROP. Any ROP noncompliance constitutes a violation of Article II, Chapter 1, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451), and is grounds for enforcement action, for ROP revocation or revision, or for denial of the renewal of the ROP. All terms and conditions of this ROP that are designated as federally enforceable are enforceable by the Administrator of the United States Environmental Protection Agency (EPA) and by citizens under the provisions of the federal Clean Air Act (CAA). Any terms and conditions based on applicable requirements which are designated as "state only" are not enforceable by the EPA or citizens pursuant to the CAA. **(R 336.1213(1)(a))**
2. 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 conditions of this ROP. **(R 336.1213(1)(b))**
3. This ROP may be modified, revised, or revoked for cause. The filing of a request by the permittee for a permit modification, revision, or termination, or a notification of planned changes or anticipated noncompliance does not stay any ROP term or condition. This does not supersede or affect the ability of the permittee to make changes, at the permittee's own risk, pursuant to Rules 215 and 216. **(R 336.1213(1)(c))**
4. The permittee shall allow the department, or an authorized representative of the department, upon presentation of credentials and other documents as may be required by law and upon stating the authority for and purpose of the investigation, to perform any of the following activities **(R 336.1213(1)(d))**:
 - a. Enter, at reasonable times, a stationary source or other premises where emissions-related activity is conducted or where records must be kept under the conditions of the ROP.
 - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the ROP.
 - c. Inspect, at reasonable times, any of the following:
 - i. Any stationary source.
 - ii. Any emission unit.
 - iii. Any equipment, including monitoring and air pollution control equipment.
 - iv. Any work practices or operations regulated or required under the ROP.
 - d. As authorized by Section 5526 of Act 451, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the ROP or applicable requirements.
5. The permittee shall furnish to the department, within a reasonable time, any information the department may request, in writing, to determine whether cause exists for modifying, revising, or revoking the ROP or to determine compliance with this ROP. Upon request, the permittee shall also furnish to the department copies of any records that are required to be kept as a term or condition of this ROP. For information which is claimed by the permittee to be confidential, consistent with the requirements of 1976 PA 442, MCL §15.231 et seq., and known as the Freedom of Information Act, the person may also be required to furnish the records directly to the EPA together with a claim of confidentiality. **(R 336.1213(1)(e))**

6. A challenge by any person, the Administrator of the EPA, or the department to a particular condition or a part of this ROP shall not set aside, delay, stay, or in any way affect the applicability or enforceability of any other condition or part of this ROP. **(R 336.1213(1)(f))**
7. The permittee shall pay fees consistent with the fee schedule and requirements pursuant to Section 5522 of Act 451. **(R 336.1213(1)(g))**
8. This ROP does not convey any property rights or any exclusive privilege. **(R 336.1213(1)(h))**

Equipment & Design

9. Any collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in Rule 370(2). **(R 336.1370)**
10. Any air cleaning device shall be installed, maintained, and operated in a satisfactory manner and in accordance with the Michigan Air Pollution Control rules and existing law. **(R 336.1910)**

Emission Limits

11. Except as provided in subrules 2, 3, and 4 of Rule 301, a person shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of a density greater than the most stringent of Rule 301(1)(a) or (b) unless otherwise specified in this ROP. The grading of visible emissions shall be determined in accordance with Rule 303. **(R 336.1301(1) in pertinent part):**
 - a. A 6-minute average of 20% opacity, except for one 6-minute average per hour of not more than 27% opacity.
 - b. A limit specified by an applicable federal new source performance standard.
12. The permittee shall not cause or permit the emission of an air contaminant or water vapor in quantities that cause, alone or in reaction with other air contaminants, either of the following:
 - a. Injurious effects to human health or safety, animal life, plant life of significant economic value, or property. **¹(R 336.1901(a))**
 - b. Unreasonable interference with the comfortable enjoyment of life and property. **¹(R 336.1901(b))**

Testing/Sampling

13. The department may require the owner or operator of any source of an air contaminant to conduct acceptable performance tests, at the owner's or operator's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001(1). **(R 336.2001)**
14. Any required performance testing shall be conducted in accordance with Rule 1001(2), Rule 1001(3) and Rule 1003. **(R 336.2001(2), R 336.2001(3), R 336.2003(1))**
15. Any required test results shall be submitted to the Air Quality Division (AQD) in the format prescribed by the applicable reference test method within 60 days following the last date of the test. **(R 336.2001(4))**

Monitoring/Recordkeeping

16. Records of any periodic emission or parametric monitoring required in this ROP shall include the following information specified in Rule 213(3)(b)(i), where appropriate **(R 336.1213(3)(b))**:
 - a. The date, location, time, and method of sampling or measurements.
 - b. The dates the analyses of the samples were performed.
 - c. The company or entity that performed the analyses of the samples.
 - d. The analytical techniques or methods used.
 - e. The results of the analyses.
 - f. The related process operating conditions or parameters that existed at the time of sampling or measurement.
17. All required monitoring data, support information and all reports, including reports of all instances of deviation from permit requirements, shall be kept and furnished to the department upon request for a period of not less than 5 years from the date of the monitoring sample, measurement, report or application. Support information includes all calibration and maintenance records and all original strip-chart recordings, or other original data records, for continuous monitoring instrumentation and copies of all reports required by the ROP. **(R 336.1213(1)(e), R 336.1213(3)(b)(ii))**

Certification & Reporting

18. Except for the alternate certification schedule provided in Rule 213(3)(c)(iii)(B), any document required to be submitted to the department as a term or condition of this ROP shall contain an original certification by a responsible official which states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. **(R 336.1213(3)(c))**
19. A responsible official shall certify to the appropriate District Office of the AQD and the EPA that the stationary source is and has been in compliance with all terms and conditions contained in the ROP except for deviations that have been or are being reported to the appropriate District Office of the AQD pursuant to Rule 213(3)(c). This certification shall include all the information specified in Rule 213(4)(c)(i) through (v) and shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the certification are true, accurate, and complete. The EPA address is: US EPA, Air Compliance Data - Michigan, Air and Radiation Division, 77 West Jackson Boulevard, Chicago, IL, 60604. **(R 336.1213(4)(c))**
20. The certification of compliance shall be submitted annually for the term of this ROP as detailed in the special conditions, or more frequently if specified in an applicable requirement or in this ROP. **(R 336.1213(4)(c))**
21. The permittee shall promptly report any deviations from ROP requirements and certify the reports. The prompt reporting of deviations from ROP requirements is defined in Rule 213(3)(c)(ii) as follows, unless otherwise described in this ROP **(R 336.1213(3)(c))**:
 - a. For deviations that exceed the emissions allowed under the ROP, prompt reporting means reporting consistent with the requirements of Rule 912 as detailed in Condition 25. All reports submitted pursuant to this paragraph shall be promptly certified as specified in Rule 213(3)(c)(iii).
 - b. For deviations which exceed the emissions allowed under the ROP and which are not reported pursuant to Rule 912 due to the duration of the deviation, prompt reporting means the reporting of all deviations in the semiannual reports required by Rule 213(3)(c)(i). The report shall describe reasons for each deviation and the actions taken to minimize or correct each deviation.
 - c. For deviations that do not exceed the emissions allowed under the ROP, prompt reporting means the reporting of all deviations in the semiannual reports required by Rule 213(3)(c)(i). The report shall describe the reasons for each deviation and the actions taken to minimize or correct each deviation.

22. For reports required pursuant to Rule 213(3)(c)(ii), prompt certification of the reports is described in Rule 213(3)(c)(iii) as either of the following **(R 336.1213(3)(c))**:
 - a. Submitting a certification by a responsible official with each report which states that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.
 - b. Submitting, within 30 days following the end of a calendar month during which one or more prompt reports of deviations from the emissions allowed under the ROP were submitted to the department pursuant to Rule 213(3)(c)(ii), a certification by a responsible official which states that, based on information and belief formed after reasonable inquiry, the statements and information contained in each of the reports submitted during the previous month were true, accurate, and complete. The certification shall include a listing of the reports that are being certified. Any report submitted pursuant to Rule 213(3)(c)(ii) that will be certified on a monthly basis pursuant to this paragraph shall include a statement that certification of the report will be provided within 30 days following the end of the calendar month.
23. Semiannually for the term of the ROP as detailed in the special conditions, or more frequently if specified, the permittee shall submit certified reports of any required monitoring to the appropriate District Office of the AQD. All instances of deviations from ROP requirements during the reporting period shall be clearly identified in the reports. **(R 336.1213(3)(c)(i))**
24. On an annual basis, the permittee shall report the actual emissions, or the information necessary to determine the actual emissions, of each regulated air pollutant as defined in Rule 212(6) for each emission unit utilizing the emissions inventory forms provided by the department. **(R 336.1212(6))**
25. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the appropriate District Office of the AQD. The notice shall be provided not later than two business days after the start-up, shutdown, or discovery of the abnormal conditions or malfunction. Notice shall be by any reasonable means, including electronic, telephonic, or oral communication. Written reports, if required under Rule 912, must be submitted to the appropriate District Supervisor within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal conditions or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5) and shall be certified by a responsible official in a manner consistent with the CAA. **(R 336.1912)**

Permit Shield

26. Compliance with the conditions of the ROP shall be considered compliance with any applicable requirements as of the date of ROP issuance, if either of the following provisions is satisfied **(R 336.1213(6)(a)(i), R 336.1213(6)(a)(ii))**:
 - a. The applicable requirements are included and are specifically identified in the ROP.
 - b. The permit includes a determination or concise summary of the determination by the department that other specifically identified requirements are not applicable to the stationary source.

Any requirements identified in Part E of this ROP have been identified as non-applicable to this ROP and are included in the permit shield.
27. Nothing in this ROP shall alter or affect any of the following:
 - a. The provisions of Section 303 of the CAA, emergency orders, including the authority of the EPA under Section 303 of the CAA. **(R 336.1213(6)(b)(i))**
 - b. The liability of the owner or operator of this source for any violation of applicable requirements prior to or at the time of this ROP issuance. **(R 336.1213(6)(b)(ii))**
 - c. The applicable requirements of the acid rain program, consistent with Section 408(a) of the CAA. **(R 336.1213(6)(b)(iii))**
 - d. The ability of the EPA to obtain information from a source pursuant to Section 114 of the CAA. **(R 336.1213(6)(b)(iv))**

28. The permit shield shall not apply to provisions incorporated into this ROP through procedures for any of the following:
- Operational flexibility changes made pursuant to Rule 215. **(R 336.1215(5))**
 - Administrative amendments made pursuant to Rule 216(1)(a)(i)-(iv). **(R 336.1216(1)(b)(iii))**
 - Administrative amendments made pursuant to Rule 216(1)(a)(v) until the amendment has been approved by the department. **(R 336.1216(1)(c)(iii))**
 - Minor permit modifications made pursuant to Rule 216(2). **(R 336.1216(2)(f))**
 - State-only modifications made pursuant to Rule 216(4) until the changes have been approved by the department. **(R 336.1216(4)(e))**
29. Expiration of this ROP results in the loss of the permit shield. If a timely and administratively complete application for renewal is submitted not more than 18 months, but not less than 6 months, before the expiration date of the ROP, but the department fails to take final action before the end of the ROP term, the existing ROP does not expire until the renewal is issued or denied, and the permit shield shall extend beyond the original ROP term until the department takes final action. **(R 336.1217(1)(c), R 336.1217(1)(a))**

Revisions

30. For changes to any process or process equipment covered by this ROP that does not require a revision of the ROP pursuant to Rule 216, the permittee must comply with Rule 215. **(R 336.1215, R 336.1216)**
31. A change in ownership or operational control of a stationary source covered by this ROP shall be made pursuant to Rule 216(1). **(R 336.1219(3))**
32. For revisions to this ROP, an administratively complete application shall be considered timely if it is received by the department in accordance with the time frames specified in Rule 216. **(R 336.1210(9))**
33. Pursuant to Rule 216(1)(b)(iii), Rule 216(2)(d) and Rule 216(4)(d), after a change has been made, and until the department takes final action, the permittee shall comply with both the applicable requirements governing the change and the ROP terms and conditions proposed in the application for the modification. During this time period, the permittee may choose to not comply with the existing ROP terms and conditions that the application seeks to change. However, if the permittee fails to comply with the ROP terms and conditions proposed in the application during this time period, the terms and conditions in the ROP are enforceable. **(R 336.1216(1)(c)(3), R 336.1216(2)(d), R 336.1216(4)(d))**

Reopenings

34. A ROP shall be reopened by the department prior to the expiration date and revised by the department under any of the following circumstances:
- If additional requirements become applicable to this stationary source with three or more years remaining in the term of the ROP, but not if the effective date of the new applicable requirement is later than the ROP expiration date. **(R 336.1217(2)(a)(i))**
 - If additional requirements pursuant to Title IV of the CAA become applicable to this stationary source. **(R 336.1217(2)(a)(ii))**
 - If the department determines that the ROP contains a material mistake, information required by any applicable requirement was omitted, or inaccurate statements were made in establishing emission limits or the terms or conditions of the ROP. **(R 336.1217(2)(a)(iii))**
 - If the department determines that the ROP must be revised to ensure compliance with the applicable requirements. **(R 336.1217(2)(a)(iv))**

Renewals

35. For renewal of this ROP, an administratively complete application shall be considered timely if it is received by the department not more than 18 months, but not less than 6 months, before the expiration date of the ROP. **(R 336.1210(7))**

Stratospheric Ozone Protection

36. If the permittee is subject to 40 CFR Part 82 and services, maintains, or repairs appliances except for motor vehicle air conditioners (MVAC), or disposes of appliances containing refrigerant, including MVAC and small appliances, or if the permittee is a refrigerant reclaimer, appliance owner or a manufacturer of appliances or recycling and recovery equipment, the permittee shall comply with all applicable standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F.
37. If the permittee is subject to 40 CFR Part 82 and performs a service on motor (fleet) vehicles when this service involves refrigerant in the MVAC, the permittee is subject to all the applicable requirements as specified in 40 CFR Part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed by the original equipment manufacturer. The term MVAC as used in Subpart B does not include the air-tight sealed refrigeration system used for refrigerated cargo or an air conditioning system on passenger buses using Hydrochlorofluorocarbon-22 refrigerant.

Risk Management Plan

38. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall register and submit to the EPA the required data related to the risk management plan for reducing the probability of accidental releases of any regulated substances listed pursuant to Section 112(r)(3) of the CAA as amended in 68.130. The list of substances, threshold quantities, and accident prevention regulations promulgated under Part 68 do not limit in any way the general duty provisions under Section 112(r)(1).
39. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall comply with the requirements of Part 68 no later than the latest of the following dates as provided in 68.10(a):
- d. June 21, 1999,
 - e. Three years after the date on which a regulated substance is first listed under 68.130, or
 - f. The date on which a regulated substance is first present above a threshold quantity in a process.
40. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall submit any additional relevant information requested by any regulatory agency necessary to ensure compliance with the requirements of 40 CFR Part 68.
41. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall annually certify compliance with all applicable requirements of Section 112(r) as detailed in Rule 213(4)(c)). **(40 CFR Part 68)**

Emission Trading

42. Emission averaging and emission reduction credit trading are allowed pursuant to any applicable interstate or regional emission trading program that has been approved by the Administrator of the EPA as a part of Michigan's State Implementation Plan. Such activities must comply with Rule 215 and Rule 216. **(R 336.1213(12))**

Permit To Install (PTI)

43. The process or process equipment included in this permit shall not be reconstructed, relocated, or modified unless a PTI authorizing such action is issued by the department, except to the extent such action is exempt from the PTI requirements by any applicable rule.² **(R 336.1201(1))**
44. The department may, after notice and opportunity for a hearing, revoke PTI terms or conditions if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of the PTI or is violating the department's rules or the CAA.² **(R 336.1201(8), Section 5510 of Act 451, PA 1994)**
45. The terms and conditions of a PTI shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by the PTI. If a new owner or operator submits a written request to the department pursuant to Rule 219 and the department approves the request, this PTI will be amended to reflect the change of ownership or operational control. The request must include all of the information required by subrules (1)(a), (b) and (c) of Rule 219. The written request shall be sent to the appropriate AQD District Supervisor, MDEQ.² **(R 336.1219)**
46. If the installation, reconstruction, relocation, or modification of the equipment for which PTI terms and conditions have been approved has not commenced within 18 months, or has been interrupted for 18 months, the applicable terms and conditions from that PTI shall become void unless otherwise authorized by the department. Furthermore, the person to whom that PTI was issued, or the designated authorized agent, shall notify the department via the Supervisor, Permit Section, MDEQ, AQD, P. O. Box 30260, Lansing, MI 48909, if it is decided not to pursue the installation, reconstruction, relocation, or modification of the equipment allowed by the terms and conditions from that PTI.² **(R 336.1201(4))**

Footnotes:

¹This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

B-3. SOURCE-WIDE CONDITIONS

Part B outlines the source-wide terms and conditions that apply to this stationary source. The permittee is subject to these special conditions for the stationary source in addition to the General Conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply to this source, NA (not applicable) has been used in the table. If there are no source-wide conditions, this section will be left blank.

For the purpose of the contiguous site being a synthetic minor for HAPs, all process equipment at the site including equipment covered by other permits, grand-fathered equipment and exempt equipment shall encompass the Chemical Production Plants (SRN B4359), Secondary Plastic Production Plants (SRN M4777), and R&D/Application Centers (SRN M4808) stationary sources.

TABLE B-3.1					
SOURCE-WIDE REQUIREMENTS [for Conditions II.B.1.1, II.B.2.2, III.A.3.2, III.A.3.3 and associated certifications and deviations for these conditions, the term SOURCE-WIDE comprises all process equipment at the site including equipment covered by other permits, grand-fathered equipment and exempt equipment. The site encompasses the Chemical Production Plants (SRN B4359), Secondary Plastic Production Plants (SRN M4777), and R&D/Application Centers (SRN M4808) stationary sources]					
EMISSION UNIT	NA				
Flexible Group ID	NA				
I. DESIGN PARAMETERS					
A. Pollution Control Equipment	NA				
B. Stack/Vent Parameters					
Stack/Vent ID	a. Minimum Height (feet)	b. Maximum Exhaust Dimension (inches)	c. Temp. (°F)	d. Air Flow Rate (acfm)	Applicable Requirement
C. Other Design Parameters					
NA					
II. MATERIAL USAGE/EMISSION LIMITS					
A. Material	Maximum Usage Rate				
NA	NA				
B. Pollutant	Maximum Emission Limit				
1. Each Individual HAP	1. Less than 10.0 tons per 12-month rolling time period as determined at the end of each calendar month, including the individual HAPs emissions from the BASF Corporation M4777, M4808, and B4359 contiguous sites. (R336.1205(1))				
2. Total HAPs	2. Less than 25.0 tons per 12-month rolling time period as determined at the end of each calendar month, including the total HAPs emissions from the BASF Corporation M4777, M4808, and B4359 contiguous sites. (R336.1205(1))				
III. COMPLIANCE EVALUATION					
Records of all of the following shall be maintained on file for a period of 5 years. (R 336.1213(3)(b)(ii))					
A. MONITORING/RECORDKEEPING (R 336.1213(3))					
In Addition To General Requirements in Part A					
1. Continuous Emission Monitoring (CEM) System and Recordkeeping	NA				

TABLE B-3.1

SOURCE-WIDE REQUIREMENTS [for Conditions II.B.1.1, II.B.2.2, III.A.3.2, III.A.3.3 and associated certifications and deviations for these conditions, the term SOURCE-WIDE comprises all process equipment at the site including equipment covered by other permits, grand-fathered equipment and exempt equipment. The site encompasses the Chemical Production Plants (SRN B4359), Secondary Plastic Production Plants (SRN M4777), and R&D/Application Centers (SRN M4808) stationary sources]

2. Process Monitoring System and Recordkeeping	
3. Other Monitoring and/or Recordkeeping	<ol style="list-style-type: none"> 1. Permittee shall comply with the applicable requirements of 40 CFR Part 61, Subpart FF, Section 61.356 (Recordkeeping requirements.) (40 CFR 61, Subparts A and FF) 2. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any recordkeeping, reporting or notification special condition. (R336.1205(1)) 3. The permittee shall keep in a satisfactory manner, monthly and previous 12-month emission calculation records for individual HAPs and total HAPs. (R336.1205(1))

**B. TESTING/RECORDKEEPING (R 336.1213(3))
In Addition to General Requirements in Part A**

1. Parameter to be Tested/Recorded	
2. Method/Analysis	
3. Frequency and Schedule of Testing/Recordkeeping	

IV. REPORTING

Reports and Schedules	<ol style="list-style-type: none"> 1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii)) 2. Semiannual reporting of any deviations pursuant to General Condition 23 of Part A. Due March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i)) 3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. Due annually by March 15 for the previous calendar year. (R 336.1213(4)(c)) 4. Permittee shall comply with the applicable requirements of 40 CFR Part 61, Subpart FF, Section 61.357 (Reporting requirements.)(40 CFR 61, Subparts A and FF) <p>See Appendix 2-8.</p>
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V. OPERATIONAL PARAMETERS

NA

VI. OTHER REQUIREMENTS

1. Permittee shall comply with the applicable requirements of 40 CFR 61, Subparts A (General Provisions) and FF (National Emission Standard for Benzene Waste Operations). The applicable sections of Subpart FF include, but are not necessarily limited to: **(40 CFR 61, Subparts A and FF)**
 - A. 61.342 (Standards: General)
 - B. 61.355 (Test methods, procedures, and compliance methods)
2. Permittee shall comply with the applicable requirements of 40 CFR 61, Subparts A (General Provisions) and M (National Emission Standard for Asbestos). The applicable sections of Subpart M include, but are not necessarily limited to: **(40 CFR 61, Subparts A and M)**
 - A. 61.145 (Standard for demolition and renovation)
 - B. 61.150 (Standard for waste disposal for manufacturing, fabricating, demolition, renovation, and spraying operations)

Footnotes:

¹This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

C-3. EMISSION UNIT CONDITIONS

Part C outlines terms and conditions that are specific to individual emission units listed in the Emission Unit Summary Table. The permittee is subject to the special conditions for each emission unit in addition to the General Conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply, NA (not applicable) has been used in the table. If there are no conditions specific to individual emission units, this section will be left blank.

EMISSION UNIT SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Emission Unit ID	Emission Unit Description (Including Process Equipment and Control Device(s))	Installation/ Modification Date	Requirement Table No.
EUCHEAGCHEMDRY	This group includes all equipment utilized in the manufacture of dry agriculture chemicals. Currently, "CELEBRITY" is the only material that will be manufactured in this group and the emission unit is exempted by Rule 290. Control equipment includes a baghouse and filters.	1/14/2000	D-3.1
EUCHEGRAFTEDPOLYOL	This group includes all equipment utilized in the manufacture grafted polyols and the emission unit is exempted by Rule 290.	7/15/2002	D-3.1
EUCHEMACROMERS	This emission group includes all equipment utilized in the manufacture of macromers used internally in the production of graft polyols. This emission group is exempt from Rule 201 requirements pursuant to Rule 290.	3/15/2002	D-3.1
EURULECHE290	Any existing or future emission unit that emits air contaminants which are exempt from the requirements of R 336.1201 pursuant to R 336.1290.	NA	D-3.1
EUCHENMP	This emission group includes all equipment utilized in the recovery (by distillation) of N-Methyl Pyrrolidone. This emission unit is exempt from Rule 201 requirements pursuant to Rule 290. Control equipment includes surface temperature condenser.	8/25/1997	D-3.1
EUCHEPOLYTHF	Production of special molecular weight grades of Poly-THF by solvent extraction carried out in Building 53Z. Equipment includes reactors R-30, R-62, and R-63, and various other vessels. Emissions from vacuum jets are controlled by non-contact condenser system and emissions from reactors R-30, R-62, and R-63 are controlled by condenser system E-4, E-6, and E-12 respectively. Control equipment includes surface temperature condenser.	1/1/1951 6/2/1994	C-3.1

Emission Unit ID	Emission Unit Description (Including Process Equipment and Control Device(s))	Installation/ Modification Date	Requirement Table No.
EUCHEPOLYOL	Polyether polyol synthesis process carried out in Buildings 53Z and 55T. Equipment includes reactors systems R-20, R-30, and R-100, and oxide storage tanks TK-73 and TK-78 or tank cars. Emissions from vacuum jets are controlled by non-contact condenser system and emissions from depressurization, liquid transfers, and line priming are controlled by the oxide scrubber.	1/1/1951 9/1/1993	C-3.2
EUCHETK-43	This Emission group includes Tank #43. Tank #43 is exempt from the permit to install program requirements pursuant to Rule 284(i), but it is subject to the volume and dimensions requirements of 40 CFR 60, Subpart Kb. 17,000 gallons fixed roof tank modified in 1996. It stores liquid having a true vapor pressure of not more than 1.5 psia.	1/1/1996 (MODIFY)	C-3.4
EUCHEINDEXFILTER	This emission unit consists of an index filter that is used to filter various materials that have low vapor pressures. This emission unit is exempt from Rule 201 requirements pursuant to Rule 290.	9/17/01	D-3.1

TABLE C-3.1 EUCHEPOLYTHF EMISSION UNIT REQUIREMENTS					
EMISSION UNIT	Production of special molecular weight grades of Poly-THF by solvent extraction carried out in Building 53Z. Equipment includes reactors R-30, R-62, and R-63, and various other vessels. Emissions from vacuum jets are controlled by non-contact condenser system and emissions from reactors R-30, R-62, and R-63 are controlled by condensers E-4, E-6, and E-12 respectively.				
Flexible Group ID	FGCHEFACILITY				
I. DESIGN PARAMETERS					
A. Pollution Control Equipment	Surface Temperature Condensers				
B. Stack/Vent Parameters	Exhaust gases shall be discharged unobstructed vertically upwards unless otherwise noted.				
Stack/Vent ID	a. Minimum Height (feet)	b. Maximum Exhaust Dimension (inches)	c. Temp (°F)	d. Air Flow Rate (acfm)	Applicable Requirement
1. SVCHE509	56 ¹	2.1 ¹	NA	NA	R336.1225
2. SVCHE506	52 ¹	2.1 ¹	NA	NA	R336.1225
3. SVCHE052C	56 ¹	2.1 ¹	NA	NA	R336.1225
4. SVCHE52A	54 ¹	1.61 ¹	NA	NA	R336.1225
5. SVCHEWJET	52 ¹	3.1 ¹	NA	NA	R336.1225
6. SVCHE057	53 ¹	36 ¹	NA	NA	R336.1225
7. SVCHE058	37 ¹	1.61 ¹	NA	NA	R336.1225
8. SVCHE512	52 ¹	2.1 ¹	NA	NA	R336.1225
9. SVCHE056	52 ¹	1.61 ¹	NA	NA	R336.1225
10. SVCHE502	56 ¹	2.1 ¹	NA	NA	R336.1225
C. Other Design Parameters					
NA					
II. MATERIAL USAGE/EMISSION LIMITS					
A. Material		Maximum Usage Rate			
NA		NA			
B. Pollutant		Maximum Emission Limit			
1. VOC	10 tons per year based on a 12-month rolling average as determined at the end of each calendar month ² (R336.1702(a))				
2. Methanol	2 tons per year based on a 12-month rolling average as determined at the end of each calendar month ² (R336.1225, R336.1702(a)) ,				
3. Cyclohexane	8 tons per year based on a 12-month rolling average as determined at the end of each calendar month ² (R336.1225, R336.1702(a))				
III. COMPLIANCE EVALUATION					
Records of all of the following shall be maintained on file for a period of 5 years. (R 336.1213(3)(b)(ii))					
A. MONITORING/RECORDKEEPING (R 336.1213(3)) In Addition To General Requirements in Part A					
1. Continuous Emission Monitoring (CEM) System and Recordkeeping	NA				
2. Process Monitoring System and Recordkeeping	1. The permittee shall install, calibrate, maintain and operate in a satisfactory manner devices to monitor the exhaust gas temperature of each vacuum jet condenser system on a continuous basis. ² (R336.1225, R336.1702(a), R336.1910)				

TABLE C-3.1 EUCHEPOLYTHF EMISSION UNIT REQUIREMENTS	
	2. The permittee shall install, calibrate, maintain and operate in a satisfactory manner devices to monitor the exhaust gas temperatures of E-4, E-6, and E-12 on a continuous basis. ² (R336.1225, R336.1702(a), R336.1910)
3. Other Monitoring and/or Recordkeeping	1. VOC, methanol, and cyclohexane emissions as detailed in Appendix 3-4.
B. TESTING/RECORDKEEPING (R 336.1213(3)) In Addition to General Requirements in Part A	
1. Parameter to be Tested/Recorded	1. VOC (R336.1213(3)) 2. Methanol (R336.1213(3)) 3. Cyclohexane (R336.1213(3))
2. Method/Analysis	1. Scientific calculations acceptable to the Department (R336.1213(3)) 2. Scientific calculations acceptable to the Department (R336.1213(3)) 3. Scientific calculations acceptable to the Department (R336.1213(3))
3. Frequency and Schedule of Testing/Recordkeeping	1. Annual emission rate for VOC emissions (R336.1213(3)) 2. Annual emission rate for methane emissions (R336.1213(3)) 3. Annual emission rate for cyclohexane emissions (R336.1213(3))
IV. REPORTING	
Reports and Schedules	1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii)) 2. Semiannual reporting of any deviations pursuant to General Condition 23 of Part A. Due March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i)) 3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. Due annually by March 15 for the previous calendar year. (R 336.1213(4)(c)) See Appendix 3-8.
V. OPERATIONAL PARAMETERS	
1. Permittee shall not produce more than 110 batches of poly-THF 2900 per 12-month rolling time period as determined at the end of each calendar month. ² (R336.1225, R336.1702(a))	
2. Permittee shall not produce more than 125 batches of poly-THF 250 per 12-month rolling time period as determined at the end of each calendar month. ² (R336.1225, R336.1702(a))	
3. The permittee shall visually inspect all equipment in methanol service, during the first batch of each calendar month, to ensure there are no leaks. The permittee shall repair or replace any leaking equipment prior to the start of any subsequent batch. ² (R336.1225, R336.1702(a))	
4. The permittee shall not vent any equipment through a vacuum jet unless the corresponding vacuum jet condenser is installed, maintained, and operated in a satisfactory manner. Satisfactory operation of the vacuum jet condenser includes maintaining an exhaust gas temperature from the condenser of 115°F or less. ² (R336.1225, R336.1702(a), R336.1910)	
5. The permittee shall not operate R-30 during process steps involving emission of methanol and/or cyclohexane unless condenser system E-4 is installed, maintained, and operated in a satisfactory manner. Satisfactory operation of the condenser system includes maintaining an exhaust gas temperature from the condenser system of 115°F or less. ² (R336.1225, R336.1702(a), R336.1910)	

**TABLE C-3.1 EUCHEPOLYTHF
EMISSION UNIT REQUIREMENTS**

6. The permittee shall not operate R-62 during poly-THF 2900 process steps F.1 and F.13 and poly-THF 250 process steps 4.7, 5.3, 5.4, 5.5, 7.8, 12.5, 12.6, 12.7, and 12.8 unless condenser system E-6, is installed, maintained, and operated in a satisfactory manner. Satisfactory operation of the condenser system includes maintaining an exhaust gas temperature from the condenser system of 115°F or less.² **(R336.1225, R336.1702(a), R336.1910)**
7. The permittee shall not operate R-63 during poly-THF 2900 process steps D.6 and E.2 and poly-THF 250 process steps 6.4, 6.5, 6.6, and 8.1 unless condenser system E-12 is installed, maintained, and operated in a satisfactory manner. Satisfactory operation of the condenser system includes maintaining an exhaust gas temperature from the condenser system of 115°F or less.² **(R336.1225, R336.1702(a), R336.1910)**

VI. OTHER REQUIREMENTS

1. The permittee shall comply with all provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60 Subparts A and Kb, as they apply to the storage tanks in EUCHEPOLYTHF. **[40 CFR Part 60 Subparts A and Kb]**

Footnotes:

¹This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

TABLE C-3.2 EUCHEPOLYOL EMISSION UNIT REQUIREMENTS					
EMISSION UNIT	Polyether polyol synthesis process carried out in Buildings 53Z and 55T. Equipment includes reactors systems R-20, R-30, and R-100, and oxide storage tanks TK-73 and TK-78 or tank cars. Emissions from vacuum jets are controlled by non-contact condensers and emissions from depressurization, liquid transfers, and line priming are controlled by the oxide scrubber.				
Flexible Group ID	FGCHEFACILITY				
I. DESIGN PARAMETERS					
A. Pollution Control Equipment	Surface Temperature Condensers, Wet scrubber				
B. Stack/Vent Parameters	Exhaust gases shall be discharged unobstructed vertically upwards unless otherwise noted.				
Stack/Vent ID	a. Minimum Height (feet)	b. Maximum Exhaust Dimension (inches)	c. Temp. (°F)	d. Air Flow Rate (acfm)	Applicable Requirement
1. SVCHE054	50 ¹	1.5 ¹	NA	NA	R336.1225
2. SVCHE057	53 ¹	36 ¹	NA	NA	R336.1225
3. SVCHE525	50 ¹	2 ¹	NA	NA	R336.1225
4. SVCHE526	27.7 ¹	1.5 ¹	NA	NA	R336.1225
5. SVCHE527	31 ¹	6 ¹	NA	NA	R336.1225
6. SVCHE528	55 ¹	1.61 ¹	NA	NA	R336.1225
7. SVCHET-110	41 ¹	2.1 ¹	NA	NA	R336.1225
8. SVCHEWJET	52 ¹	3.1 ¹	NA	NA	R336.1225
C. Other Design Parameters					
NA					
II. MATERIAL USAGE/EMISSION LIMITS					
A. Material		Maximum Usage Rate			
NA		NA			
B. Pollutant		Maximum Emission Limit			
1. VOC		7.22 tons per year based on a 12-month rolling average as determined at the end of each calendar month ² (R336.1702(a))			
2. EO		0.8 tons per year based on a 12-month rolling average as determined at the end of each calendar month ² (R336.1225, R336.1702(a))			
3. PO		3.5 tons per year based on a 12-month rolling average as determined at the end of each calendar month ² (R336.1225, R336.1702(a))			
4. BO		0.89 tons per year based on a 12-month rolling average as determined at the end of each calendar month ² (R336.1225, R336.1702(a))			

III. COMPLIANCE EVALUATION	
Records of all of the following shall be maintained on file for a period of 5 years. (R 336.1213(3)(b)(ii))	
A. MONITORING/RECORDKEEPING (R 336.1213(3))	
In Addition To General Requirements in Part A	
1. Continuous Emission Monitoring (CEM) System and Recordkeeping	NA
2. Process Monitoring System and Recordkeeping	<ol style="list-style-type: none"> 1. The permittee shall equip and maintain T-110 wet scrubber pump with a flow alarm.² (R336.1225, R336.1702(a), R336.1910) 2. The permittee shall visually inspect all equipment in EO, PO, and BO service, during the first batch of each calendar month, to ensure there are no leaks. The permittee shall repair or replace any leaking equipment prior to the start of any subsequent batch.² (R336.1225, R336.1702(a)) 3. The permittee shall verify the pH of the T-110 wet scrubber solution at the beginning of each calendar month and whenever the scrubber solution is replaced.² (R336.1225, R336.1702(a)) 4. The permittee shall determine the percent water, by weight, in the T-110 wet scrubber solution at the beginning of each calendar month and calculate the theoretical number of batches that can be completed without depleting the water concentration below 60 percent by weight. The permittee shall replace the scrubber solution prior to the start of the batch when the water concentration is calculated to fall below 60 percent by weight.² (R336.1225, R336.1702(a)) 5. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor the exhaust gas temperature of each vacuum jet condenser system on a continuous basis.² (R336.1225, R336.1702(a), R336.1910) 6. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor the T-110 wet scrubber pump outlet pressure on a continuous basis.² (R336.1225, R336.1702(a), R336.1910)
3. Other Monitoring and/or Recordkeeping	See Appendix 3-4
B. TESTING/RECORDKEEPING (R 336.1213(3))	
In Addition to General Requirements in Part A	
1. Parameter to be Tested/Recorded	<ol style="list-style-type: none"> 1. EO (R336.1213(3)) 2. PO (R336.1213(3)) 3. BO (R336.1213(3))
2. Method/Analysis	<ol style="list-style-type: none"> 1. Scientific calculations acceptable to the Department (R336.1213(3)) 2. Scientific calculations acceptable to the Department (R336.1213(3)) 3. Scientific calculations acceptable to the Department (R336.1213(3))
3. Frequency and Schedule of Testing/Recordkeeping	<ol style="list-style-type: none"> 1. Annual emission rate for EO emissions (R336.1213(3)) 2. Annual emission rate for PO emissions (R336.1213(3)) 3. Annual emission rate for BO emissions (R336.1213(3))
IV. REPORTING	

<p>Reports and Schedules</p>	<ol style="list-style-type: none"> 1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii)) 2. Semiannual reporting of any deviation pursuant to General Condition 23 of Part A. Due March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i)) 3. Annual certification of compliance pursuant to General Conditions 219 and 20 of Part A. Due annually by March 15 for the previous calendar year. (R 336.1213(4)(c)) <p>See Appendix 3-8.</p>
<p>V. OPERATIONAL PARAMETERS</p>	
<ol style="list-style-type: none"> 1. Permittee shall not produce more than 220 batches of polyether polyol products per 12-month rolling time period as determined at the end of each calendar month.² (R336.1225, R336.1702(a)) 2. Permittee shall not produce more than 3,300,000 pounds of polyether polyol products per 12-month rolling time period as determined at the end of each calendar month.² (R336.1225, R336.1702(a)) 3. The permittee shall not vent any equipment through the north or south vacuum jet unless the corresponding vacuum jet condenser system is installed, maintained, and operated in a satisfactory manner. Satisfactory operation of the north and south vacuum jet condenser systems includes maintaining a condenser system exhaust gas temperature of 113°F or less.² (R336.1225, R336.1702(a), R336.1910) 4. The permittee shall not vent any equipment through the east or west vacuum jet unless the corresponding vacuum jet condenser system is installed, maintained, and operated in a satisfactory manner. Satisfactory operation of the east and west vacuum jet condenser systems includes maintaining a condenser system exhaust gas temperature of 140°F or less. (R336.1225, R336.1702(a), R336.1910) 5. The permittee shall not operate any equipment during process steps involving emission of EO, PO, and/or BO unless the T-110 wet scrubber is installed, maintained, and operated in a satisfactory manner. Satisfactory operation of the T-110 wet scrubber includes the following:² (R336.1225, R336.1702(a), R336.1910) <ol style="list-style-type: none"> a) The pH of the T-110 wet scrubber solution shall be maintained at 3.0 or less, b) The T-110 wet scrubber pump outlet pressure shall be maintained at 2.0 bar gauge or less, and c) The water concentration in the T-110 wet scrubber solution shall be maintained at 60 percent by weight or more. 	
<p>VI. OTHER REQUIREMENTS</p>	
<ol style="list-style-type: none"> 1. The permittee shall comply with all provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60 Subparts A and Kb, as they apply to the storage tanks in EUCHEPOLYOL. (40 CFR Part 60 Subparts A and Kb) 	

Footnotes:

¹This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

TABLE C-3.4 EUCHETK-43 EMISSION UNIT REQUIREMENTS					
EMISSION UNIT	This Emission group includes Tank #43. Tank #43 is exempt from the permit to install program requirements pursuant to Rule 284(i), but it is subject to the volume and dimensions requirements of 40 CFR 60, Subpart Kb. 17,000 gallons fixed roof tank modified in 1996. It stores liquid having a true vapor pressure of not more than 1.5 psia.				
Flexible Group ID	FGCHEFACILITY				
I. DESIGN PARAMETERS					
A. Pollution Control Equipment	NA				
B. Stack/Vent Parameters	Exhaust gases shall be discharged unobstructed vertically upwards unless otherwise noted.				
Stack/Vent ID	a. Minimum Height (feet)	b. Maximum Exhaust Dimension (inches)	c. Temp. (°F)	d. Air Flow Rate (acfm)	Applicable Requirement
NA	NA	NA	NA	NA	NA
C. Other Design Parameters					
NA					
II. MATERIAL USAGE/EMISSION LIMITS					
A. Material	Maximum Usage Rate				
NA	NA				
B. Pollutant	Maximum Emission Limit				
NA	NA				
III. COMPLIANCE EVALUATION					
Records of all of the following shall be maintained on file for a period of 5 years. (R 336.1213(3)(b)(ii))					
A. MONITORING/RECORDKEEPING (R 336.1213(3)) In Addition To General Requirements in Part A					
1. Continuous Emission Monitoring (CEM) System and Recordkeeping	NA				
2. Process Monitoring System and Recordkeeping	NA				
3. Other Monitoring and/or Recordkeeping	Permittee, for each storage vessel, as specified in 40 CFR 60.110b(b) shall keep records and furnish reports as required by 40 CFR 60.116b(a) and (b) (40 CFR 60.116b)				
B. TESTING/RECORDKEEPING (R 336.1213(3)) In Addition to General Requirements in Part A					
1. Parameter to be Tested/Recorded	NA				
2. Method/Analysis	NA				
3. Frequency and Schedule of Testing/Recordkeeping	NA				

IV. REPORTING	
Reports and Schedules	<ol style="list-style-type: none"> 1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii)) 2. Semiannual reporting of any deviations pursuant to General Condition 23 of Part A. Due March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i)) 3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. Due annually by March 15 for the previous calendar year. (R 336.1213(4)(c)) <p>See Appendix 3-8.</p>
V. OPERATIONAL PARAMETERS	
NA	
VI. OTHER REQUIREMENTS	
1. Permittee shall comply with applicable requirements of 40 CFR 60, Subpart Kb. (R336.1203(1), 40 CFR 60 Subpart Kb)	

Footnotes:

¹This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

D-3. FLEXIBLE GROUP CONDITIONS

Part D outlines terms and conditions that apply to more than one emission unit. The permittee is subject to the special conditions for each flexible group in addition to the General Conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply, NA (not applicable) has been used in the table. If there are no special conditions that apply to more than one emission unit, this section will be left blank.

FLEXIBLE GROUP SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Flexible Group ID	Emission Units Included in Flexible Group	Requirement Table No.
FGCHERULE290	EUCHERULE290, EUCHEAGCHEMDRY, EUCHEGRAFTEDPOYOL, EUCHENMP, EUCHEINDEXFILTER	D-3.1

TABLE D-3.1: FGCHERULE290 FLEXIBLE GROUP REQUIREMENTS					
FLEXIBLE GROUP		<p>EUCHERULE290: Any existing or future emission unit that emits air contaminants which are exempt from the requirements of R 336.1201 pursuant to R 336.1290.</p> <p>EUCHEGRAFTEDPOLYOL: This emission group includes all equipment utilized in the manufacture of grafted polyol. This emission unit is exempt from Rule 201 requirements pursuant to Rule 290.</p> <p>EUCHENMP: This emission group includes all equipment utilized in the recovery (by distillation) of N-Methyl Pyrrolidone. This emission unit is exempt from Rule 201 requirements pursuant to Rule 290.</p> <p>EUCHEMACROMERS: This emission group contains all equipment utilized in the manufacture of macromers used internally in production of graft polyol. This emission unit is exempt from Rule 201 requirements pursuant to Rule 290.</p> <p>EUCHEAGCHEMDRY: This group includes all equipment utilized in the manufacture of dry agriculture chemicals. Currently, "CELEBRITY" is the only material that will be manufactured in this group and the emission unit is exempted by Rule 290. Control equipment includes a baghouse and filters.</p>			
Emission Units		Each EUCHERULE290, EUCHEGRAFTEDPOLYOL, EUCHENMP, EUCHEMACROMERS, EUCHEAGCHEMDRY			
I. DESIGN PARAMETERS					
A. Pollution Control Equipment		NA			
B. Stack/Vent Parameters		NA			
Stack/Vent ID	a. Minimum Height (feet)	b. Maximum Exhaust Dimension (inches)	c. Temp. (°F)	d. Air Flow Rate (acfm)	Applicable Requirement
NA	NA	NA	NA	NA	NA
C. Other Design Parameters					
NA					
II. MATERIAL USAGE/EMISSION LIMITS					
A. Material		Maximum Usage Rate			
NA		NA			
B. Pollutants		Maximum Emission Limit			
The type of pollutants are categorized below:		This flexible group applies to each emission unit that meets any of the listed emission limit descriptions in one, two and/or three below:			
1. Noncarcinogenic VOCs or non-carcinogenic materials listed in R 336.1122(f).		1. Each emission unit emits only noncarcinogenic volatile organic compounds or noncarcinogenic materials which are listed in R 336.1122(f) as not contributing appreciably to the formation of ozone if the total uncontrolled or controlled emissions of air contaminants are not more than 1,000 or 500 pounds per month, respectively. (R 336.1290(a)(i))			
2. Other air contaminants with ITSLs or IRSLS greater than or equal to 0.04 µg/m ³ .		2. Each emission unit that the total uncontrolled or controlled emissions of air contaminants are not more than 1,000 or 500 pounds per month (total means the sum of emission limit number one, above, and emission limit no. 2, including parts a, b and c below), respectively, and all the following criteria listed below are met: (R 336.1290(a)(ii))			

TABLE D-3.1: FGCHERULE290 FLEXIBLE GROUP REQUIREMENTS	
a. Noncarcinogenic air contaminants with ITSLs greater than or equal to 2.0 $\mu\text{g}/\text{m}^3$, excluding those listed in emission limit no. 1, above.	a. For noncarcinogenic air contaminants, excluding noncarcinogenic volatile organic compounds and noncarcinogenic materials which are listed in R 336.1122(f) as not contributing appreciably to the formation of ozone, with initial threshold screening levels greater than or equal to 2.0 micrograms per cubic meter, the total uncontrolled or controlled emissions shall not exceed 1,000 or 500 pounds per month, respectively. (R 336.1290(a)(ii)(A))
b. Noncarcinogenic air contaminants with ITSLs greater than or equal to 0.04 $\mu\text{g}/\text{m}^3$ and less than 2.0 $\mu\text{g}/\text{m}^3$, excluding those listed in emission limit no. 1, above.	b. For noncarcinogenic air contaminants, excluding noncarcinogenic volatile organic compounds and noncarcinogenic materials which are listed in R 336.1122(f) as not contributing appreciably to the formation of ozone, with initial threshold screening levels greater than or equal to 0.04 microgram per cubic meter and less than 2.0 micrograms per cubic meter, the uncontrolled or controlled emissions shall not exceed 20 or 10 pounds per month, respectively. (R 336.1290(a)(ii)(B))
c. Carcinogenic air contaminants with IRSLS greater than or equal to 0.04 $\mu\text{g}/\text{m}^3$.	c. For carcinogenic air contaminants with initial risk screening levels greater than or equal to 0.04 microgram per cubic meter, the uncontrolled or controlled emissions shall not exceed 20 or 10 pounds per month, respectively. (R 336.1290(a)(ii)(C))
d. Air contaminants with ITSLs or IRSLS less than 0.04 $\mu\text{g}/\text{m}^3$.	d. The emission unit shall not emit any air contaminants, excluding noncarcinogenic volatile organic compounds and noncarcinogenic materials which are listed in R 336.1122(f) as not contributing appreciably to the formation of ozone, with an initial threshold screening level or initial risk screening level less than 0.04 microgram per cubic meter. (R 336.1290(a)(ii)(D))
3. Noncarcinogenic particulate air contaminants with ITSLs greater than 2.0 $\mu\text{g}/\text{m}^3$, excluding nuisance particulate.	3. Each emission unit that emits noncarcinogenic particulate air contaminants and other air contaminants that are exempted under emission limit number one or emission limit number two, above, and all of the following provisions are met: (R 336.1290(a)(iii)) <ul style="list-style-type: none"> a. The particulate emissions are controlled by an appropriately designed and operated fabric filter collector or an equivalent control system which is designed to control particulate matter to a concentration of less than or equal to 0.01 pound of particulate per 1,000 pounds of exhaust gases and which does not have an exhaust gas flow rate more than 30,000 actual cubic feet per minute. (R 336.1290(a)(iii)(A)) b. The visible emissions from the emission unit are not more than 5% opacity in accordance with the methods contained in R 336.1303. (R 336.1290(a)(iii)(B)) c. The initial threshold screening level for each particulate air contaminant, excluding nuisance particulate, is more than 2.0 micrograms per cubic meter. (R 336.1290(a)(iii)(C))

III. COMPLIANCE EVALUATION	
Records of all of the following shall be maintained on file for a period of 5 years. (R 336.1213(3)(b)(ii))	
A. MONITORING/RECORDKEEPING (R 336.1213(3))	
In Addition to General Requirements in Part A	
1. Continuous Emission Monitoring (CEM) System and Recordkeeping	NA
2. Process Monitoring System and Recordkeeping	NA
3. Other Monitoring and/or Recordkeeping	<ol style="list-style-type: none"> 1. The permittee shall maintain records of the following information for each emission unit included in FGCHERULE290 for each calendar month using the methods outlined in Appendix 4. (R 336.1213(3)) <ol style="list-style-type: none"> a. Records identifying each air contaminant that is emitted. (R 336.1213(3)) b. Records identifying if each air contaminant is controlled or uncontrolled. (R 336.1213(3)) c. Records identifying if each air contaminant is either carcinogenic or non-carcinogenic. (R 336.1213(3)) d. Records identifying the ITSL and IRSL, if established, of each air contaminant that is emitted. (R 336.1213(3)) e. Material use and calculations identifying the quality, nature, and quantity of the air contaminant emissions in sufficient detail to demonstrate that the actual emissions of the emission unit meet the emission limits outlined in this table and R 336.1290. (R 336.1213(3), R 336.1290(c)) 2. The permittee shall maintain an inventory of each emission unit that is covered by FGCHERULE290. This inventory shall include the following information. (R 336.1213(3)) <ol style="list-style-type: none"> a. The permittee shall maintain a written description of each emission unit as it is maintained and operated throughout the life of the emission unit. (R 336.1290(b), R 336.1213(3)) b. For each emission unit that emits noncarcinogenic particulate air contaminants pursuant to R 336.1290(a)(iii), the permittee shall maintain a written description of the control device, including the designed control efficiency and the designed exhaust gas flow rate. (R 336.1213(3)) 3. For each emission unit that emits noncarcinogenic particulate air contaminants pursuant to R 336.1290(a)(iii), the permittee shall perform a monthly visible emission observation of each stack or vent during routine operating conditions. This observation need not be performed using Method 9. The permittee shall keep a written record of the results of each observation. (R 336.1213(3)) <p>See Appendix 3-4a</p>

B. TESTING/RECORDKEEPING (R 336.1213(3)) In Addition to General Requirements in Part A	
1. Parameter to be Tested/Recorded	NA
2. Method/Analysis	NA
3. Frequency and Schedule of Testing/Recordkeeping	NA
IV. REPORTING	
Reports and Schedules	<ol style="list-style-type: none"> 1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii)) 2. Semiannual reporting of deviations pursuant to General Condition 23 of Part A. Due March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i)) 3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. Due annually by March 15 for the previous calendar year. (R 336.1213(4)(c)) <p>See Appendix 3-8.</p>
V. OPERATIONAL PARAMETERS	
1. The provisions of FGCHERULE290 apply to <u>each</u> emission unit which is operating pursuant to R 336.1290. (R 336.1290)	
VI. OTHER REQUIREMENTS	
NA	

Footnotes:

¹This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

E-3. Non-Applicable Requirements

At the time of ROP issuance, the AQD has determined that no non-applicable requirements have been identified for incorporation into the permit shield provision set forth in the General Conditions in Part A pursuant to R 336.1213(6)(a)(ii).

APPENDICES

Appendix 3-1: Abbreviations & Acronyms

The following is an alphabetical listing of abbreviations/acronyms that may be used in this permit.

AQD	Air Quality Division	MM	Million
acfm	Actual cubic feet per minute	MSDS	Material Safety Data Sheet
BACT	Best Available Control Technology	MW	Megawatts
BTU	British Thermal Unit	NA	Not Applicable
°C	Degrees Celsius	NAAQS	National Ambient Air Quality Standards
CAA	Federal Clean Air Act	NESHAP	National Emission Standard for Hazardous Air Pollutants
CAM	Compliance Assurance Monitoring	NMOC	Non-methane Organic Compounds
CEM	Continuous Emission Monitoring	NOx	Oxides of Nitrogen
CFR	Code of Federal Regulations	NSPS	New Source Performance Standards
CO	Carbon Monoxide	NSR	New Source Review
COM	Continuous Opacity Monitoring	PM	Particulate Matter
department	Michigan Department of Environmental Quality	PM-10	Particulate Matter less than 10 microns in diameter
dscf	Dry standard cubic foot	pph	Pound per hour
dscm	Dry standard cubic meter	ppm	Parts per million
EPA	United States Environmental Protection Agency	ppmv	Parts per million by volume
EU	Emission Unit	ppmw	Parts per million by weight
°F	Degrees Fahrenheit	PS	Performance Specification
FG	Flexible Group	PSD	Prevention of Significant Deterioration
GACS	Gallon of Applied Coating Solids	psia	Pounds per square inch absolute
gr	Grains	psig	Pounds per square inch gauge
HAP	Hazardous Air Pollutant	PeTE	Permanent Total Enclosure
Hg	Mercury	PTI	Permit to Install
hr	Hour	RACT	Reasonable Available Control Technology
HP	Horsepower	ROP	Renewable Operating Permit
H ₂ S	Hydrogen Sulfide	SC	Special Condition
HVLP	High Volume Low Pressure *	scf	Standard cubic feet
ID	Identification (Number)	sec	Seconds
IRSL	Initial Risk Screening Level	SCR	Selective Catalytic Reduction
ITSL	Initial Threshold Screening Level	SO ₂	Sulfur Dioxide
LAER	Lowest Achievable Emission Rate	SRN	State Registration Number
lb	Pound	TAC	Toxic Air Contaminant
m	Meter	Temp	Temperature
MACT	Maximum Achievable Control Technology	THC	Total Hydrocarbons
MAERS	Michigan Air Emissions Reporting System	tpy	Tons per year
MAP	Malfunction Abatement Plan	µg	Microgram
MDEQ	Michigan Department of Environmental Quality	VE	Visible Emissions
mg	Milligram	VOC	Volatile Organic Compounds
mm	Millimeter	yr	Year

*For High Volume Low Pressure (HVLP) applicators, the pressure measured at the HVLP gun air cap shall not exceed ten (10) pounds per square inch gauge (psig).

Appendix 3-2. Schedule of Compliance

The permittee has certified that this source is in compliance with all applicable requirements as of the date of issuance of this ROP and the permittee shall continue to comply with all applicable requirements listed in this ROP. A detailed Schedule of Compliance is not required. (R 336.1213(4)(a), R 336.1119(a)(ii))

Appendix 3-3. Monitoring Requirements

Specific monitoring requirement procedures, methods or specifications are detailed in Part A or the appropriate Requirement Tables. Therefore, this appendix is not applicable.

Appendix 3-4. Recordkeeping

The permittee shall use the following approved formats and procedures for the recordkeeping requirements referenced in Table {EUCHEPOLYTHF}. Alternative formats must be approved by the AQD District Supervisor.

1. The permittee shall keep, in a satisfactory manner, the following records for EUCHEPOLYTHF for each month and 12-month rolling time period. All records shall be kept on file for a period of at least five years and made available to the Department upon request.²

	Record	Applicable Requirement
1a	Number of batches of poly-THF 2900 produced. ²	R336.1225, R336.1702(a)
1b	Number of batches of poly-THF 250 produced. ²	R336.1225, R336.1702(a)
1c	All leak detection and repair activities. ²	R336.1225, R336.1702(a)
1d	Amount of make-up methanol and cyclohexane added for each calendar month and 12-month rolling time period. ²	R336.1225, R336.1702(a)
1e	Exhaust gas temperature of each vacuum jet condenser system. ²	R336.1225, R336.1702(a), R336.1910
1f	Exhaust gas temperature of condenser system E-4 during process steps involving emission of methanol and/or cyclohexane. ²	R336.1225, R336.1702(a), R336.1910
1g	Exhaust gas temperature of condenser system E-6 during poly-THF 2900 process steps F.1 and F.13 and poly-THF 250 process steps 4.7, 5.3, 5.4, 5.5, 7.8, 12.5, 12.6, 12.7, and 12.8. ²	R336.1225, R336.1702(a), R336.1910
1h	Exhaust gas temperature of condenser system E-12 during poly-THF 2900 process steps D.6 and E.2 and poly-THF 250 process steps 6.4, 6.5, 6.6, and 8.1. ²	R336.1225, R336.1702(a), R336.1910
1i	Calculations of the VOC emission rates. ²	R336.1702(a)
1j	Calculations of the methanol emission rates. ²	R336.1225, R336.1702(a)
1k	Calculations of the cyclohexane emission rates. ²	R336.1225, R336.1702(a)

The permittee shall use the following approved formats and procedures for the recordkeeping requirements referenced in Table {EUCHEPOLYOL}. Alternative formats must be approved by the AQD District Supervisor.

2. The permittee shall keep, in a satisfactory manner, the following records for EUCHEPOLYOL for each month and 12-month rolling time period. All records shall be kept on file for a period of at least five years and made available to the Department upon request.

	Record	Applicable Requirement
2a	Number of batches of polyether polyol products produced. ²	R336.1225, R336.1702(a)
2b	Pounds of polyether polyol products produced. ²	R336.1225, R336.1702(a)

	Record	Applicable Requirement
2c	All leak detection and repair activities. ²	R336.1225, R336.1702(a)
2d	T-110 wet scrubber solution pH. ²	R336.1225, R336.1702(a), R336.1910
2e	T-110 wet scrubber solution weight percent water, calculated theoretical number of batches that can be completed in the ensuing calendar month, and scrubber solution replacements. ²	R336.1225, R336.1702(a), R336.1910
2f	T-110 wet scrubber pump alarm conditions and steps taken to correct each alarm condition. ²	R336.1225, R336.1702(a), R336.1910
2g	Exhaust gas temperature of north and south vacuum jet condenser system. ²	R336.1225, R336.1702(a), R336.1910
2h	Exhaust gas temperature of east and west vacuum jet condenser system. ²	R336.1225, R336.1702(a), R336.1910
2i	T-110 wet scrubber pump outlet pressure. ²	R336.1225, R336.1702(a), R336.1910
2j	Calculations of the VOC emission rates. ²	R336.1702(a)
2k	Calculations of the EO emission rates. ²	R336.1225, R336.1702(a)
2l	Calculations of the PO emission rates. ²	R336.1225, R336.1702(a)
2m	Calculations of the BO emission rates. ²	R336.1225, R336.1702(a)

Appendix 3-4a. Recordkeeping

The permittee shall use the DEQ Rule 290 Permit to Install Exemption Record form (EQP3558) or an alternative format as approved by the AQD District Supervisor to document monthly records as required by R336.1290 and Table D-3.1: FGCHERULE290.

Appendix 3-5. Testing Procedures

There are no specific testing requirement plans or procedures for this ROP. Therefore, this appendix is not applicable.

Appendix 3-6. Permits to Install/Operate

The following table lists the Permits to Install and/or operate, which relate to the identified Emission Units or Flexible Groups:

Permit to Install/Operate Number	Description of Equipment	Corresponding Emission Unit Or Flexible Group ID
269-01A	Production of special molecular weight grades of Poly-THF by solvent extraction carried out in Building 53Z.	EUCHEPOLYTHF
	Polyether polyol synthesis process carried out in Buildings 53Z and 55T.	EUCHEPOLYOL

Appendix 3-7. Emission Calculations

There are no specific emission calculations to be used for this ROP. Therefore, this appendix is not applicable.

Appendix 3-8. Reporting

A. Annual and Deviation Certification Reporting

The permittee shall use the DEQ Report Certification form (EQP 5736) and DEQ Deviation Report form (EQP 5737) for the annual and deviation certification reporting referenced in Section IV of the Requirement Tables. Alternative formats must meet the provisions of R 336.1213(4)(c) and R 336.1213(3)(c)(i), respectively, and be approved by the AQD District Supervisor.

B. Other Reporting

Specific reporting requirement formats and procedures are detailed in Part A or the appropriate Requirement Tables. Therefore, Part B of this appendix is not applicable.

**STATE OF MICHIGAN
RENEWABLE OPERATING PERMIT**

BASF Corporation, Chemical Plants

SECTION 04

THERMOPLASTIC URETHANE SYNTHESIS MANUFACTURING UNIT

SRN: B4359

LOCATED AT

1609 Biddle Avenue, Wyandotte, Michigan

Permit Number: MI-ROP-B4359-2003b

Effective Date: December 1, 2003

Revision Date: September 14, 2005, January 4, 2007

Expiration Date: December 1, 2008

AUTHORITY AND ENFORCEABILITY

For the purpose of this permit, the **permittee** is defined as any person who owns or operates an emission unit at a stationary source for which this permit has been issued. The department is defined in Rule 104(d) as the Director of the Michigan Department of Environmental Quality (MDEQ) or his or her designee.

The permittee shall comply with all specific details in the permit terms and conditions and the cited underlying applicable requirements. All terms and conditions in this ROP are both federally enforceable and state enforceable unless otherwise footnoted. Certain terms and conditions are applicable to most stationary sources for which an ROP has been issued. These general conditions are included in Part A of this ROP. Other terms and conditions may apply to a specific emission unit, several emission units which are represented as a flexible group, or the entire stationary source which is represented as a source-wide group. Special conditions are identified in Parts B, C, D and/or the appendices.

In accordance with Rule 213(2)(a), all underlying applicable requirements will be identified for each ROP term or condition. All terms and conditions that are included in a Permit to Install (PTI), are streamlined or subsumed, or are state-only enforceable will be noted as such.

In accordance with Section 5507 of Article II, Chapter 1, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, the permittee has included in the ROP application a compliance certification, a schedule of compliance, and a compliance plan. For applicable requirements with which the source is in compliance, the source will continue to comply with these requirements. For applicable requirements with which the source is not in compliance, the source will comply with the detailed schedule of compliance requirements that are incorporated as an appendix in this ROP. Furthermore, for any applicable requirements effective after the date of issuance of this ROP, the stationary source will meet the requirements on a timely basis, unless the underlying applicable requirement requires a more detailed schedule of compliance.

Issuance of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.

A-4. GENERAL CONDITIONS

Permit Enforceability

- All conditions in this permit are both federally enforceable and state enforceable unless otherwise noted. **(R 336.1213(5))**
- Those conditions that are hereby incorporated in a state-only enforceable Source-wide Permit to Install (PTI) pursuant to Rule 201(2)(d) are designated by Footnote 1. **(R 336.1213(5)(a), R336.1214a(5))**
- Those conditions that are hereby incorporated in federal enforceable Source-wide PTI No. MI-PTI-B4359-2003 pursuant to Rule 201(2)(c) are designated by Footnote 2. **(R 336.1213(5)(b), R 336.1214a(3))**

General Provisions

1. The permittee shall comply with all conditions of this ROP. Any ROP noncompliance constitutes a violation of Article II, Chapter 1, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451), and is grounds for enforcement action, for ROP revocation or revision, or for denial of the renewal of the ROP. All terms and conditions of this ROP that are designated as federally enforceable are enforceable by the Administrator of the United States Environmental Protection Agency (EPA) and by citizens under the provisions of the federal Clean Air Act (CAA). Any terms and conditions based on applicable requirements which are designated as "state only" are not enforceable by the EPA or citizens pursuant to the CAA. **(R 336.1213(1)(a))**
2. 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 conditions of this ROP. **(R 336.1213(1)(b))**
3. This ROP may be modified, revised, or revoked for cause. The filing of a request by the permittee for a permit modification, revision, or termination, or a notification of planned changes or anticipated noncompliance does not stay any ROP term or condition. This does not supersede or affect the ability of the permittee to make changes, at the permittee's own risk, pursuant to Rules 215 and 216. **(R 336.1213(1)(c))**
4. The permittee shall allow the department, or an authorized representative of the department, upon presentation of credentials and other documents as may be required by law and upon stating the authority for and purpose of the investigation, to perform any of the following activities **(R 336.1213(1)(d))**:
 - a. Enter, at reasonable times, a stationary source or other premises where emissions-related activity is conducted or where records must be kept under the conditions of the ROP.
 - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the ROP.
 - c. Inspect, at reasonable times, any of the following:
 - v. Any stationary source.
 - vi. Any emission unit.
 - vii. Any equipment, including monitoring and air pollution control equipment.
 - viii. Any work practices or operations regulated or required under the ROP.
 - d. As authorized by Section 5526 of Act 451, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the ROP or applicable requirements.
5. The permittee shall furnish to the department, within a reasonable time, any information the department may request, in writing, to determine whether cause exists for modifying, revising, or revoking the ROP or to determine compliance with this ROP. Upon request, the permittee shall also furnish to the department copies of any records that are required to be kept as a term or condition of this ROP. For information which is claimed by the permittee to be confidential, consistent with the requirements of 1976 PA 442, MCL §15.231 et seq., and

known as the Freedom of Information Act, the person may also be required to furnish the records directly to the EPA together with a claim of confidentiality. **(R 336.1213(1)(e))**

6. A challenge by any person, the Administrator of the EPA, or the department to a particular condition or a part of this ROP shall not set aside, delay, stay, or in any way affect the applicability or enforceability of any other condition or part of this ROP. **(R 336.1213(1)(f))**
7. The permittee shall pay fees consistent with the fee schedule and requirements pursuant to Section 5522 of Act 451. **(R 336.1213(1)(g))**
8. This ROP does not convey any property rights or any exclusive privilege. **(R 336.1213(1)(h))**

Equipment & Design

9. Any collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in Rule 370(2). **(R 336.1370)**
10. Any air cleaning device shall be installed, maintained, and operated in a satisfactory manner and in accordance with the Michigan Air Pollution Control rules and existing law. **(R 336.1910)**

Emission Limits

11. Except as provided in subrules 2, 3, and 4 of Rule 301, a person shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of a density greater than the most stringent of Rule 301(1)(a) or (b) unless otherwise specified in this ROP. The grading of visible emissions shall be determined in accordance with Rule 303. **(R 336.1301(1) in pertinent part):**
 - a. A 6-minute average of 20% opacity, except for one 6-minute average per hour of not more than 27% opacity.
 - b. A limit specified by an applicable federal new source performance standard.
12. The permittee shall not cause or permit the emission of an air contaminant or water vapor in quantities that cause, alone or in reaction with other air contaminants, either of the following:
 - a. Injurious effects to human health or safety, animal life, plant life of significant economic value, or property. **¹(R 336.1901(a))**
 - b. Unreasonable interference with the comfortable enjoyment of life and property. **¹(R 336.1901(b))**

Testing/Sampling

13. The department may require the owner or operator of any source of an air contaminant to conduct acceptable performance tests, at the owner's or operator's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001(1). **(R 336.2001)**
14. Any required performance testing shall be conducted in accordance with Rule 1001(2), Rule 1001(3) and Rule 1003. **(R 336.2001(2), R 336.2001(3), R 336.2003(1))**
15. Any required test results shall be submitted to the Air Quality Division (AQD) in the format prescribed by the applicable reference test method within 60 days following the last date of the test. **(R 336.2001(4))**

Monitoring/Recordkeeping

16. Records of any periodic emission or parametric monitoring required in this ROP shall include the following information specified in Rule 213(3)(b)(i), where appropriate **(R 336.1213(3)(b))**:
 - a. The date, location, time, and method of sampling or measurements.
 - b. The dates the analyses of the samples were performed.
 - c. The company or entity that performed the analyses of the samples.
 - d. The analytical techniques or methods used.
 - e. The results of the analyses.
 - f. The related process operating conditions or parameters that existed at the time of sampling or measurement.
17. All required monitoring data, support information and all reports, including reports of all instances of deviation from permit requirements, shall be kept and furnished to the department upon request for a period of not less than 5 years from the date of the monitoring sample, measurement, report or application. Support information includes all calibration and maintenance records and all original strip-chart recordings, or other original data records, for continuous monitoring instrumentation and copies of all reports required by the ROP. **(R 336.1213(1)(e), R 336.1213(3)(b)(ii))**

Certification & Reporting

18. Except for the alternate certification schedule provided in Rule 213(3)(c)(iii)(B), any document required to be submitted to the department as a term or condition of this ROP shall contain an original certification by a responsible official which states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. **(R 336.1213(3)(c))**
19. A responsible official shall certify to the appropriate District Office of the AQD and the EPA that the stationary source is and has been in compliance with all terms and conditions contained in the ROP except for deviations that have been or are being reported to the appropriate District Office of the AQD pursuant to Rule 213(3)(c). This certification shall include all the information specified in Rule 213(4)(c)(i) through (v) and shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the certification are true, accurate, and complete. The EPA address is: US EPA, Air Compliance Data - Michigan, Air and Radiation Division, 77 West Jackson Boulevard, Chicago, IL, 60604. **(R 336.1213(4)(c))**
20. The certification of compliance shall be submitted annually for the term of this ROP as detailed in the special conditions, or more frequently if specified in an applicable requirement or in this ROP. **(R 336.1213(4)(c))**
21. The permittee shall promptly report any deviations from ROP requirements and certify the reports. The prompt reporting of deviations from ROP requirements is defined in Rule 213(3)(c)(ii) as follows, unless otherwise described in this ROP **(R 336.1213(3)(c))**:
 - a. For deviations that exceed the emissions allowed under the ROP, prompt reporting means reporting consistent with the requirements of Rule 912 as detailed in Condition 25. All reports submitted pursuant to this paragraph shall be promptly certified as specified in Rule 213(3)(c)(iii).
 - b. For deviations which exceed the emissions allowed under the ROP and which are not reported pursuant to Rule 912 due to the duration of the deviation, prompt reporting means the reporting of all deviations in the semiannual reports required by Rule 213(3)(c)(i). The report shall describe reasons for each deviation and the actions taken to minimize or correct each deviation.
 - c. For deviations that do not exceed the emissions allowed under the ROP, prompt reporting means the reporting of all deviations in the semiannual reports required by Rule 213(3)(c)(i). The report shall describe the reasons for each deviation and the actions taken to minimize or correct each deviation.

22. For reports required pursuant to Rule 213(3)(c)(ii), prompt certification of the reports is described in Rule 213(3)(c)(iii) as either of the following **(R 336.1213(3)(c))**:
- Submitting a certification by a responsible official with each report which states that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.
 - Submitting, within 30 days following the end of a calendar month during which one or more prompt reports of deviations from the emissions allowed under the ROP were submitted to the department pursuant to Rule 213(3)(c)(ii), a certification by a responsible official which states that, based on information and belief formed after reasonable inquiry, the statements and information contained in each of the reports submitted during the previous month were true, accurate, and complete. The certification shall include a listing of the reports that are being certified. Any report submitted pursuant to Rule 213(3)(c)(ii) that will be certified on a monthly basis pursuant to this paragraph shall include a statement that certification of the report will be provided within 30 days following the end of the calendar month.
23. Semiannually for the term of the ROP as detailed in the special conditions, or more frequently if specified, the permittee shall submit certified reports of any required monitoring to the appropriate District Office of the AQD. All instances of deviations from ROP requirements during the reporting period shall be clearly identified in the reports. **(R 336.1213(3)(c)(i))**
24. On an annual basis, the permittee shall report the actual emissions, or the information necessary to determine the actual emissions, of each regulated air pollutant as defined in Rule 212(6) for each emission unit utilizing the emissions inventory forms provided by the department. **(R 336.1212(6))**
25. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the appropriate District Office of the AQD. The notice shall be provided not later than two business days after the start-up, shutdown, or discovery of the abnormal conditions or malfunction. Notice shall be by any reasonable means, including electronic, telephonic, or oral communication. Written reports, if required under Rule 912, must be submitted to the appropriate District Supervisor within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal conditions or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5) and shall be certified by a responsible official in a manner consistent with the CAA. **(R 336.1912)**

Permit Shield

26. Compliance with the conditions of the ROP shall be considered compliance with any applicable requirements as of the date of ROP issuance, if either of the following provisions is satisfied **(R 336.1213(6)(a)(i), R 336.1213(6)(a)(ii))**:
- The applicable requirements are included and are specifically identified in the ROP.
 - The permit includes a determination or concise summary of the determination by the department that other specifically identified requirements are not applicable to the stationary source.

Any requirements identified in Part E of this ROP have been identified as non-applicable to this ROP and are included in the permit shield.

27. Nothing in this ROP shall alter or affect any of the following:
- The provisions of Section 303 of the CAA, emergency orders, including the authority of the EPA under Section 303 of the CAA. **(R 336.1213(6)(b)(i))**
 - The liability of the owner or operator of this source for any violation of applicable requirements prior to or at the time of this ROP issuance. **(R 336.1213(6)(b)(ii))**
 - The applicable requirements of the acid rain program, consistent with Section 408(a) of the CAA. **(R 336.1213(6)(b)(iii))**
 - The ability of the EPA to obtain information from a source pursuant to Section 114 of the CAA. **(R 336.1213(6)(b)(iv))**

28. The permit shield shall not apply to provisions incorporated into this ROP through procedures for any of the following:
- Operational flexibility changes made pursuant to Rule 215. **(R 336.1215(5))**
 - Administrative amendments made pursuant to Rule 216(1)(a)(i)-(iv). **(R 336.1216(1)(b)(iii))**
 - Administrative amendments made pursuant to Rule 216(1)(a)(v) until the amendment has been approved by the department. **(R 336.1216(1)(c)(iii))**
 - Minor permit modifications made pursuant to Rule 216(2). **(R 336.1216(2)(f))**
 - State-only modifications made pursuant to Rule 216(4) until the changes have been approved by the department. **(R 336.1216(4)(e))**
29. Expiration of this ROP results in the loss of the permit shield. If a timely and administratively complete application for renewal is submitted not more than 18 months, but not less than 6 months, before the expiration date of the ROP, but the department fails to take final action before the end of the ROP term, the existing ROP does not expire until the renewal is issued or denied, and the permit shield shall extend beyond the original ROP term until the department takes final action. **(R 336.1217(1)(c), R 336.1217(1)(a))**

Revisions

30. For changes to any process or process equipment covered by this ROP that does not require a revision of the ROP pursuant to Rule 216, the permittee must comply with Rule 215. **(R 336.1215, R 336.1216)**
31. A change in ownership or operational control of a stationary source covered by this ROP shall be made pursuant to Rule 216(1). **(R 336.1219(3))**
32. For revisions to this ROP, an administratively complete application shall be considered timely if it is received by the department in accordance with the time frames specified in Rule 216. **(R 336.1210(9))**
33. Pursuant to Rule 216(1)(b)(iii), Rule 216(2)(d) and Rule 216(4)(d), after a change has been made, and until the department takes final action, the permittee shall comply with both the applicable requirements governing the change and the ROP terms and conditions proposed in the application for the modification. During this time period, the permittee may choose to not comply with the existing ROP terms and conditions that the application seeks to change. However, if the permittee fails to comply with the ROP terms and conditions proposed in the application during this time period, the terms and conditions in the ROP are enforceable. **(R 336.1216(1)(c)(3), R 336.1216(2)(d), R 336.1216(4)(d))**

Reopenings

34. A ROP shall be reopened by the department prior to the expiration date and revised by the department under any of the following circumstances:
- If additional requirements become applicable to this stationary source with three or more years remaining in the term of the ROP, but not if the effective date of the new applicable requirement is later than the ROP expiration date. **(R 336.1217(2)(a)(i))**
 - If additional requirements pursuant to Title IV of the CAA become applicable to this stationary source. **(R 336.1217(2)(a)(ii))**
 - If the department determines that the ROP contains a material mistake, information required by any applicable requirement was omitted, or inaccurate statements were made in establishing emission limits or the terms or conditions of the ROP. **(R 336.1217(2)(a)(iii))**
 - If the department determines that the ROP must be revised to ensure compliance with the applicable requirements. **(R 336.1217(2)(a)(iv))**

Renewals

35. For renewal of this ROP, an administratively complete application shall be considered timely if it is received by the department not more than 18 months, but not less than 6 months, before the expiration date of the ROP. **(R 336.1210(7))**

Stratospheric Ozone Protection

36. If the permittee is subject to 40 CFR Part 82 and services, maintains, or repairs appliances except for motor vehicle air conditioners (MVAC), or disposes of appliances containing refrigerant, including MVAC and small appliances, or if the permittee is a refrigerant reclaimer, appliance owner or a manufacturer of appliances or recycling and recovery equipment, the permittee shall comply with all applicable standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F.
37. If the permittee is subject to 40 CFR Part 82 and performs a service on motor (fleet) vehicles when this service involves refrigerant in the MVAC, the permittee is subject to all the applicable requirements as specified in 40 CFR Part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed by the original equipment manufacturer. The term MVAC as used in Subpart B does not include the air-tight sealed refrigeration system used for refrigerated cargo or an air conditioning system on passenger buses using Hydrochlorofluorocarbon-22 refrigerant.

Risk Management Plan

38. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall register and submit to the EPA the required data related to the risk management plan for reducing the probability of accidental releases of any regulated substances listed pursuant to Section 112(r)(3) of the CAA as amended in 68.130. The list of substances, threshold quantities, and accident prevention regulations promulgated under Part 68 do not limit in any way the general duty provisions under Section 112(r)(1).
39. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall comply with the requirements of Part 68 no later than the latest of the following dates as provided in 68.10(a):
- g. June 21, 1999,
 - h. Three years after the date on which a regulated substance is first listed under 68.130, or
 - i. The date on which a regulated substance is first present above a threshold quantity in a process.
40. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall submit any additional relevant information requested by any regulatory agency necessary to ensure compliance with the requirements of 40 CFR Part 68.
41. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall annually certify compliance with all applicable requirements of Section 112(r) as detailed in Rule 213(4)(c)). **(40 CFR Part 68)**

Emission Trading

42. Emission averaging and emission reduction credit trading are allowed pursuant to any applicable interstate or regional emission trading program that has been approved by the Administrator of the EPA as a part of Michigan's State Implementation Plan. Such activities must comply with Rule 215 and Rule 216. **(R 336.1213(12))**

Permit To Install (PTI)

- 43. The process or process equipment included in this permit shall not be reconstructed, relocated, or modified unless a PTI authorizing such action is issued by the department, except to the extent such action is exempt from the PTI requirements by any applicable rule.² **(R 336.1201(1))**
- 44. The department may, after notice and opportunity for a hearing, revoke PTI terms or conditions if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of the PTI or is violating the department's rules or the CAA.² **(R 336.1201(8), Section 5510 of Act 451, PA 1994)**
- 45. The terms and conditions of a PTI shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by the PTI. If a new owner or operator submits a written request to the department pursuant to Rule 219 and the department approves the request, this PTI will be amended to reflect the change of ownership or operational control. The request must include all of the information required by subrules (1)(a), (b) and (c) of Rule 219. The written request shall be sent to the appropriate AQD District Supervisor, MDEQ.² **(R 336.1219)**
- 46. If the installation, reconstruction, relocation, or modification of the equipment for which PTI terms and conditions have been approved has not commenced within 18 months, or has been interrupted for 18 months, the applicable terms and conditions from that PTI shall become void unless otherwise authorized by the department. Furthermore, the person to whom that PTI was issued, or the designated authorized agent, shall notify the department via the Supervisor, Permit Section, MDEQ, AQD, P. O. Box 30260, Lansing, MI 48909, if it is decided not to pursue the installation, reconstruction, relocation, or modification of the equipment allowed by the terms and conditions from that PTI.² **(R 336.1201(4))**

Footnotes:

¹This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

B-4. SOURCE-WIDE CONDITIONS

Part B outlines the source-wide terms and conditions that apply to this stationary source. The permittee is subject to these special conditions for the stationary source in addition to the General Conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply to this source, NA (not applicable) has been used in the table. If there are no source-wide conditions, this section will be left blank.

For the purpose of the contiguous site being a synthetic minor for HAPs, all process equipment at the site including equipment covered by other permits, grand-fathered equipment and exempt equipment shall encompass the Chemical Production Plants (SRN B4359), Secondary Plastic Production Plants (SRN M4777), and R&D/Application Centers (SRN M4808) stationary sources.

TABLE B-4.1					
SOURCE-WIDE REQUIREMENTS [for Conditions II.B.1.1, II.B.2.2, III.A.3.2, III.A.3.3 and associated certifications and deviations for these conditions, the term SOURCE-WIDE comprises all process equipment at the site including equipment covered by other permits, grand-fathered equipment and exempt equipment. The site encompasses the Chemical Production Plants (SRN B4359), Secondary Plastic Production Plants (SRN M4777), and R&D/Application Centers (SRN M4808) stationary sources]					
EMISSION UNIT	NA				
Flexible Group ID	NA				
I. DESIGN PARAMETERS					
A. Pollution Control Equipment	NA				
B. Stack/Vent Parameters					
Stack/Vent ID	a. Minimum Height (feet)	b. Maximum Exhaust Dimension (inches)	c. Temp. (°F)	d. Air Flow Rate (acfm)	Applicable Requirement
C. Other Design Parameters					
NA					
II. MATERIAL USAGE/EMISSION LIMITS					
A. Material		Maximum Usage Rate			
NA		NA			
B. Pollutant		Maximum Emission Limit			
1. Each Individual HAP		1. Less than 10.0 tons per 12-month rolling time period as determined at the end of each calendar month, including the individual HAPs emissions from the BASF Corporation M4777, M4808, and B4359 contiguous sites. (R336.1205(1))			
2. Total HAPs		2. Less than 25.0 tons per 12-month rolling time period as determined at the end of each calendar month, including the total HAPs emissions from the BASF Corporation M4777, M4808, and B4359 contiguous sites. (R336.1205(1))			
III. COMPLIANCE EVALUATION					
Records of all of the following shall be maintained on file for a period of 5 years. (R 336.1213(3)(b)(ii))					
A. MONITORING/RECORDKEEPING (R 336.1213(3))					
In Addition To General Requirements in Part A					
1. Continuous Emission	NA				

<p>TABLE B-4.1 SOURCE-WIDE REQUIREMENTS [for Conditions II.B.1.1, II.B.2.2, III.A.3.2, III.A.3.3 and associated certifications and deviations for these conditions, the term SOURCE-WIDE comprises all process equipment at the site including equipment covered by other permits, grand-fathered equipment and exempt equipment. The site encompasses the Chemical Production Plants (SRN B4359), Secondary Plastic Production Plants (SRN M4777), and R&D/Application Centers (SRN M4808) stationary sources]</p>	
<p>Monitoring (CEM) System and Recordkeeping</p>	
<p>2. Process Monitoring System and Recordkeeping</p>	
<p>3. Other Monitoring and/or Recordkeeping</p>	<p>1. Permittee shall comply with the applicable requirements of 40 CFR Part 61, Subpart FF, Section 61.356 (Recordkeeping requirements.) (40 CFR 61, Subparts A and FF)</p> <p>2. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any recordkeeping, reporting or notification special condition. (R336.1205(1))</p> <p>3. The permittee shall keep in a satisfactory manner, monthly and previous 12-month emission calculation records for individual HAPs and total HAPs. (R336.1205(1))</p>
<p align="center">B. TESTING/RECORDKEEPING (R 336.1213(3)) In Addition to General Requirements in Part A</p>	
<p>1. Parameter to be Tested/Recorded</p>	
<p>2. Method/Analysis</p>	
<p>3. Frequency and Schedule of Testing/Recordkeeping</p>	
<p>IV. REPORTING</p>	
<p>Reports and Schedules</p>	<p>1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))</p> <p>2. Semiannual reporting of any deviations pursuant to General Condition 23 of Part A. Due March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))</p> <p>3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. Due annually by March 15 for the previous calendar year. (R 336.1213(4)(c))</p> <p>4. Permittee shall comply with the applicable requirements of 40 CFR Part 61, Subpart FF, Section 61.357 (Reporting requirements.)(40 CFR 61, Subparts A and FF)</p> <p>See Appendix 2-8.</p>
<p>V. OPERATIONAL PARAMETERS</p>	
<p>NA</p>	

VI. OTHER REQUIREMENTS

1. Permittee shall comply with the applicable requirements of 40 CFR 61, Subparts A (General Provisions) and FF (National Emission Standard for Benzene Waste Operations). The applicable sections of Subpart FF include, but are not necessarily limited to: **(40 CFR 61, Subparts A and FF)**
 - A. 61.342 (Standards: General)
 - B. 61.355 (Test methods, procedures, and compliance methods)

2. Permittee shall comply with the applicable requirements of 40 CFR 61, Subparts A (General Provisions) and M (National Emission Standard for Asbestos). The applicable sections of Subpart M include, but are not necessarily limited to: **(40 CFR 61, Subparts A and M)**
 - A. 61.145 (Standard for demolition and renovation)
 - B. 61.150 (Standard for waste disposal for manufacturing, fabricating, demolition, renovation, and spraying operations)

Footnotes:

¹This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

C-4. EMISSION UNIT CONDITIONS

Part C outlines terms and conditions that are specific to individual emission units listed in the Emission Unit Summary Table. The permittee is subject to the special conditions for each emission unit in addition to the General Conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply, NA (not applicable) has been used in the table. If there are no conditions specific to individual emission units, this section will be left blank.

EMISSION UNIT SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Emission Unit ID	Emission Unit Description (Including Process Equipment and Control Device(s))	Installation/ Modification Date	Requirement Table No.
EUTPURULE290	Any existing or future emission unit that emits air contaminants which are exempt from the requirements of R 336.1201 pursuant to R 336.1290.	NA	D-4.1
EUTPUSYNTHESIS	TPU Synthesis Plant. All equipment included in the EUTPUSYNTHESIS emission grouping is exempt from the installation permit requirements of Michigan Rule 201 pursuant to Rule 290. Control includes activated carbon adsorber, baghouse, filter screen, high volume air filter, cyclone, impingement wet type scrubber.	8/1/1991 6/1/1998 (modification)	D-4.1
EUTPUFURNACE	The mix pot cleaning operation is conducted in a controlled pyrolysis oven. This emission unit is exempt from installation permitting requirements pursuant to R290. This new system replaces the procedyne oven.	11/15/1999	D-4.1
EUTPUEXTRUSION	This emission group consists of all equipment at the TPU Synthesis Plant that is exempt from permitting pursuant to Rule 286(a) and includes all plastics extrusion equipment as well as associated plastic resin handling and storage equipment.	5/15/1998 6/01/2002	NA

D-4. FLEXIBLE GROUP CONDITIONS

Part D outlines terms and conditions that apply to more than one emission unit. The permittee is subject to the special conditions for each flexible group in addition to the General Conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply, NA (not applicable) has been used in the table. If there are no special conditions that apply to more than one emission unit, this section will be left blank.

FLEXIBLE GROUP SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Flexible Group ID	Emission Units Included in Flexible Group	Requirement Table No.
FGTPURULE290	EUTPURULE290, EUTPUSYNTHESIS, EUTPUFURNACE	D-4.1

TABLE D-4.1: FGTPURULE290 FLEXIBLE GROUP REQUIREMENTS					
FLEXIBLE GROUP	<p>EUTPURULE290: Any existing or future emission unit that emits air contaminants which are exempt from the requirements of R 336.1201 pursuant to R 336.1290.</p> <p>EUTPUSYNTHESIS: TPU Synthesis Plant. All equipment included in the EUTPU emission grouping is exempt from the installation permit requirements of Michigan Rule 201 pursuant to Rule 290.</p> <p>EUTPUFURNACE: The mix pot cleaning operations is conducted in a controlled pyrolysis oven. This emission unit is exempt from installation permit requirements pursuant to R290. This new system replaces the procedyne oven.</p>				
Emission Units	Each EUTPURULE290, EUTPUSYNTHESIS, EUTPUFURNACE				
I. DESIGN PARAMETERS					
A. Pollution Control Equipment	Activated Carbon Adsorber, Baghouse, Filter, Screen, High Volume Air Filter, Cyclone, Impingement Wet Type Scrubber				
B. Stack/Vent Parameters	NA				
Stack/Vent ID	a. Minimum Height (feet)	b. Maximum Exhaust Dimension (inches)	c. Temp. (°F)	d. Air Flow Rate (acfm)	Applicable Requirement
NA	NA	NA	NA	NA	NA
C. Other Design Parameters					
NA					
II. MATERIAL USAGE/EMISSION LIMITS					
A. Material	Maximum Usage Rate				
NA	NA				
B. Pollutants	Maximum Emission Limit				
The type of pollutants are categorized below:	This flexible group applies to each emission unit that meets any of the listed emission limit descriptions in one, two and/or three below:				
1. Noncarcinogenic VOCs or non-carcinogenic materials listed in R 336.1122(f).	1. Each emission unit emits only noncarcinogenic volatile organic compounds or noncarcinogenic materials which are listed in R 336.1122(f) as not contributing appreciably to the formation of ozone if the total uncontrolled or controlled emissions of air contaminants are not more than 1,000 or 500 pounds per month, respectively. (R 336.1290(a)(i))				
2. Other air contaminants with ITSLs or IRSLS greater than or equal to 0.04 µg/m ³ .	2. Each emission unit that the total uncontrolled or controlled emissions of air contaminants are not more than 1,000 or 500 pounds per month (total means the sum of emission limit number one, above, and emission limit no. 2, including parts a, b and c below), respectively, and all the following criteria listed below are met: (R 336.1290(a)(ii))				
a. Noncarcinogenic air contaminants with ITSLs greater than or equal to 2.0 µg/m ³ , excluding those listed in emission limit no. 1, above.	a. For noncarcinogenic air contaminants, excluding noncarcinogenic volatile organic compounds and noncarcinogenic materials which are listed in R 336.1122(f) as not contributing appreciably to the formation of ozone, with initial threshold screening levels greater than or equal to 2.0 micrograms per cubic meter, the total uncontrolled or controlled emissions shall not exceed 1,000 or 500 pounds per month, respectively. (R 336.1290(a)(ii)(A))				

**TABLE D-4.1: FGTPURULE290
 FLEXIBLE GROUP REQUIREMENTS**

<p>b. Noncarcinogenic air contaminants with ITSLs greater than or equal to 0.04 $\mu\text{g}/\text{m}^3$ and less than 2.0 $\mu\text{g}/\text{m}^3$, excluding those listed in emission limit no. 1, above.</p> <p>c. Carcinogenic air contaminants with IRSLS greater than or equal to 0.04 $\mu\text{g}/\text{m}^3$.</p> <p>d. Air contaminants with ITSLs or IRSLS less than 0.04 $\mu\text{g}/\text{m}^3$.</p>	<p>b. For noncarcinogenic air contaminants, excluding noncarcinogenic volatile organic compounds and noncarcinogenic materials which are listed in R 336.1122(f) as not contributing appreciably to the formation of ozone, with initial threshold screening levels greater than or equal to 0.04 microgram per cubic meter and less than 2.0 micrograms per cubic meter, the uncontrolled or controlled emissions shall not exceed 20 or 10 pounds per month, respectively. (R 336.1290(a)(ii)(B))</p> <p>c. For carcinogenic air contaminants with initial risk screening levels greater than or equal to 0.04 microgram per cubic meter, the uncontrolled or controlled emissions shall not exceed 20 or 10 pounds per month, respectively. (R 336.1290(a)(ii)(C))</p> <p>d. The emission unit shall not emit any air contaminants, excluding noncarcinogenic volatile organic compounds and noncarcinogenic materials which are listed in R 336.1122(f) as not contributing appreciably to the formation of ozone, with an initial threshold screening level or initial risk screening level less than 0.04 microgram per cubic meter. (R 336.1290(a)(ii)(D))</p>
<p>3. Noncarcinogenic particulate air contaminants with ITSLs greater than 2.0 $\mu\text{g}/\text{m}^3$, excluding nuisance particulate.</p>	<p>3. Each emission unit that emits noncarcinogenic particulate air contaminants and other air contaminants that are exempted under emission limit number one or emission limit number two, above, and all of the following provisions are met: (R 336.1290(a)(iii))</p> <p>a. The particulate emissions are controlled by an appropriately designed and operated fabric filter collector or an equivalent control system which is designed to control particulate matter to a concentration of less than or equal to 0.01 pound of particulate per 1,000 pounds of exhaust gases and which does not have an exhaust gas flow rate more than 30,000 actual cubic feet per minute. (R 336.1290(a)(iii)(A))</p> <p>b. The visible emissions from the emission unit are not more than 5% opacity in accordance with the methods contained in R 336.1303. (R 336.1290(a)(iii)(B))</p> <p>c. The initial threshold screening level for each particulate air contaminant, excluding nuisance particulate, is more than 2.0 micrograms per cubic meter. (R 336.1290(a)(iii)(C))</p>

III. COMPLIANCE EVALUATION

Records of all of the following shall be maintained on file for a period of 5 years. (R 336.1213(3)(b)(ii))

**A. MONITORING/RECORDKEEPING (R 336.1213(3))
 In Addition to General Requirements in Part A**

<p>1. Continuous Emission Monitoring (CEM) System and Recordkeeping</p>	<p>NA</p>
<p>2. Process Monitoring System and Recordkeeping</p>	<p>1. Permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor the liquid flow rate of the water scrubber on a continuous basis. ² (R336.1213(3))</p> <p>2. Permittee shall record, in a satisfactory manner, the water scrubber liquid flow rate at least once per month. All records are for the purpose of</p>

**TABLE D-4.1: FGTPURULE290
 FLEXIBLE GROUP REQUIREMENTS**

	<p>compliance demonstration and shall be kept on file for a period of at least five years and made available to the Department upon request.² (R336.1213(3))</p> <p>3. Regular inspections of the water scrubber shall be conducted during scheduled outages or downtime, but not less frequently than every 12 months. (R336.1213(3))</p> <p>4. The operational condition, and if necessary, reasons for the failure or malfunction of the different components of the water scrubber shall be determined during the inspection. (R336.1213(3))</p> <p>5. Any repairs and corrective actions, needed to address the causes of malfunction or failure shall be performed within one hour. If the problem is not corrected within one hour, the facility shall promptly discontinue the source of emissions to the water scrubber until any repairs and corrective actions needed to address the causes of malfunction or failure is performed. (R336.1213(3))</p> <p>6. Permittee shall record each interlock shutdown of the water scrubber. All records are for the purpose of compliance demonstration and shall be kept on file for a period of at least five years and made available to the Department upon request. (R336.1213(3))</p>
<p>3. Other Monitoring and/or Recordkeeping</p>	<p>1. The permittee shall maintain records of the following information for each emission unit included in FGTPURULE290 for each calendar month using</p>

**TABLE D-4.1: FGTPURULE290
 FLEXIBLE GROUP REQUIREMENTS**

	<p>the methods outlined in Appendix 4-4. (R 336.1213(3))</p> <ol style="list-style-type: none"> a. Records identifying each air contaminant that is emitted. (R 336.1213(3)) b. Records identifying if each air contaminant is controlled or uncontrolled. (R 336.1213(3)) c. Records identifying if each air contaminant is either carcinogenic or non-carcinogenic. (R 336.1213(3)) d. Records identifying the ITSL and IRSL, if established, of each air contaminant that is emitted. (R 336.1213(3)) e. Material use and calculations identifying the quality, nature, and quantity of the air contaminant emissions in sufficient detail to demonstrate that the actual emissions of the emission unit meet the emission limits outlined in this table and R 336.1290. (R 336.1213(3), R 336.1290(c)) <p>2. The permittee shall maintain an inventory of each emission unit that is covered by FGTPURULE290. This inventory shall include the following information. (R 336.1213(3))</p> <ol style="list-style-type: none"> a. The permittee shall maintain a written description of each emission unit as it is maintained and operated throughout the life of the emission unit. (R 336.1290(b), R 336.1213(3)) b. For each emission unit that emits noncarcinogenic particulate air contaminants pursuant to R 336.1290(a)(iii), the permittee shall maintain a written description of the control device, including the designed control efficiency and the designed exhaust gas flow rate. (R 336.1213(3))
	<p>3. For each emission unit that emits noncarcinogenic particulate air contaminants pursuant to R 336.1290(a)(iii), the permittee shall perform a monthly visible emission observation of each stack or vent during routine operating conditions. This observation need not be performed using Method 9. The permittee shall keep a written record of the results of each observation. (R 336.1213(3))</p> <p>See Appendix 4-4a</p>
<p>B. TESTING/RECORDKEEPING (R 336.1213(3)) In Addition to General Requirements in Part A</p>	
<p>1. Parameter to be Tested/Recorded</p>	<p>NA</p>
<p>2. Method/Analysis</p>	<p>NA</p>
<p>3. Frequency and Schedule of Testing/Recordkeeping</p>	<p>NA</p>
<p>IV. REPORTING</p>	
<p>Reports and Schedules</p>	<ol style="list-style-type: none"> 1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii)) 2. Semiannual reporting of deviations pursuant to General Condition 23 of Part A. Due March 15 for reporting period July 1 to December 31 and

**TABLE D-4.1: FGTPURULE290
 FLEXIBLE GROUP REQUIREMENTS**

	September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i)) 3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. Due annually by March 15 for the previous calendar year. (R 336.1213(4)(c)) See Appendix 4-8.
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V. OPERATIONAL PARAMETERS

1. The provisions of FGTPURULE290 apply to each emission unit which is operating pursuant to R 336.1290.
(R 336.1290)
2. The permittee shall equip and maintain the water scrubber with an interlock to prevent the synthesis belt line from operating if the scrubber liquid flow rate, as monitored in accordance with Special Condition III.A.2.1, is less than the required minimum flow rate. **(R 336.1290)**

VI. OTHER REQUIREMENTS

NA

Footnotes:

¹This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).

²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

E-4. Non-Applicable Requirements

At the time of ROP issuance, the AQD has determined that no non-applicable requirements have been identified for incorporation into the permit shield provision set forth in Part A (Conditions 30 through 33) of this ROP pursuant to R 336.1213(6)(a)(ii).

APPENDICES

Appendix 4-1: Abbreviations & Acronyms

The following is an alphabetical listing of abbreviations/acronyms that may be used in this permit.

AQD	Air Quality Division	MM	Million
acfm	Actual cubic feet per minute	MSDS	Material Safety Data Sheet
BACT	Best Available Control Technology	MW	Megawatts
BTU	British Thermal Unit	NA	Not Applicable
°C	Degrees Celsius	NAAQS	National Ambient Air Quality Standards
CAA	Federal Clean Air Act	NESHAP	National Emission Standard for Hazardous Air Pollutants
CAM	Compliance Assurance Monitoring	NMOC	Non-methane Organic Compounds
CEM	Continuous Emission Monitoring	NOx	Oxides of Nitrogen
CFR	Code of Federal Regulations	NSPS	New Source Performance Standards
CO	Carbon Monoxide	NSR	New Source Review
COM	Continuous Opacity Monitoring	PM	Particulate Matter
department	Michigan Department of Environmental Quality	PM-10	Particulate Matter less than 10 microns in diameter
dscf	Dry standard cubic foot	pph	Pound per hour
dscm	Dry standard cubic meter	ppm	Parts per million
EPA	United States Environmental Protection Agency	ppmv	Parts per million by volume
EU	Emission Unit	ppmw	Parts per million by weight
°F	Degrees Fahrenheit	PS	Performance Specification
FG	Flexible Group	PSD	Prevention of Significant Deterioration
GACS	Gallon of Applied Coating Solids	psia	Pounds per square inch absolute
gr	Grains	psig	Pounds per square inch gauge
HAP	Hazardous Air Pollutant	PeTE	Permanent Total Enclosure
Hg	Mercury	PTI	Permit to Install
hr	Hour	RACT	Reasonable Available Control Technology
HP	Horsepower	ROP	Renewable Operating Permit
H ₂ S	Hydrogen Sulfide	SC	Special Condition
HVLP	High Volume Low Pressure *	scf	Standard cubic feet
ID	Identification (Number)	sec	Seconds
IRSL	Initial Risk Screening Level	SCR	Selective Catalytic Reduction
ITSL	Initial Threshold Screening Level	SO ₂	Sulfur Dioxide
LAER	Lowest Achievable Emission Rate	SRN	State Registration Number
lb	Pound	TAC	Toxic Air Contaminant
m	Meter	Temp	Temperature
MACT	Maximum Achievable Control Technology	THC	Total Hydrocarbons
MAERS	Michigan Air Emissions Reporting System	tpy	Tons per year
MAP	Malfunction Abatement Plan	µg	Microgram
MDEQ	Michigan Department of Environmental Quality	VE	Visible Emissions
mg	Milligram	VOC	Volatile Organic Compounds
mm	Millimeter	yr	Year

*For High Volume Low Pressure (HVLP) applicators, the pressure measured at the HVLP gun air cap shall not exceed ten (10) pounds per square inch gauge (psig).

Appendix 4-2. Schedule of Compliance

The permittee has certified that this source is in compliance with all applicable requirements as of the date of issuance of this ROP and the permittee shall continue to comply with all applicable requirements listed in this ROP. A detailed Schedule of Compliance is not required. (R 336.1213(4)(a), R 336.1119(a)(ii))

Appendix 4-3. Monitoring Requirements

Specific monitoring requirement procedures, methods or specifications are detailed in Part A or the appropriate Requirement Tables. Therefore, this appendix is not applicable.

Appendix 4-4. Recordkeeping

Specific recordkeeping requirement formats and procedures are detailed in Part A or the appropriate Requirement Tables. Therefore, this appendix is not applicable.

Appendix 4-4a. Recordkeeping

The permittee shall use the DEQ Rule 290 Permit to Install Exemption Record form (EQP3558) or an alternative format as approved by the AQD District Supervisor to document monthly records as required by R336.1290 and Table D-4.1: FGTPURULE290.

Appendix 4-5. Testing Procedures

There are no specific testing requirement plans or procedures for this ROP. Therefore, this appendix is not applicable.

Appendix 4-6. Permits to Install/Operate

The following table lists the Permits to Install and/or operate, which relate to the identified Emission Units or Flexible Groups:

Permit to Install/Operate Number	Description of Equipment	Corresponding Emission Unit Or Flexible Group ID
N/A		

Appendix 4-7. Emission Calculations

There are no specific emission calculations to be used for this ROP. Therefore, this appendix is not applicable.

Appendix 4-8. Reporting

A. Annual and Deviation Certification Reporting

The permittee shall use the DEQ Report Certification form (EQP 5736) and DEQ Deviation Report form (EQP 5737) for the annual and deviation certification reporting referenced in Section IV of the Requirement Tables. Alternative formats must meet the provisions of R 336.1213(4)(c) and R 336.1213(3)(c)(i), respectively, and be approved by the AQD District Supervisor.

B. Other Reporting

Specific reporting requirement formats and procedures are detailed in Part A or the appropriate Requirement Tables. Therefore, Part B of this appendix is not applicable.