

DRAFT/PROPOSED CAAPP PERMIT
October 24, 2014

Attention:

Vantage Specialties, Inc.
Attn: Donald Wood
3938 Porett Drive
Gurnee, IL 60031-1281

State of Illinois

CLEAN AIR ACT PERMIT
PROGRAM (CAAPP) PERMIT

[Title I and Title V Permit]

Source:

Vantage Specialties
3938 Porett Drive
Gurnee, IL 60031-1281

I.D. No.: 097035AAQ
Permit No.: 96030159

Permitting Authority:

Illinois Environmental Protection Agency
Bureau of Air, Permit Section
217/785-1705

CLEAN AIR ACT PERMIT PROGRAM (CAAPP) PERMIT

[Title I and Title V Permit]

Type of Application: Renewal

Purpose of Application: Renew Existing CAAPP Permit for 5 Years

ID No.: 097035AAQ

Permit No.: 96030159

Statement of Basis No.: 96030159-1410

Date Application Received: October 24, 2005

Date Issued: TBD

Expiration Date: TBD

Renewal Submittal Date: 9 Months Prior to Expiration Date

Source Name: Vantage Specialties, Inc.

Address: 3938 Porett Drive

City: Gurnee

County: Lake

ZIP Code: 60031-1281

This permit is hereby granted to the above-designated source authorizing operation in accordance with this CAAPP permit, pursuant to the above referenced application. This source is subject to the conditions contained herein. For further information on the source see Section 1 and for further discussion on the effectiveness of this permit see Condition 2.3(g).

If you have any questions concerning this permit, please contact Bruce Beazly at 217/785-1705.

Raymond E. Pilapil
Manager, Permit Section
Division of Air Pollution Control

REP:MTR:BDB:jws

cc: IEPA, Permit Section
IEPA, FOS, Region 1
Lotus Notes Database

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Section 1 - Source Information

1. Addresses

Source

Vantage Specialties
3938 Porett Drive
Gurnee, IL 60031-1281

Owner

Vantage Specialties
3938 Porett Drive
Gurnee, IL 60031-1281

Operator

Vantage Specialties
3938 Porett Drive
Gurnee, IL 60031-1281

Permittee

The Owner and Operator of the source as identified in this table.

2. Contacts

Certified Officials

The source shall submit an Administrative Permit Amendment for any change in the Certified Officials, pursuant to Section 39.5(13) of the Act.

	<i>Name</i>	<i>Title</i>
<i>Responsible Official</i>	Randy Turk	Site Manager
<i>Delegated Authority</i>	No other individuals have been authorized by the IEPA.	N/A

Other Contacts

	<i>Name</i>	<i>Phone No.</i>	<i>Email</i>
<i>Source Contact</i>	Randy Turk	847/249-6824	RTurk@lambentcorp.com
<i>Technical Contact</i>	Donald Wood	847/249-6805	DWood@lambentcorp.com
<i>Correspondence</i>	Donald Wood	847/249-6805	DWood@lambentcorp.com
<i>Billing</i>	Donald Wood	847/249-6805	DWood@lambentcorp.com

3. Single Source

The source identified in Condition 1.1 above shall be defined to include all the following additional source(s):

<i>I.D. No.</i>	<i>Permit No.</i>	<i>Single Source Name and Address</i>
N/A	N/A	N/A

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Section 2 - General Permit Requirements

1. Prohibitions

- a. It shall be unlawful for any person to violate any terms or conditions of this permit issued under Section 39.5 of the Act, to operate the CAAPP source except in compliance with this permit issued by the IEPA under Section 39.5 of the Act or to violate any other applicable requirements. All terms and conditions of this permit issued under Section 39.5 of the Act are enforceable by USEPA and citizens under the Clean Air Act, except those, if any, that are specifically designated as not being federally enforceable in this permit pursuant to Section 39.5(7)(m) of the Act. [Section 39.5(6)(a) of the Act]
- b. After the applicable CAAPP permit or renewal application submittal date, as specified in Section 39.5(5) of the Act, the source shall not operate this CAAPP source without a CAAPP permit unless the complete CAAPP permit or renewal application for such source has been timely submitted to the IEPA. [Section 39.5(6)(b) of the Act]
- c. No Owner or Operator of the CAAPP source shall cause or threaten or allow the continued operation of an emission source during malfunction or breakdown of the emission source or related air pollution control equipment if such operation would cause a violation of the standards or limitations applicable to the source, unless this CAAPP permit granted to the source provides for such operation consistent with the Act and applicable Illinois Pollution Control Board regulations. [Section 39.5(6)(c) of the Act]
- d. Pursuant to Section 39.5(7)(g) of the Act, emissions from the source are not allowed to exceed any allowances that the source lawfully holds under Title IV of the Clean Air Act or the regulations promulgated thereunder, consistent with Section 39.5(17) of the Act and applicable requirements, if any.

2. Emergency Provisions

Pursuant to Section 39.5(7)(k) of the Act, the Owner or Operator of the CAAPP source may provide an affirmative defense of emergency to an action brought for noncompliance with technology-based emission limitations under this CAAPP permit if the following conditions are met through properly signed, contemporaneous operating logs, or other relevant evidence:

- a.
 - i. An emergency occurred and the source can identify the cause(s) of the emergency.
 - ii. The source was at the time being properly operated.
 - iii. The source submitted notice of the emergency to the IEPA within 2 working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a detailed description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.
 - iv. During the period of the emergency the source took all reasonable steps to minimize levels of emissions that exceeded the emission limitations, standards, or requirements in this permit.
- b. For purposes of Section 39.5(7)(k) of the Act, "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, such as an act of God, that requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under this permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operation error.
- c. In any enforcement proceeding, the source seeking to establish the occurrence of an emergency has the burden of proof. This provision is in addition to any emergency or

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upset provision contained in any applicable requirement. This provision does not relieve the source of any reporting obligations under existing federal or state laws or regulations.

3. General Provisions

a. Duty to Comply

The source must comply with all terms and conditions of this permit. Any permit noncompliance constitutes a violation of the CAA and the Act, and is grounds for any or all of the following: enforcement action; permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. [Section 39.5(7)(o)(i) of the Act]

b. Need to Halt or Reduce Activity is not a Defense

It shall not be a defense for the source 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 permit. [Section 39.5(7)(o)(ii) of the Act]

c. Duty to Maintain Equipment

The source shall maintain all equipment covered under this permit in such a manner that the performance or operation of such equipment shall not cause a violation of applicable requirements. [Section 39.5(7)(a) of the Act]

d. Disposal Operations

The source shall be operated in such a manner that the disposal of air contaminants collected by the equipment operations, or activities shall not cause a violation of the Act or regulations promulgated there under. [Section 39.5(7)(a) of the Act]

e. Duty to Pay Fees

- i. The source must pay fees to the IEPA consistent with the fee schedule approved pursuant to Section 39.5(18) of the Act, and submit any information relevant thereto. [Section 39.5(7)(o)(vi) of the Act]
- ii. The IEPA shall assess annual fees based on the allowable emissions of all regulated air pollutants, except for those regulated air pollutants excluded in Section 39.5(18)(f) of the Act and insignificant activities in Section 6, at the source during the term of this permit. The amount of such fee shall be based on the information supplied by the applicant in its complete CAAPP permit application. [Section 39.5(18)(a)(ii)(A) of the Act]
- iii. The check should be payable to "Treasurer, State of Illinois" and sent to: Fiscal Services Section, Illinois EPA, P.O. Box 19276, Springfield, IL, 62794-9276. Include on the check: ID #, Permit #, and "CAAPP Operating Permit Fees". [Section 39.5(18)(e) of the Act]

f. Obligation to Allow IEPA Surveillance

Pursuant to Sections 4(a), 39.5(7)(a), and 39.5(7)(p)(ii) of the Act, inspection and entry requirements that necessitate that, upon presentation of credentials and other documents as may be required by law and in accordance with constitutional limitations, the source shall allow the IEPA, or an authorized representative to perform the following:

- i. Enter upon the source's premises where the emission unit(s) is located or emissions-related activity is conducted, or where records must be kept under the conditions of this permit.

- ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit.
- iii. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
- iv. Sample or monitor any substances or parameters at any location at reasonable times:
 - A. As authorized by the Clean Air Act or the Act, at reasonable times, for the purposes of assuring compliance with this CAAPP permit or applicable requirements; or
 - B. As otherwise authorized by the Act.
- v. Enter and utilize any photographic, recording, testing, monitoring, or other equipment for the purposes of preserving, testing, monitoring, or recording any activity, discharge or emission at the source authorized by this permit.

g. Effect of Permit

- i. Pursuant to Section 39.5(7)(j)(iv) of the Act, nothing in this CAAPP permit shall alter or affect the following:
 - A. The provisions of Section 303 (emergency powers) of the CAA, including USEPA's authority under that Section.
 - B. The liability of the Owner or Operator of the source for any violation of applicable requirements prior to or at the time of permit issuance.
 - C. The applicable requirements of the acid rain program consistent with Section 408(a) of the Clean Air Act.
 - D. The ability of USEPA to obtain information from the source pursuant to Section 114 (inspections, monitoring, and entry) of the Clean Air Act.
- ii. Notwithstanding the conditions of this permit specifying compliance practices for applicable requirements, pursuant to Sections 39.5(7)(j) and (p) of the Act, any person (including the Permittee) may also use other credible evidence to establish compliance or noncompliance with applicable requirements. [35 IAC 201.122 and Section 39.5(7)(a) of the Act]

h. Severability Clause

The provisions of this permit are severable. In the event of a challenge to any portion of this permit, other portions of this permit may continue to be in effect. Should any portion of this permit be determined to be illegal or unenforceable, the validity of the other provisions shall not be affected and the rights and obligations of the source shall be construed and enforced as if this permit did not contain the particular provisions held to be invalid and the applicable requirements underlying these provisions shall remain in force. [Section 39.5(7)(i) of the Act]

4. Testing

- a. Tests conducted to measure composition of materials, efficiency of pollution control devices, emissions from process or control equipment, or other parameters shall be conducted using standard test methods if applicable test methods are not specified by the applicable regulations or otherwise identified in the conditions of this permit. Documentation of the test date, conditions, methodologies, calculations, and test results shall be retained pursuant to the recordkeeping procedures of this permit. Reports of

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any tests conducted as required by this permit or as the result of a request by the IEPA shall be submitted as specified in Condition 7.1 of this permit. [35 IAC Part 201 Subpart J and Section 39.5(7)(a) of the Act]

- b. Pursuant to Section 4(b) of the Act and 35 IAC 201.282, every emission source or air pollution control equipment shall be subject to the following testing requirements for the purpose of determining the nature and quantities of specified air contaminant emissions and for the purpose of determining ground level and ambient air concentrations of such air contaminants:
 - i. **Testing by Owner or Operator:** The IEPA may require the Owner or Operator of the emission source or air pollution control equipment to conduct such tests in accordance with procedures adopted by the IEPA, at such reasonable times as may be specified by the IEPA and at the expense of the Owner or Operator of the emission source or air pollution control equipment. All such tests shall be made by or under the direction of a person qualified by training and/or experience in the field of air pollution testing. The IEPA shall have the right to observe all aspects of such tests.
 - ii. **Testing by the IEPA:** The IEPA shall have the right to conduct such tests at any time at its own expense. Upon request of the IEPA, the Owner or Operator of the emission source or air pollution control equipment shall provide, without charge to the IEPA, necessary holes in stacks or ducts and other safe and proper testing facilities, including scaffolding, but excluding instruments and sensing devices, as may be necessary.

5. Recordkeeping

a. Control Equipment Maintenance Records

Pursuant to Section 39.5(7)(b) of the Act, a maintenance record shall be kept on the premises for each item of air pollution control equipment. At a minimum, this record shall show the dates maintenance was performed and the nature of preventative maintenance activities.

b. Retention of Records

- i. Records of all monitoring data and support information shall be retained for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records, original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. [Section 39.5(7)(e)(ii) of the Act]
- ii. Pursuant to Section 39.5(7)(a) of the Act, other records required by this permit including any logs, plans, procedures, or instructions required to be kept by this permit shall be retained for a period of at least 5 years from the date of entry unless a different period is specified by a particular permit provision.

c. Availability of Records

- i. Pursuant to Section 39.5(7)(a) of the Act, the Permittee shall retrieve and provide paper copies, or as electronic media, any records retained in an electronic format (e.g., computer) in response to an IEPA or USEPA request during the course of a source inspection.
- ii. Pursuant to Section 39.5(7)(a) of the Act, upon written request by the IEPA for copies of records or reports required to be kept by this permit, the Permittee shall promptly submit a copy of such material to the IEPA. For this purpose, material shall be submitted to the IEPA within 30 days unless additional time is provided by the IEPA or the Permittee believes that the volume and nature of

requested material would make this overly burdensome, in which case, the Permittee shall respond within 30 days with the explanation and a schedule for submittal of the requested material. (See also Condition 2.9(d))

6. Certification

a. Compliance Certification

- i. Pursuant to Section 39.5(7)(p)(v)(C) of the Act, the source shall submit annual compliance certifications by May 1 unless a different date is specified by an applicable requirement or by a particular permit condition. The annual compliance certifications shall include the following:
 - A. The identification of each term or condition of this permit that is the basis of the certification.
 - B. The compliance status.
 - C. Whether compliance was continuous or intermittent.
 - D. The method(s) used for determining the compliance status of the source, both currently and over the reporting period consistent with the conditions of this permit.
- ii. Pursuant to Section 39.5(7)(p)(v)(D) of the Act, all compliance certifications shall be submitted to the IEPA Compliance Section. Address is included in Attachment 3.
- iii. Pursuant to Section 39.5(7)(p)(i) of the Act, all compliance reports required to be submitted shall include a certification in accordance with Condition 2.6(b).

b. Certification by a Responsible Official

Any document (including reports) required to be submitted by this permit shall contain a certification by the responsible official of the source that meets the requirements of Section 39.5(5) of the Act and applicable regulations. [Section 39.5(7)(p)(i) of the Act]. An example Certification by a Responsible Official is included in Attachment 4 of this permit.

7. Permit Shield

- a. Pursuant to Section 39.5(7)(j) of the Act, except as provided in Condition 2.7(b) below, the source has requested and has been granted a permit shield. This permit shield provides that compliance with the conditions of this permit shall be deemed compliance with applicable requirements which were applicable as of the date the proposed permit for this source was issued, provided that either the applicable requirements are specifically identified within this permit, or the IEPA, in acting on this permit application, has determined that other requirements specifically identified are not applicable to this source and this determination (or a concise summary thereof) is included in this permit. This permit shield does not extend to applicable requirements which are promulgated after October 31, 2014 (date USEPA notice started), unless this permit has been modified to reflect such new requirements.
- b. Pursuant to Section 39.5(7)(j) of the Act, this permit and the terms and conditions herein do not affect the Permittee's past and/or continuing obligation with respect to statutory or regulatory requirements governing major source construction or modification under Title I of the CAA. Further, neither the issuance of this permit nor any of the terms or conditions of the permit shall alter or affect the liability of the Permittee for any violation of applicable requirements prior to or at the time of permit issuance.

- c. Pursuant to Section 39.5(7)(a) of the Act, the issuance of this permit by the IEPA does not and shall not be construed as barring, diminishing, adjudicating or in any way affecting any currently pending or future legal, administrative or equitable rights or claims, actions, suits, causes of action or demands whatsoever that the IEPA or the USEPA may have against the applicant including, but not limited to, any enforcement action authorized pursuant to the provision of applicable federal and state law.

8. Title I Conditions

Pursuant to Sections 39(a), 39(f), and 39.5(7)(a) of the Act, as generally identified below, this CAAPP permit may contain certain conditions that relate to requirements arising from the construction or modification of emission units at this source. These requirements derive from permitting programs authorized under Title I of the Clean Air Act (CAA) and regulations thereunder, and Title X of the Illinois Environmental Protection Act (Act) and regulations implementing the same. Such requirements, including the New Source Review programs for both major (i.e., PSD and nonattainment areas) and minor sources, are implemented by the IEPA.

- a. This permit may contain conditions that reflect requirements originally established in construction permits previously issued for this source. These conditions include requirements from preconstruction permits issued pursuant to regulations approved or promulgated by USEPA under Title I of the CAA, as well as requirements contained within construction permits issued pursuant to state law authority under Title X of the Act. Accordingly, all such conditions are incorporated into this CAAPP permit by virtue of being either an "applicable Clean Air Act requirement" or an "applicable requirement" in accordance with Section 39.5 of the Act. These conditions are identifiable herein by a designation to their origin of authority.
- b. This permit may contain conditions that reflect necessary revisions to requirements established for this source in preconstruction permits previously issued under the authority of Title I of the CAA. These conditions are specifically designated herein as "TIR."
 - i. Revisions to original Title I permit conditions are incorporated into this permit through the combined legal authority of Title I of the CAA and Title X of the Act. Public participation requirements and appeal rights shall be governed by Section 39.5 of the Act.
 - ii. Revised Title I permit conditions shall remain in effect through this CAAPP permit, and are therefore enforceable under the same, so long as such conditions do not expire as a result of a failure to timely submit a complete renewal application or are not removed at the applicant's request.
- c. This permit may contain conditions that reflect new requirements for this source that would ordinarily derive from a preconstruction permit established under the authority of Title I of the CAA. These conditions are specifically designated herein as "TIN."
 - i. The incorporation of new Title I requirements into this CAAPP permit is authorized through the combined legal authority of Title I of the CAA and Title X of the Act. Public participation requirements and appeal rights shall be governed by Section 39.5 of the Act.
 - ii. Any Title I conditions that are newly incorporated shall remain in effect through this CAAPP permit, and are therefore enforceable under the same, so long as such conditions do not expire as a result of a failure to timely submit a complete renewal application or are not removed at the applicant's request.

9. Reopening and Revising Permit

a. Permit Actions

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This permit may be modified, revoked, reopened and reissued, or terminated for cause in accordance with applicable provisions of Section 39.5 of the Act. The filing of a request by the source for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. [Section 39.5(7)(o)(iii) of the Act]

b. Reopening and Revision

Pursuant to Section 39.5(15)(a) of the Act, this permit must be reopened and revised if any of the following occur:

- i. Additional requirements become applicable to the equipment covered by this permit and three or more years remain before expiration of this permit;
- ii. Additional requirements become applicable to the source for acid deposition under the acid rain program;
- iii. The IEPA or USEPA determines that this permit contains a material mistake or that an inaccurate statement was made in establishing the emission standards or limitations, or other terms or conditions of this permit; or
- iv. The IEPA or USEPA determines that this permit must be revised or revoked to ensure compliance with the applicable requirements.

c. Inaccurate Application

Pursuant to Sections 39.5(5)(e) and (i) of the Act, the IEPA has issued this permit based upon the information submitted by the source in the permit application referenced on page 1 of this permit. Any misinformation, false statement or misrepresentation in the application shall be grounds for revocation or reopening of this CAAPP under Section 39.5(15) of the Act.

d. Duty to Provide Information

The source shall furnish to the IEPA, within a reasonable time specified by the IEPA any information that the IEPA may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. Upon request, the source shall also furnish to the IEPA copies of records required to be kept by this permit. [Section 39.5(7)(o)(v) of the Act]

10. Emissions Trading Programs

No permit revision shall be required for increases in emissions allowed under any USEPA approved economic incentives, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for elsewhere in this permit and that are authorized by the applicable requirement. [Section 39.5(7)(o)(vii) of the Act]

11. Permit Renewal

- a. Upon the expiration of this permit, if the source is operated, it shall be deemed to be operating without a permit unless a timely and complete CAAPP application has been submitted for renewal of this permit. However, if a timely and complete application to renew this CAAPP permit has been submitted, the terms and all conditions of the most recent issued CAAPP permit will remain in effect until the issuance of a renewal permit. [Sections 39.5(5)(l) and (o) of the Act]
- b. For purposes of permit renewal, a timely application is one that is submitted no less than 9 months prior to the date of permit expiration. [Section 39.5(5)(n) of the Act]

12. Permanent Shutdown

Pursuant to Section 39.5(7)(a) of the Act, this permit only covers emission units and control equipment while physically present at the source location(s). Unless this permit specifically provides for equipment relocation, this permit is void for the operation or activity of any item of equipment on the date it is removed from the permitted location(s) or permanently shut down. This permit expires if all equipment is removed from the permitted location(s), notwithstanding the expiration date specified on this permit.

13. Startup, Shutdown, and Malfunction

Pursuant to Section 39.5(7)(a) of the Act, in the event of an action to enforce the terms or conditions of this permit, this permit does not prohibit a Permittee from invoking any affirmative defense that is provided by the applicable law or rule.

Section 3 - Source Requirements

1. Applicable Requirements

Pursuant to Sections 39.5(7)(a), 39.5(7)(b), and 39.5(7)(d) of the Act, the Permittee shall comply with the following applicable requirements. These requirements are applicable to all emission units (including insignificant activities unless specified otherwise in this Section) at the source.

a. Fugitive Particulate Matter

- i. Pursuant to 35 IAC 212.301 and 35 IAC 212.314, no person shall cause or allow the emission of fugitive particulate matter from any process, including any material handling or storage activity, that is visible by an observer looking generally toward the zenith at a point beyond the property line of the source unless the wind speed is greater than 25 mph.
- ii. Compliance Method (Fugitive Particulate Matter)

Upon request by the IEPA, the Permittee shall conduct observations at the property line of the source for visible emissions of fugitive particulate matter from the source to address compliance with 35 IAC 212.301. For this purpose, daily observations shall be conducted for a week for particular area(s) of concern at the source, as specified in the request, observations shall begin either within one day or three days of receipt of a written request from the IEPA, depending, respectively, upon whether observations will be conducted by employees of the Permittee or a third-party observer hired by the Permittee to conduct observations on its behalf. The Permittee shall keep records for these observations, including identity of the observer, the date and time of observations, the location(s) from which observations were made, and duration of any fugitive emissions event(s).

b. Emissions Reduction Market System (ERMS)

Pursuant to 35 IAC Part 205, ERMS seasonal emissions of VOM during the seasonal allotment period from May 1 through September 30 shall not exceed 10 tons.

c. Ozone Depleting Substances

Pursuant to 40 CFR 82.150(b), the Permittee shall comply with the standards for recycling and emissions reduction of ozone depleting substances pursuant to 40 CFR Part 82, Subpart F, except as provided for motor vehicle air conditioners in Subpart B of 40 CFR Part 82:

- i. Pursuant to 40 CFR 82.156, persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices.
- ii. Pursuant to 40 CFR 82.158, equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment.
- iii. Pursuant to 40 CFR 82.161, persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program.
- iv. Pursuant to 40 CFR 82 Subpart B, any person performing service on a motor vehicle for consideration when this service involves the refrigerant in the motor vehicle air conditioner shall comply with 40 CFR 82 Subpart B, Servicing of Motor Vehicle Air Conditioners.
- v. Pursuant to 40 CFR 82.166, all persons shall comply with the reporting and recordkeeping requirements of 40 CFR 82.166.

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d. Asbestos Demolition and Renovation

- i. Asbestos Fees. Pursuant to Section 9.13(a) of the Act, for any site for which the Owner or Operator must file an original 10-day notice of intent to renovate or demolish pursuant to Condition 3.1(d)(ii) below and 40 CFR 61.145(b), the owner or operator shall pay to the IEPA with the filing of each 10-day notice a fee of \$150.
- ii. Pursuant to 40 CFR 61 Subpart M, Standard of Asbestos, prior to any demolition or renovation at this facility, the Permittee shall fulfill the applicable notification requirements of 40 CFR 61.145(b).
- iii. Pursuant to 40 CFR 61.145(c), during demolition or renovation, the Permittee shall comply with the applicable procedures for asbestos emission control established by 40 CFR 61.145(c).

e. Future Emission Standards

Pursuant to Section 39.5(15)(a) of the Act, this source shall comply with any new or revised applicable future standards of 40 CFR 60, 61, 62, or 63; or 35 IAC Subtitle B after the date issued of this permit. The Permittee shall, in accordance with the applicable regulation(s), comply with the applicable requirements by the date(s) specified and shall certify compliance with the applicable requirements of such regulation(s) as part of the annual compliance certification, as required by Condition 2.6(a). This permit may also have to be revised or reopened to address such new regulations in accordance to Condition 2.9.

2. Applicable Plans and Programs

Pursuant to Sections 39.5(7)(a), 39.5(7)(b), and 39.5(7)(d) of the Act, the Permittee shall comply with the following applicable requirements. These requirements are applicable to all emission units (including insignificant activities unless specified otherwise in this Section) at the source.

a. Fugitive PM Operating Program

- i. Pursuant to 35 IAC 212.309, this source shall be operated under the provisions of Fugitive PM Operating Program prepared by the Permittee and submitted to the IEPA for its review. The Fugitive PM Operating Program shall be designed to significantly reduce fugitive particulate matter emissions, pursuant to 35 IAC 212.309(a). The Permittee shall comply with the Fugitive PM Operating Program and any amendments to the Fugitive PM Operating Program submitted pursuant to Condition 3.2(a)(ii). As a minimum, the Fugitive PM Operating Program shall include provisions identified in 35 IAC 212.310(a) through (g) and the following:
 - A. A detailed description of the best management practices utilized to achieve compliance with 35 IAC 212.304 through 212.308.
 - B. Estimated frequency of application of dust suppressants by location.
 - C. Such other information as may be necessary to facilitate the IEPA's review of the Fugitive PM Operating Program.
- ii. Pursuant to 35 IAC 212.312, the Fugitive PM Operating Program shall be amended from time to time by the Permittee so that the Fugitive PM Operating Program is current. Such amendments shall be consistent with the requirements set forth by this Condition 3.2(a) and shall be submitted to the IEPA within 30 days of such amendment. Any future revision to the Fugitive PM Operating Program made by the Permittee during the permit term is automatically incorporated by reference provided the revision is not expressly disapproved, in writing, by the IEPA within 30 days of receipt of the revision. In the event that the IEPA notifies the

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Permittee of a deficiency with any revision to the Fugitive PM Operating Program, the Permittee shall be required to revise and resubmit the Fugitive PM Operating Program within 30 days of receipt of notification to address the deficiency pursuant to Section 39.5(7) (a) of the Act.

- iii. The Fugitive PM Operating Program, as submitted by the Permittee on August 4, 2014, is incorporated herein by reference. The document constitutes the formal Fugitive PM Operating Program required under 35 IAC 212.310, addressing the control of fugitive particulate matter emissions from all plant roadways and other subject operations located at the facility that are subject to 35 IAC 212.309.
- iv. Pursuant to Section 39.5(7)(b) of the Act, the Permittee shall keep a copy of the Fugitive PM Operating Program, any amendments or revisions to the Fugitive PM Operating Program (as required by Condition 3.2(a)), and the Permittee shall also keep a record of activities completed according to the Fugitive PM Operating Program.

b. Risk Management Plan (RMP)

- i. Pursuant to 40 CFR 68.215(a), the Permittee shall have a Risk Management Plan registered with the USEPA that includes information required by 40 CFR 68.150.
- ii. The Permittee shall keep a copy of the Risk Management Plan and shall update the Risk Management Plan with the USEPA pursuant to 40 CFR 68.190.

3. Title I Requirements

As of the date of issuance of this permit, there are no source-wide Title I requirements that need to be included in this Condition.

4. Synthetic Minor Limits

a. i. HAP Requirements

A. Pursuant to Construction Permit 10120018, source wide emissions of HAPs shall be less than 8.0 tons/year for each individual HAP and less than 20.0 tons/year for all HAPs combined. Compliance with annual limits shall be determined on a monthly basis from a running total of 12 months of data (the sum of the data for the current month plus the preceding 11 months).

ii. Compliance Method (HAP Requirements)

Monitoring

A. The requirements for the Leak Detection and Repair (LDAR) program detailed in Section 4.6 of this permit provide sufficient monitoring to assure compliance with the HAP requirements of 3.4(a)(i)(A).

Recordkeeping

B. Pursuant to Section 39.5(7)(b) of the Act, The Permittee shall maintain records of individual and combined HAP emissions on a monthly and annual basis for the emission units covered by Section 4 (Emission Unit Requirements) of this permit to demonstrate compliance with Condition 3.4(a)(i)(A).

5. Source-wide Non-Applicability Determinations

- a. i. Pursuant to 35 IAC 212.700, the source is not subject to 35 IAC Part 212 Subpart U because the source is not located in the areas designated in and subject to 35 IAC 212.324(a)(1) or 212.423(a).

- ii. Should this source become subject to 35 IAC 212.700, then the Permittee shall prepare and operate under a PM₁₀ Contingency Measure Plan reflecting the PM₁₀ emission reductions as set forth in 35 IAC 212.701 and 212.703. The Permittee shall, within 90 days after the date this source becomes subject to 35 IAC 212.700, submit a request to modify this CAAPP permit in order to include a new, appropriate PM₁₀ Contingency Measure Plan.
- b.
 - i. Pursuant to 35 IAC 244.142 the source is not subject to 35 IAC Part 244 Subpart C because the source is not one of the subject source types listed.
 - ii. Should this source become subject to 35 IAC 244.142, the Permittee shall prepare, submit, and operate under an Episode Action Plan for reducing the levels of emissions during yellow alerts, red alerts, and emergencies, consistent with safe operating procedures and submitted to the IEPA for its review
- c. The source is not subject to 40 CFR 63 Subpart PPP: National Emission Standards for Hazardous Air Pollutant Emissions for Polyether Polyols Production because the source is not a major source for HAP.
- d. The source is not subject to 40 CFR 63 Subpart VVVVVV: National Emission Standards for Hazardous Air Pollutant Emissions for Chemical Manufacturing Area Sources because the source does not use as feedstocks, generate as byproducts, or produce as products any of the HAP listed in Table 1 of the subpart.
- e. The source is not subject to 40 CFR 63 Subpart BBBBBB: National Emission Standards for Hazardous Air Pollutant Emissions for Area Sources: Chemical Preparations Industry because the source does not have any chemical operations in target HAP service as defined in 40 CFR 63.11588

6. Reporting Requirements

The Permittee shall submit the following information pursuant to Section 39.5(7)(f) of the Act. Addresses are included in Attachment 3.

a. Prompt Reporting

- i.
 - A. Pursuant to Section 39.5(7)(f)(ii) of the Act, the Permittee shall promptly notify the IEPA, Air Compliance Section, within 30 days of deviations from applicable requirements as follows:
 - I. Requirements in Conditions 3.1(a)(i), 3.1(b), 3.1(c), 3.1(d), and 3.1(e).
 - II. Requirements in Conditions 3.2(a) and 3.2(b).
 - III. Requirements in Condition 3.4(a)(i).
 - B. All such deviations shall be summarized and reported as part of the Semiannual Monitoring Report required by Condition 3.5(b).
- ii. The Permittee shall notify the IEPA, Air Compliance Section, of all other deviations as part of the Semiannual Monitoring Report required by Condition 3.5(b).
- iii. The deviation reports shall contain at a minimum the following information:
 - A. Date and time of the deviation.
 - B. Emission unit(s) and/or operation involved.
 - C. The duration of the event.

- D. Probable cause of the deviation.
 - E. Corrective actions or preventative measures taken.
- iv. All deviation reports required in this Permit shall be identified, summarized, and reported as part of the Semiannual Monitoring Report required by Condition 3.5(b).

b. Semiannual Reporting

- i. Pursuant to Section 39.5(7)(f)(i) of the Act, the Permittee shall submit a Semi-Annual Monitoring Report to the Illinois EPA, Air Compliance Section, summarizing required monitoring and identifying all instances of deviation from the permit, every six months as follows, unless more frequent reporting is required elsewhere in this permit.

<u>Monitoring Period</u>	<u>Report Due Date</u>
January through June	July 31
July through December	January 31

- ii. The Semiannual Monitoring Report must be certified by a Responsible Official consistent with Condition 2.6(b).

Note: Required monitoring includes all applicable monitoring, testing, recordkeeping, and reporting requirements identified in the Compliance Method sections and other conditions of this permit.

c. Annual Emissions Reporting

Pursuant to 35 IAC Part 254, the Source shall submit an Annual Emission Report to the Air Quality Planning Section, due by May 1 of the year following the calendar year in which the emissions took place. All records and calculations upon which the verified and reported data are based must be retained by the source.

Section 4 - Emission Unit Requirements

4.1 Fuel Combustion Equipment

1. Emission Units and Operations

<i>Emission Units</i>	<i>Pollutants Being Regulated</i>	<i>Original Construction Date</i>	<i>Modification/ Reconstruction Date</i>	<i>Air Pollution Control Devices or Measures</i>	<i>Monitoring Devices</i>
Emission Unit Group G01a:					
Natural gas fired Boiler (21 mmBtu/hr) B1	PM, VOM, CO, NO _x	1977	N/A	None	None
Natural gas fired Boiler (21 mmBtu/hr) B2	PM, VOM, CO, NO _x	1979	N/A	None	None
Natural gas fired Boiler (20.9 mmBtu/hr) B5	PM, VOM, CO, NO _x	1986	N/A	None	None
Natural gas fired Boiler (7.5 mmBtu/hr) B7	PM, VOM, CO, NO _x	1974	N/A	None	None

2. Applicable Requirements

For the emission units in Condition 4.1.1 above, the Permittee shall comply with the following applicable requirements pursuant to Sections 39.5(7)(a), 39.5(7)(b), and 39.5(7)(d) of the Act. In addition, the emission units that are in Section 5 shall comply with the applicable requirements in Section 5.1.

a. i. Opacity Requirements

A. Pursuant to 35 IAC 212.123(a), no person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units subject to 35 IAC 212.122, except as provided in 35 IAC 212.123(b).

ii. Compliance Method (Opacity Requirements)

Monitoring

A. Pursuant to Sections 39.5(7)(b) and (d) of the Act, at a minimum, the Permittee shall perform observations for opacity from each emission unit in accordance with Method 22 for visible emissions at least once every calendar year. If visible emissions are observed, the Permittee shall take corrective action within 4 hours of such observation. Corrective action may include, but is not limited to, shut down of the affected boiler and/or maintenance and repair. If corrective action was taken the Permittee shall perform a follow-up observation for visible emissions in accordance with Method 22. If visible emissions continue, then measurements of opacity in accordance with Method 9 and Section 7.1 shall be conducted within 7 days in accordance with Condition 2.4.

Recordkeeping

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- B. Pursuant to Section 39.5(7)(b) of the Act, the Permittee shall keep records for each observation for opacity conducted. These records shall include, at a minimum: date and time the observation was performed, name(s) of observing personnel, identification of which equipment was observed, whether or not the equipment was running properly, the findings of the observation including the presence of any visible emissions, and a description of any corrective action taken including if the corrective action took place within 4 hours of the observation.
- C. Pursuant to Section 39.5(7)(b) of the Act, the Permittee shall keep records for all opacity measurements made in accordance with USEPA Method 9.

b. i. Carbon Monoxide Requirements (CO)

- A. Pursuant to 35 IAC 216.121, no person shall cause or allow the emission of carbon monoxide (CO) into the atmosphere from any fuel combustion emission source with actual heat input greater than 2.9 MW (10 mmBtu/hr) to exceed 200 ppm, corrected to 50 percent excess air.

ii. Compliance Method (CO Requirements)

- A. The monitoring requirements sufficient to meet 39.5(7)(d)(ii) of the Act are addressed by the operational and production requirements in Condition 4.1.2(c) and the work practice requirement in Condition 4.1.2(d).

c. i. Operational and Production Requirements

- A. Pursuant to Section 39.5(7)(a) of the Act, pipeline quality natural gas shall be the only fuel fired in the boilers.

ii. Compliance Method (Operational and Production Requirements)

Recordkeeping Requirements

- A. Pursuant to Section 39.5(7)(b) of the Act, the Permittee shall maintain records of the type of fuel fired in the boilers.

d. i. Work Practice Requirements

- A. Pursuant to Section 39.5(7)(a) of the Act, the Permittee shall maintain and operate the boilers in a manner consistent with safety and good air pollution control practice for minimizing emissions.

ii. Compliance Method (Work Practice Requirements)

Monitoring Requirements

- A. Pursuant to Sections 39.5(7)(a) of the Act, at a minimum, the Permittee shall perform monthly inspections of each boiler.

Recordkeeping Requirements

- B. Pursuant to Section 39.5(7)(b) of the Act, the Permittee shall keep records of each inspection performed along with a maintenance and repair log. These records shall include, at a minimum: date and time inspections were performed, name(s) of inspection personnel, identification of equipment being inspected, findings of the inspections, operation and maintenance procedures, and a description of all maintenance and repair activities performed including if the activity resulted in a modification or reconstruction of the piece of equipment.

3. Non-Applicability Determinations

- a. The boilers are not subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 CFR Part 63 Subpart DDDDD because this facility is an area source for HAPs.
- b. The boilers are not subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers Area Sources, 40 CFR Part 63 Subpart JJJJJJ, because the boilers are gas-fired pursuant to 40 CFR 63.11195(e).
- c. The boilers are not subject to the New Source Performance Standards (NSPS) for Small Industrial Steam Generating Units, 40 CFR Part 60 Subpart Dc, because all of the boilers were constructed prior to the applicable date of June 9, 1989.
- d. The boilers are not subject to 35 IAC 212.206 and 35 IAC 214.122 because they use natural gas exclusively.
- e. The boilers are not subject to 35 IAC 217.141 because the individual heat input of the boilers is less than 250 mmBtu/hr.
- f. The boilers are not subject to 35 IAC 217 Subparts D and E because they are not located at a source that has the potential to emit NO_x in an amount equal to or greater than 100 tons per year.
- g. The boilers are not subject to 40 CFR Part 64, Compliance Assurance Monitoring (CAM) for Major Stationary Sources for PM, SO₂, VOM, CO, and NO_x, because the boilers do not use an add-on control device to achieve compliance with an emission limitation or standard.

4. Other Requirements

As of the date of issuance of this permit, there are no other requirements that need to be included in this Condition.

5. Reporting Requirements

The Permittee shall submit the following information pursuant to Section 39.5(7)(f) of the Act. Addresses are included in Attachment 3.

a. Prompt Reporting

- i. A. Pursuant to Section 39.5(7)(f)(ii) of the Act, the Permittee shall promptly notify the IEPA, Air Compliance Section, within 30 days of deviations from applicable requirements as follows unless a different period is specified by a particular permit provision, i.e., NSPS or NESHAP requirement:
 - I. Requirements in Conditions 4.1.2(a)(i), 4.1.2(b)(i), 4.1.2(c)(i), and 4.1.2(d)(i).
 - B. All such deviations shall be summarized and reported as part of the Semiannual Monitoring Report required by Condition 3.5(b).
- ii. The Permittee shall notify the IEPA, Air Compliance Section, of all other deviations as part of the Semiannual Monitoring Report required by Condition 3.5(b).
- iii. The deviation reports shall contain at a minimum the following information:
 - A. Date and time of the deviation.
 - B. Emission unit(s) and/or operation involved.

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- C. The duration of the event.
- D. Probable cause of the deviation.
- E. Corrective actions or preventative measures taken.

4.2 Process Heaters

1. Emission Units and Operations

<i>Emission Units</i>	<i>Pollutants Being Regulated</i>	<i>Original Construction Date</i>	<i>Modification/ Reconstruction Date</i>	<i>Air Pollution Control Devices or Measures</i>	<i>Monitoring Devices</i>
Emission Unit Group G01b*:					
Natural gas fired Oil Heater (10 mmBtu/hr) B3	PM, VOM, CO, NO _x	1980	N/A	None	None
Natural gas fired Oil Heater (10 mmBtu/hr) B6	PM, VOM, CO, NO _x	October 1989	N/A	None	None
Natural Gas fired Oil Heater (12 mmBtu/hr) B8	PM, VOM, CO, NO _x	2001	N/A	None	None

* The units described as an "oil heater" use oil as the heat transfer medium rather than steam.

2. Applicable Requirements

For the emission units in Condition 4.2.1 above, the Permittee shall comply with the following applicable requirements pursuant to Sections 39.5(7)(a), 39.5(7)(b), and 39.5(7)(d) of the Act. In addition, the emission unit(s) that are in Section 5 shall comply with the applicable requirements in Section 5.1.

a. i. Opacity Requirements

A. Pursuant to 35 IAC 212.123(a), no person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units subject to 35 IAC 212.122, except as provided in 35 IAC 212.123(b).

ii. Compliance Method (Opacity Requirements)

Monitoring

A. Pursuant to Sections 39.5(7)(b) and (d) of the Act, at a minimum, the Permittee shall perform observations for opacity from each emission unit in accordance with Method 22 for visible emissions at least once every calendar year. If visible emissions are observed, the Permittee shall take corrective action within 4 hours of such observation. Corrective action may include, but is not limited to, shut down of the affected process heater and/or maintenance and repair. If corrective action was taken the Permittee shall perform a follow-up observation for visible emissions in accordance with Method 22. If visible emissions continue, then measurements of opacity in accordance with Method 9 and Section 7.1 shall be conducted within 7 days in accordance with Condition 2.4.

Recordkeeping

B. Pursuant to Section 39.5(7)(b) of the Act, the Permittee shall keep records for each observation for opacity conducted. These records shall include, at a minimum: date and time the observation was performed, name(s) of observing personnel, identification of which equipment was observed, whether or not the equipment was running properly, the findings of the observation including the presence of any visible emissions, and a description of any

corrective action taken including if the corrective action took place within 4 hours of the observation.

C. Pursuant to Section 39.5(7)(b) of the Act, the Permittee shall keep records for all opacity measurements made in accordance with USEPA Method 9.

b. i. Carbon Monoxide Requirements (CO)

A. Pursuant to 35 IAC 216.121, no person shall cause or allow the emission of carbon monoxide (CO) into the atmosphere from any fuel combustion emission source with actual heat input greater than 2.9 MW (10 mmBtu/hr) to exceed 200 ppm, corrected to 50 percent excess air.

c. i. Nitrogen Oxide Requirements (NO_x)

A. Pursuant to Operating Permit #89110043, NO_x emissions from process heater B6 shall not exceed 1.77 lb/hr and 7.73 ton/year. Compliance with annual limits shall be determined on a monthly basis from a running total of 12 months of data (the sum of the data for the current month plus the preceding 11 months. [T1]

B. Pursuant to Construction Permit #99100090 and 39.5(7)(a) of the Act, NO_x emissions from process heater B8 shall not exceed 1.77 lb/hr and 7.73 ton/year. Compliance with annual limits shall be determined on a monthly basis from a running total of 12 months of data (the sum of the data for the current month plus the preceding 11 months. [T1]

ii. Compliance Method (NO_x Requirements)

Recordkeeping

A. Pursuant to Section 39.5(7)(b) of the Act, the Permittee shall maintain records of the monthly and annual emissions of NO_x from each process heater with supporting calculations (tons/month and tons/year).

d. i. Operational and Production Requirements

A. Pursuant to Section 39.5(7)(a) of the Act, pipeline quality natural gas shall be the only fuel fired in the process heaters.

ii. Compliance Method (Operational and Production Requirements)

Recordkeeping Requirements

A. Pursuant to Section 39.5(7)(b) of the Act, the Permittee shall maintain records of the type of fuel fired in the process heaters.

B. Pursuant to 40 CFR 60.48c(g)(2), the Permittee shall record and maintain records of the amount of each fuel combusted during each calendar month in the oil heaters B6 and B8.

e. i. Work Practice Requirements

A. Pursuant to Section 39.5(7)(a) of the Act, the Permittee shall maintain and operate the process heaters in a manner consistent with safety and good air pollution control practice for minimizing emissions.

ii. Compliance Method (Work Practice Requirements)

Monitoring Requirements

- A. Pursuant to Sections 39.5(7)(a) of the Act, at a minimum, the Permittee shall perform monthly inspections of each process heater.

Recordkeeping Requirements

- B. Pursuant to Section 39.5(7)(b) of the Act, the Permittee shall keep records of each inspection performed along with a maintenance and repair log. These records shall include, at a minimum: date and time inspections were performed, name(s) of inspection personnel, identification of equipment being inspected, findings of the inspections, operation and maintenance procedures, and a description of all maintenance and repair activities performed including if the activity resulted in a modification or reconstruction of the piece of equipment.

3. Non-Applicability Determinations

- a. The process heaters are not subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 CFR Part 63 Subpart DDDDD because this facility is an area source for HAPs.
- b. The process heaters are not subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers Area Sources, 40 CFR Part 63 Subpart JJJJJJ, because process heaters, as defined in 40 CFR 63.11237 are not boilers [as defined in 63.11237] and, pursuant to 63.11193, only boilers are subject to Subpart JJJJJJ.
- c. The oil heater B3 is not subject to the New Source Performance Standards (NSPS) for Small Industrial Steam Generating Units, 40 CFR Part 60 Subpart Dc, because it was constructed before the applicability date of June 9, 1989.
- d. The process heaters are not subject to 35 IAC 212.206 and 35 IAC 214.122 because they use natural gas exclusively.
- e. The process heaters are not subject to 35 IAC 217.141 because the individual heat input of the process heaters is less than 250 mmBtu/hr.
- f. The process heaters are not subject to 35 IAC 217 Subparts D and F, because they are not located at a source that has the potential to emit NO_x in an amount equal to or greater than 100 tons per year.
- g. The process heaters are not subject to 40 CFR Part 64, Compliance Assurance Monitoring (CAM) for Major Stationary Sources for PM, SO₂, VOM, CO, and NO_x, because the process heaters do not use an add-on control device to achieve compliance with an emission limitation or standard.

4. Other Requirements

As of the date of issuance of this permit, there are no other requirements that need to be included in this Condition.

5. Reporting Requirements

The Permittee shall submit the following information pursuant to Section 39.5(7)(f) of the Act. Addresses are included in Attachment 3.

a. Prompt Reporting

- i. A. Pursuant to Section 39.5(7)(f)(ii) of the Act, the Permittee shall promptly notify the IEPA, Air Compliance Section, within 30 days of deviations from

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applicable requirements as follows unless a different period is specified by a particular permit provision, i.e., NSPS or NESHAP requirement:

- I. Requirements in Conditions 4.2.2(a)(i), 4.2.2(b)(i), 4.2.2(c)(i), 4.2.2(d)(i), and 4.2.2(e)(i).
 - B. All such deviations shall be summarized and reported as part of the Semiannual Monitoring Report required by Condition 3.5(b).
- ii. The Permittee shall notify the IEPA, Air Compliance Section, of all other deviations as part of the Semiannual Monitoring Report required by Condition 3.5(b).
 - iii. The deviation reports shall contain at a minimum the following information:
 - A. Date and time of the deviation.
 - B. Emission unit(s) and/or operation involved.
 - C. The duration of the event.
 - D. Probable cause of the deviation.
 - E. Corrective actions or preventative measures taken.

Section 4 - Emission Unit Requirements
4.3 - Organic Chemical Manufacturing Processes Requiring VOM Control

4.3 Organic Chemical Processes Requiring VOM Control

1. Emission Units and Operations

<i>Emission Units</i>	<i>Pollutants Being Regulated</i>	<i>Original Construction Date</i>	<i>Modification/Reconstruction Date</i>	<i>Air Pollution Control Devices or Measures</i>	<i>Monitoring Devices</i>
Emission Unit Group G02:					
Reactor R1 (Alkoxylation)	VOM, HAP	Pre-1989	N/A	Scrubber (R37)	Scrubbant liquid flow, pH, glycol content, and pressure drop
Reactor R2 (Alkoxylation)	VOM, HAP	Pre-1989	N/A	Scrubber (R37)	Scrubbant liquid flow, pH, glycol content, and pressure drop
Reactor R3 (Alkoxylation)	VOM, HAP	Pre-1989	N/A	Scrubber (R37)	Scrubbant liquid flow, pH, glycol content, and pressure drop
Reactor R4 (Alkoxylation)	VOM, HAP	Pre-1989	N/A	Scrubber (R37)	Scrubbant liquid flow, pH, glycol content, and pressure drop
Reactor R5 (Alkoxylation)	VOM, HAP	Pre-1989	N/A	Scrubber (R37)	Scrubbant liquid flow, pH, glycol content, and pressure drop
Reactor R7 (Alkoxylation)	VOM, HAP	Pre-1989	N/A	Scrubber (R37)	Scrubbant liquid flow, pH, glycol content, and pressure drop
Finish Tank F1/Reactor R30 (Alkoxylation)	VOM, HAP	Pre-1989	N/A	Condenser (HTX30)	Condenser water temperature and pressure
Finish Tank F2/Reactor R31 (Alkoxylation)	VOM, HAP	Pre-1989	N/A	Condenser (HTX31)	Condenser water temperature and pressure
Finish Tank F3/Reactor R32 (Alkoxylation)	VOM, HAP	Pre-1989	N/A	Condenser (HTX32)	Condenser water temperature and pressure
Finish Tank F4/Reactor R33 (Alkoxylation)	VOM, HAP	Pre-1989	N/A	Condenser (HTX33)	Condenser water temperature and pressure
Finish Tank F5/Reactor R34 (Alkoxylation)	VOM, HAP	Pre-1989	N/A	Condenser (HTX34)	Condenser water temperature and pressure
Premix Tanks (Qty. 2) (Alkoxylation)	VOM, HAP	2011	N/A	Scrubber (R37)	Scrubbant liquid flow, pH, glycol content, and pressure drop
Emission Unit Group G04					
Reactor R8 (Esterification/Finishing/Special Projects)	VOM, HAP	Pre-1989	N/A	Condenser (HTX8)	Condenser water temperature and pressure
Reactor R9 (Esterification/Finishing/Special Projects)	VOM, HAP	Pre-1989	N/A	Condenser (HTX9)	Condenser water temperature and pressure
Reactor R15 (Esterification/Finishing/Special Projects)	VOM, HAP	Pre-1989	N/A	Condenser (HTX15)	Condenser water temperature and pressure
Reactor R17 (Esterification/Finishing/Special Projects)	VOM, HAP	Pre-1989	N/A	Condenser (HTX17)	Condenser water temperature and pressure

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Section 4 - Emission Unit Requirements
4.3 - Organic Chemical Manufacturing Processes Requiring VOM Control

Reactor R19 (Esterification/Finishing/Special Projects)	VOM, HAP	Pre-1989	N/A	Condenser (HTX19)	Condenser water temperature and pressure
Emission Unit Group G06					
Reactor R18	VOM, HAP	Pre-1989	N/A	Condenser (HTX18)	Condenser water temperature and pressure
Emission Unit Group G08					
Reactor R36 (Wastewater Concentrator)	VOM, HAP	1990	N/A	Condenser (HTX36)	Condenser water temperature and pressure
Tank T50 (Wastewater Concentrator)	VOM, HAP	2003	N/A	Condenser (HTX 50)	Condenser water temperature and pressure
Tank T154 (Wastewater Concentrator)	VOM, HAP	1990	N/A	Condenser (HTX154)	Condenser water temperature and pressure

2. Applicable Requirements

For the emission units in Condition 4.3.1 above, the Permittee shall comply with the following applicable requirements pursuant to Sections 39.5(7)(a), 39.5(7)(b), and 39.5(7)(d) of the Act. In addition, the emission units that are in Section 5 shall comply with the applicable requirements in Section 5.1.

a. i. Volatile Organic Material Requirements (VOM)

- A. Pursuant to 35 IAC 218.301, no person shall cause or allow the discharge of more than 8 lbs/hr of organic material into the atmosphere from any emission unit, except as provided in 35 IAC 218.302, 218.303, and 218.304.
- B. Pursuant to 35 IAC 218.966(a), every owner or operator of a miscellaneous organic chemical manufacturing process emission unit subject to 35 IAC Subpart RR shall employ emission capture and control techniques which achieve an overall reduction in uncontrolled VOM emissions of at least 81 percent from the emission unit.
- C. Pursuant to Operating Permit 89120013 and 39.5(7)(a) of the Act, emission of VOM from Reactor R18 shall not exceed 0.9 ton/year. [T1R}

ii. Compliance Method (VOM Requirements)

Monitoring

- A. Pursuant to 39.5(7)(b) and (d) of the Act, the Permittee shall operate and maintain instrumentation to measure the following operating parameters for the cooling water system supplying the condensers controlling the alkoxylation operation finishing vessels and the esters operation reactors..
 - I. System water pressure.
 - II. System water supply temperature (i.e. temperature of the cooling water supply sent to the condensers).
- B. Pursuant to 39.5(7)(b) and (d) of the Act, the Permittee shall monitor the position of the cooling water supply valve (open or closed) at least once per batch for the condensers controlling the alkoxylation operation finishing vessels and the esters operation reactors.

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- C. Pursuant to 40 CFR Part 64, Compliance Assurance Monitoring (CAM) for Major Stationary Sources, the Emission Unit Group G02 is subject to 40 CFR Part 64. The Permittee shall comply with the monitoring requirements of the CAM Plan described in Condition 7.4 and Table 7.4.1, pursuant to 40 CFR Part 64 as submitted in the Permittee's CAM plan application. At all times, the Owner or Operator shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment, pursuant to 40 CFR 64.7(a) and (b). The monitoring and recordkeeping from Condition 7.4 and Table 7.4.1 satisfy the requirements for 35 IAC 218, Subpart UU.
- D. Pursuant to 40 CFR Part 64, Compliance Assurance Monitoring (CAM) for Major Stationary Sources, the Emission Unit Group G08 is subject to 40 CFR Part 64. The Permittee shall comply with the monitoring requirements of the CAM Plan described in Condition 7.4 and Table 7.4.2, pursuant to 40 CFR Part 64 as submitted in the Permittee's CAM plan application. At all times, the Owner or Operator shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment, pursuant to 40 CFR 64.7(a) and (b). The monitoring and recordkeeping from Condition 7.4 and Table 7.4.2 satisfy the requirements for 35 IAC 218, Subpart UU.

Testing

- E. Pursuant to 35 IAC 218.968(a), the Permittee shall conduct testing within 240 days of the effective date of this permit of Scrubber R37 and Condensers HTX36 and HTX 50 to demonstrate compliance with the overall VOM reduction efficiency of 81% that is required by 35 IAC 218.966(a).
- I. For control device efficiency testing and monitoring, the control device efficiency shall be determined by simultaneously measuring the inlet and outlet gas phase VOM concentrations and gas volumetric flow rates in accordance with the gas phase test methods specified in 35 IAC 218.105(f) [35 IAC 218.105(d)(1)].
- II. The overall efficiency of the emission control system shall be determined as specified in 35 IAC 218.105(c).
- III. Volatile Organic Material Gas Phase Source Test Methods: The methods in 40 CFR Part 60, Appendix A, delineated below shall be used to determine control device efficiencies:
1. 40 CFR Part 60, Appendix A, Method 18, 25 or 25A, as appropriate to the conditions at the site, shall be used to determine VOM concentration. Method selection shall be based on consideration of the diversity of organic species present and their total concentration and on consideration of the potential presence of interfering gases. The test shall consist of three separate runs, each lasting a minimum of 60 minutes, unless the Illinois EPA and the USEPA determine that process variables dictate shorter sampling times [35 IAC 218.105(e)(1)];
 2. 40 CFR Part 60, Appendix A, Method 1 or 1A, shall be used for sample and velocity traverses [35 IAC 218.105(e)(2)];
 3. 40 CFR Part 60, Appendix A, Method 2, 2A, 2C or 2D, shall be used for velocity and volumetric flow rates [35 IAC 218.105(e)(3)];

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4. 40 CFR Part 60, Appendix A, Method 3, shall be used for gas analysis [35 IAC 218.105(e)(4)];
 5. 40 CFR Part 60, Appendix A, Method 4, shall be used for stack gas moisture [35 IAC 218.105(e)(5)];
 6. 40 CFR Part 60, Appendix A, Methods 2, 2A, 2C, 2D, 3 and 4, shall be performed, as applicable, at least twice during each test run [35 IAC 218.105(e)(6)]; and
 7. Use of an adaptation to any of the test methods specified may not be used unless approved by the Illinois EPA and the USEPA on a case by case basis. An owner or operator must submit sufficient documentation for the Illinois EPA and the USEPA to find that the test methods specified will yield inaccurate results and that the proposed adaptation is appropriate [35 IAC 218.105(e)(7)].
- F. The Permittee shall comply with all the requirements of Section 7.1.

Recordkeeping

- G. Pursuant to Construction Permit 10120018 and, the Permittee shall keep the following files:
- I. A file or other records for the VOM and HAP emission factors for each material or category of material produced, with supporting documentation and calculations, and a demonstration that the VOM emission of units when operating normally do not exceed applicable hourly limits. This record shall be updated whenever a new product is introduced, a change is made in the raw materials for the product or the manufacturing procedure that would increase VOM or HAP emissions or result in emissions of a new HAP, or a change is made in the normal settings for operation of control equipment that would increase emissions.
 - II. The minimum and maximum values for operation of condensers controlling the alkoxylation operation finishing vessels and the esters operation reactors, including standard values of parameters which generally apply, and any values of parameters that only apply to production of particular products.
 1. Maximum value for Cooling water system supply temperature.
 2. Minimum value for cooling water system pressure.
- H. Pursuant to Construction Permit 10120018 and 35 IAC 218.991(a)(2)(A) and (B), for the condensers controlling the alkoxylation operation finishing vessels and the esters operation reactors, the Permittee shall record the readings for the following parameters on at least an hourly basis:
- I. System water pressure.
 - II. System water supply temperature (i.e. temperature of the cooling water supply sent to the condensers).
- I. Pursuant to Section 39.5(7)(b) of the Act and 35 IAC 218.991(a)(2)(A) and (B), for the condensers controlling the alkoxylation operation finishing vessels and the esters operation reactors, the Permittee shall record the position of the cooling water supply valve (open or closed) at least once per batch.

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- J. Pursuant to Construction Permit 10120018 and 35 IAC 218.991(a)(3), the Permittee shall maintain the operating logs or other records for each chemical production operation which include at a minimum:
- I. Detailed information for periods of time when condensers controlling the alkoxylation operation finishing vessels and the esters operation reactors did not operate in the ranges established in Condition 4.3.2(a)(ii)(G)(II), with date, duration, product being processed and other descriptive information, and estimate of additional emissions of VOM and HAPs.
 - K. Pursuant to Construction Permit 10120018 and 35 IAC 218.991(a)(2)(C), logs of inspection, maintenance, and repairs for the emission units, capture system, control device and monitoring equipment in the Groups G02, G04, and G08 of Condition 4.3.1 that, at a minimum, address aspects of these units that are related to the emissions. These logs must detail dates and duration of any outages.
 - L. Pursuant to 39.5(7)(b) and (d) of the Act, the Permittee shall maintain records of the VOM and total HAP emissions of each emission unit in the Condition 4.3.1, based on operating information and applicable factors, with supporting calculations (tons/month and tons/year). Compliance with annual limits shall be determined on a monthly basis from a running total of 12 months of data (the sum of the data for the current month plus the preceding 11 months).

3. Non-Applicability Determinations

- a. The chemical manufacturing operations are not subject to the New Source Performance Standards (NSPS) for Standards of Performance for Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations, 40 CFR Part 60 Subpart NNN, because the chemical manufacturing operations do not produce any of the chemicals listed in 40 CFR Part 60.667 and the cited NSPS does not apply to batch reactors and batch distillation units
- b. The chemical manufacturing operations are not subject to the New Source Performance Standards (NSPS) for Standards of Performance for Volatile Organic Compound Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes, 40 CFR Part 60 Subpart RRR, because the chemical manufacturing operations do not produce any of the chemicals listed in 40 CFR Part 60.707 and the cited NSPS does not apply to batch reactors and batch distillation units
- c. The chemical manufacturing processes are not subject to 35 IAC Subpart V, Air Oxidation Processes because the chemical manufacturing processes operate under SIC code 2843 and 35 IAC 218.501 states that the batch rule only applies to specific SIC Codes that do not include SIC Code 2843.
- d. The chemical manufacturing processes are not subject to 35 IAC 218 Subpart Q, 218.431-218.436 [for reactors and distillation columns at synthetic organic chemical manufacturing units] because, pursuant to 218.431(b)(2), the control requirements do not apply to any reactor or distillation unit that is designed and operated as a batch operation.

4. Other Requirements

As of the date of issuance of this permit, there are no other requirements that need to be included in this Condition.

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5. Reporting Requirements

The Permittee shall submit the following information pursuant to Section 39.5(7)(f) of the Act. Addresses are included in Attachment 3.

a. Prompt Reporting

- i. A. Pursuant to Section 39.5(7)(f)(ii) of the Act and 35 IAC 218.991(a)(3)(A), the Permittee shall promptly notify the IEPA, Air Compliance Section, within 30 days of deviations from applicable requirements as follows unless a different period is specified by a particular permit provision, i.e., NSPS or NESHAP requirement:
 - I. Requirements in Conditions 4.3.2(a)(i).
- B. All such deviations shall be summarized and reported as part of the Semiannual Monitoring Report required by Condition 3.5(b).
- ii. The Permittee shall notify the IEPA, Air Compliance Section, of all other deviations as part of the Semiannual Monitoring Report required by Condition 3.5(b).
- iii. The deviation reports shall contain at a minimum the following information:
 - A. Date and time of the deviation.
 - B. Emission unit(s) and/or operation involved.
 - C. The duration of the event.
 - D. Probable cause of the deviation.
 - E. Corrective actions or preventative measures taken.

4.4 Organic Chemical Manufacturing Processes Without VOM Control

1. Emission Units and Operations

<i>Emission Units</i>	<i>Pollutants Being Regulated</i>	<i>Original Construction Date</i>	<i>Modification/ Reconstruction Date</i>	<i>Air Pollution Control Devices or Measures</i>	<i>Monitoring Devices</i>
Emission Unit Group G03:					
R22 Reactor (Esterification) with recovery condenser	VOM, HAP	Pre-1989	N/A	None	None
R23 Reactor (Esterification) with recovery condenser	VOM, HAP	Pre-1989	N/A	None	None
R29 Reactor (Esterification) with recovery condenser	VOM, HAP	Pre-1989	N/A	None	None
Emission Unit Group G05:					
Reactor R16 (Multi-use: Silicone Fluids/Silicone Textile Softeners/Silicone and Organic Defoamers)	VOM, HAP	Pre-1989	N/A	None	None
Reactor R20 (Multi-use: Silicone Fluids/Silicone Textile Softeners/Silicone and Organic Defoamers)	VOM, HAP	Pre-1989	N/A	None	None
Reactor R28 (Multi-use: Silicone Fluids/Silicone Textile Softeners/Silicone and Organic Defoamers)	VOM, HAP	Pre-1989	N/A	None	None
Reactor R35	VOM, HAP	Pre-1989	N/A	None	None
Process Tank 121 (Multi-use: Silicone Fluids/Silicone Textile Softeners/Silicone and Organic Defoamers)	VOM, HAP	Pre-1989	N/A	None	None
Emission Unit Group G07:					
Reactor R21	VOM, HAP	Pre-1989	N/A	None	None
Emission Unit Group TWR 2					
Barometric Contact Cooling Tower (TWR 2)	VOM, HAP	2001	N/A	None	None

2. Applicable Requirements

For the emission units in Condition 4.4.1 above, the Permittee shall comply with the following applicable requirements pursuant to Sections 39.5(7)(a), 39.5(7)(b), and 39.5(7)(d) of the Act. In addition, the emission units that are in Section 5 shall comply with the applicable requirements in Section 5.1.

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a. i. **Volatile Organic Material Requirements (VOM)**

- A. Pursuant to 35 IAC 218.301, no person shall cause or allow the discharge of more than 8 lbs/hr of organic material into the atmosphere from any emission unit, except as provided in 35 IAC 218.302, 218.303, and 218.304.
- B. Pursuant to 35 IAC 218.960(d), no limits under 35 IAC 218 Subpart RR shall apply to emission units with emissions of VOM to the atmosphere less than or equal to 1.0 ton per calendar year if the total emissions from such emission units not complying with 35 IAC 218.966 does not exceed 5.0 tons per calendar year.
- C. Pursuant to Operating Permit 89120013, emissions of VOM from each Reactor R16 and R20 shall not exceed 0.1 lb/hr and 0.44 ton/year. [T1]
- D. Pursuant to Construction Permit 96020060, emission of VOM from Reactor R21 shall not exceed 0.1 lb/hr and 0.44 ton/year. [T1]

ii. Compliance Method (VOM Requirements)

Recordkeeping

- A. Pursuant to Section 39.5(7)(b) of the Act, the Permittee shall maintain records of the maximum hourly VOM emissions from each chemical manufacturing process with supporting calculations (lb/hour).
- B. Pursuant to Section 39.5(7)(b) of the Act, the Permittee shall maintain records of the monthly and annual emissions of VOM from each chemical manufacturing process with supporting calculations (lb/month and tons/year).
- C. Pursuant to Section 39.5(7)(b) of the Act, the Permittee shall keep the following files:
 - I. A file or other records for the VOM and HAP emission factors for each material or category of material produced, with supporting documentation and calculations, and a demonstration that the VOM emission of units when operating normally do not exceed applicable hourly limits. This record shall be updated whenever a new product is introduced, a change is made in the raw materials for the product or the manufacturing procedure that would increase VOM or HAP emissions or result in emissions of a new HAP, or a change is made in the normal settings for operation of control equipment that would increase emissions.
- D. Pursuant to Section 39.5(7)(b) of the Act, logs of inspection, maintenance, and repairs for the emission units in the chemical production operations that, at a minimum, address aspects of these units that are related to the emissions.

b. i. **Work Practice Requirements**

- A. Pursuant to Section 39.5(7)(a) of the Act, the Permittee shall maintain and operate the equipment listed in Condition 4.4.1 in a manner consistent with safety and good air pollution control practice for minimizing emissions.

ii. Compliance Method (Work Practice Requirements)

Monitoring Requirements

Section 4 - Emission Unit Requirements
4.4 - Organic Chemical Manufacturing Processes Without VOM Control

- A. Pursuant to Sections 39.5(7)(a) of the Act, at a minimum, the Permittee shall perform monthly inspections of the equipment listed in Condition 4.4.1.

Recordkeeping Requirements

- B. Pursuant to Section 39.5(7)(b) of the Act, the Permittee shall keep records of each inspection performed along with a maintenance and repair log. These records shall include, at a minimum: date and time inspections were performed, name(s) of inspection personnel, identification of equipment being inspected, findings of the inspections, operation and maintenance procedures, and a description of all maintenance and repair activities performed including if the activity resulted in a modification or reconstruction of the piece of equipment.

3. Non-Applicability Determinations

- a. The chemical manufacturing operations are not subject to the New Source Performance Standards (NSPS) for Standards of Performance for Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations, 40 CFR Part 60 Subpart NNN, because the chemical manufacturing operations do not produce any of the chemicals listed in 40 CFR Part 60.667 and the cited NSPS does not apply to batch reactors and batch distillation units.
- b. The chemical manufacturing operations are not subject to the New Source Performance Standards (NSPS) for Standards of Performance for Volatile Organic Compound Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes, 40 CFR Part 60 Subpart RRR, because the chemical manufacturing operations do not produce any of the chemicals listed in 40 CFR Part 60.707 and the cited NSPS does not apply to batch reactors and batch distillation units.
- c. The chemical manufacturing processes are not subject to 35 IAC Subpart V, Air Oxidation Processes because the chemical manufacturing processes operate under SIC code 2843 and 35 IAC 218.501 states that the batch rule only applies to specific SIC Codes that do not include SIC Code 2843.
- d. The chemical manufacturing processes are not subject to 35 IAC Subpart Q, 218.431-218.436 [for reactors and distillation columns at synthetic organic chemical manufacturing units] because, pursuant to 218.431(b)(2), the control requirements do not apply to any reactor or distillation unit that is designed and operated as a batch operation.
- e. These emission units are not subject to 40 CFR Part 64, Compliance Assurance Monitoring (CAM) for Major Stationary Sources, because the emission units do not use an add-on control device to achieve compliance with an emission limitation or standard and do not have potential pre-control device emissions of the applicable regulated air pollutant that equals or exceeds major source threshold levels.

4. Other Requirements

As of the date of issuance of this permit, there are no other requirements that need to be included in this Condition.

5. Reporting Requirements

The Permittee shall submit the following information pursuant to Section 39.5(7)(f) of the Act. Addresses are included in Attachment 3.

a. Prompt Reporting

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Section 4 - Emission Unit Requirements
4.4 - Organic Chemical Manufacturing Processes Without VOM Control

- i. A. Pursuant to Section 39.5(7)(f)(ii) of the Act, the Permittee shall promptly notify the IEPA, Air Compliance Section, within 30 days of deviations from applicable requirements as follows unless a different period is specified by a particular permit provision, i.e., NSPS or NESHAP requirement:
 - I. Requirements in Conditions 4.4.2(a)(i), and 4.4.2(b)(i)
- B. All such deviations shall be summarized and reported as part of the Semiannual Monitoring Report required by Condition 3.5(b).
- ii. The Permittee shall notify the IEPA, Air Compliance Section, of all other deviations as part of the Semiannual Monitoring Report required by Condition 3.5(b).
- iii. The deviation reports shall contain at a minimum the following information:
 - A. Date and time of the deviation.
 - B. Emission unit(s) and/or operation involved.
 - C. The duration of the event.
 - D. Probable cause of the deviation.
 - E. Corrective actions or preventative measures taken.

4.5 Propylene Oxide and Ethylene Oxide Storage

1. Emission Units and Operations

<i>Emission Units</i>	<i>Pollutants Being Regulated</i>	<i>Original Construction Date</i>	<i>Modification/ Reconstruction Date</i>	<i>Air Pollution Control Devices or Measures</i>	<i>Monitoring Devices</i>
Emission Unit Group G02:					
T-101 Ethylene Oxide Storage Tank (Alkoxylation) (30,000 gal)	VOM, HAP	1949	N/A	Scrubber (R37)	Scrubbant liquid flow, pH, glycol content, and pressure drop
T-103 Propylene Oxide Storage Tank (Alkoxylation) (30,000 gal)	VOM, HAP	1949	N/A	Scrubber (R37)	Scrubbant liquid flow, pH, glycol content, and pressure drop

2. Applicable Requirements

For the emission units in Condition 4.5.1 above, the Permittee shall comply with the following applicable requirements pursuant to Sections 39.5(7)(a), 39.5(7)(b), and 39.5(7)(d) of the Act. In addition, the emission units that are in Section 5 shall comply with the applicable requirements in Section 5.1.

a. i. Volatile Organic Material Requirements (VOM)

A. Pursuant to 35 IAC 218.122(b), no person shall cause or allow the loading of any organic material into any stationary tank having a storage capacity of greater than 250 gal, unless such tank is equipped with a permanent submerged loading pipe or submerged fill.

ii. Compliance Method (VOM Requirements)

Monitoring

- A. Pursuant to Section 39.5(7)(a) of the Act, the Permittee shall conduct annual inspections of the storage tanks to confirm the submerged loading pipe is physically present and the condition of the pipe for integrity.
- B. Pursuant to 40 CFR Part 64, Compliance Assurance Monitoring (CAM) for Major Stationary Sources, the two storage tanks are subject to 40 CFR Part 64. The Permittee shall comply with the monitoring requirements of the CAM Plan described in Condition 7.4 and Table 7.4.1, pursuant to 40 CFR Part 64 as submitted in the Permittee's CAM plan application. At all times, the Owner or Operator shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment, pursuant to 40 CFR 64.7(a) and (b).

Recordkeeping

C. Pursuant to Section 39.5(7)(b) of the Act, the Permittee shall maintain records of the presence of the submerged loading pipes or submerged fill.

b. i. Work Practice Requirements

A. Pursuant to Section 39.5(7)(a) of the Act, the Permittee shall maintain and operate the storage tanks, including associated control equipment, in a manner consistent with safety and good air pollution control practice for minimizing emissions.

ii. Compliance Method (Work Practice Requirements)

Monitoring Requirements

- A. Pursuant to Sections 39.5(7)(a) of the Act, at a minimum, the Permittee shall perform monthly inspections of the storage tanks.

Recordkeeping Requirements

- B. Pursuant to Section 39.5(7)(b) of the Act, the Permittee shall keep records of each inspection performed along with a maintenance and repair log. These records shall include, at a minimum: date and time inspections were performed, name(s) of inspection personnel, identification of equipment being inspected, findings of the inspections, operation and maintenance procedures, and a description of all maintenance and repair activities performed including if the activity resulted in a modification or reconstruction of the piece of equipment.

3. Non-Applicability Determinations

- a. The propylene oxide and ethylene oxide storage tanks are not subject to the control requirements of 35 IAC 218 Subpart B, Organic Emissions From Storage And Loading Operations, as found in 218.120, because the tanks have a capacity less than 40,000 gallons each.
- b. The propylene oxide and ethylene oxide storage tanks are not subject to 35 IAC 218.301 because the tanks do not use organic material.
- c. Pursuant to 35 IAC 218.960(a)(2), the propylene oxide and ethylene oxide storage tanks are not subject to 35 IAC 218 Subpart RR because they are in the category of 35 IAC 218 Subpart B.
- d. The propylene oxide and ethylene oxide storage tanks are not subject to 40 CFR 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. Tanks T-101 and T-102 are exempt because they were constructed prior to July 23, 1984. Tank V-53 is exempt pursuant to 40 CFR 60.110b(a) because it has a capacity less than 75 cubic meters.

4. Other Requirements

As of the date of issuance of this permit, there are no other requirements that need to be included in this Condition.

5. Reporting Requirements

The Permittee shall submit the following information pursuant to Section 39.5(7)(f) of the Act. Addresses are included in Attachment 3.

a. Prompt Reporting

- i. A. Pursuant to Section 39.5(7)(f)(ii) of the Act, the Permittee shall promptly notify the IEPA, Air Compliance Section, within 30 days of deviations from applicable requirements as follows unless a different period is specified by a particular permit provision, i.e., NSPS or NESHAP requirement:
- I. Requirements in Conditions 4.5.2(a)(i), and 4.5.2(b)(i).
- B. All such deviations shall be summarized and reported as part of the Semiannual Monitoring Report required by Condition 3.5(b).

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- ii. The Permittee shall notify the IEPA, Air Compliance Section, of all other deviations as part of the Semiannual Monitoring Report required by Condition 3.5(b).
- iii. The deviation reports shall contain at a minimum the following information:
 - A. Date and time of the deviation.
 - B. Emission unit(s) and/or operation involved.
 - C. The duration of the event.
 - D. Probable cause of the deviation.
 - E. Corrective actions or preventative measures taken.

4.6 Fugitive Emissions

1. Emission Units and Operations

<i>Emission Units</i>	<i>Pollutants Being Regulated</i>	<i>Original Construction Date</i>	<i>Modification/ Reconstruction Date</i>	<i>Air Pollution Control Devices or Measures</i>	<i>Monitoring Devices</i>
Alkoxylation Process Components, Valves, and Fittings (Emission Unit Group G02)	VOM, HAP	N/A	N/A	LDAR	None
Other Process Components, Valves, and Fittings (Emission Unit Groups G04, G06, G08)	VOM, HAP	N/A	N/A	LDAR	None

2. Applicable Requirements

For the emission units in Condition 4.6.1 above, the Permittee shall comply with the following applicable requirements pursuant to Sections 39.5(7)(a), 39.5(7)(b), and 39.5(7)(d) of the Act. In addition, the emission unit(s) that are in Section 5 shall comply with the applicable requirements in Section 5.1.

- a. i. General Volatile Organic Material (VOM) Requirements for Fugitive Emissions**

 - A.** Pursuant to Sections 39.5(7)(b) and (d) of the Act, the Permittee shall comply with the equipment leak provisions of 40 CFR Part 63, Subpart H: National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks for the components that are in ethylene oxide or propylene oxide service.
- b. i. Volatile Organic Material (VOM) Requirements for Alkoxylation Process Components, Valves and Fittings [Applies to Emission Unit Group G02 Only]**

 - A.** Pursuant to 35 IAC 218.421, the owner or operator of a plant which processes more than 3660 mg/yr (4033 tons/year) gaseous and light liquid VOM, and whose components are used to manufacture the synthetic organic chemicals or polymers listed in Appendix A of 35 IAC Subpart 218, shall comply with 35 IAC 218 Subpart Q: Leaks from Synthetic Organic Chemical and Polymer Manufacturing Plant. The provisions of 35 IAC Subpart Q are applicable to components containing 10 percent or more by weight VOM as determined by ASTM method E-168, E-169 and E-260, incorporated by reference in 35 IAC 218.112. Those components that are not process unit components are exempt from this requirement. A component shall be considered to be leaking if the VOM is equal to, or is greater than 10,000 ppmv as methane or hexane as determined by USEPA Reference Method 21, as specified at 40 CFR 60, Appendix A, incorporated by reference in 35 IAC 218.112, indication of liquids dripping, or indication by a sensor that a seal or barrier fluid system has failed. The provisions of 35 IAC Subpart Q are not applicable if the equipment components are used to produce heavy liquid chemicals only from heavy liquid feed or raw materials.
 - B.** Pursuant to 35 IAC 218.428, the following requirements apply to open-ended valves:
 - I.** Each open-ended valve shall be equipped with a cap, blind flange, plug, or a second valve, except during operations requiring fluid flow through the open-ended valve.

- II. Each open-ended valve equipped with a second valve shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed.

ii. Compliance Method (VOM Requirements)

Monitoring

- A. Pursuant to 35 IAC 218.422, the owner or operator of a synthetic organic chemical or polymer manufacturing plant subject to 35 IAC 218.421 shall prepare an inspection program plan which contains, at a minimum:
 - I. An identification of all components and the period in which each will be monitored pursuant to 35 IAC 218.423.
 - II. The format for the monitoring log required by 35 IAC 218.425.
 - III. A description of the monitoring equipment to be used when complying with 35 IAC 218.423; and
 - IV. A description of the methods to be used to identify all pipeline valves, pressure relief valves in gaseous service, all leaking components, and components exempted under 35 IAC 218.423(j) such that they are obvious and can be located by both plant personnel performing monitoring and Agency personnel performing inspections.
- B. Pursuant to 35 IAC 218.423, the owner or operator of a synthetic organic chemical or polymer manufacturing plant subject to 35 IAC 218 Subpart Q shall, for the purposes of detecting leaks, conduct a component inspection program using the test methods specified in Method 21, 40 CFR 60, Appendix A (1986), incorporated by reference in 35 IAC 218.112, consistent with the following provisions:
 - I. Test annually those components operated near extreme temperature or pressure such that they would be unsafe to routinely monitor and those components which would require the elevation of monitoring personnel higher than two meters above permanent worker access structures or surfaces.
 - II. Test quarterly all other pressure relief valves in gas service, pumps in light liquid service, valves in light liquid service and in gas service, and compressors.
 - III. If less than or equal to 2 percent of the valves in light liquid service and in gas service tested pursuant to 4.6.2(a)(ii)(B)(II) are found to leak for five consecutive quarters, no leak tests shall be required for three consecutive quarters. Thereafter, leak tests shall resume for the next quarter. If that test shows less than or equal to 2 percent of the valves in light liquid service and in gas service are leaking, then no tests are required for the next three quarters. If more than 2 percent are leaking, then tests are required for the next five quarters.
 - IV. Observe visually all pump seals weekly.
 - V. Test immediately any pump seal from which liquids are observed dripping.
 - VI. Test any relief valve within 24 hours after it has vented to the atmosphere.

- VII. Routine instrument monitoring of valves which are not externally regulated, flanges, and equipment in heavy liquid service, is not required. However, any valve which is not externally regulated, flange or piece of equipment in heavy liquid service that is found to be leaking on the basis of sight, smell or sound shall be repaired as soon as practicable but no later than 30 days after the leak is found.
- VIII. Test immediately after repair any component that was found leaking.
- IX. Within one hour of its detection, a weatherproof, readily visible tag, in bright colors such as red or yellow, bearing an identification number and the date on which the leak was detected must be affixed on the leaking component and remain in place until the leaking component is repaired.
- X. The following components are exempt from the monitoring requirements in 35 IAC 218 Subpart Q: Leaks From Synthetic Organic Chemical And Polymer Manufacturing Plant:
 - 1) Any component that is in vacuum service, and
 - 2) Any pressure relief valve that is connected to an operating flare header or vapor recovery device.
 - 3) Pursuant to the definition of "component" in 35 IAC 211.1350, valves which are not externally regulated, flanges, and equipment in heavy liquid service are excluded from Subpart Q.
- C. Pursuant to 35 IAC 218.424, all leaking components must be repaired and retested as soon as practicable but no later than 15 days after the leak is found unless the leaking component cannot be repaired until the process unit is shut down. Records of repairing and retesting must be maintained in accordance with 35 IAC 218.425 and 35 IAC 218.426.

Recordkeeping

- D. Pursuant to 35 IAC 218.425(a), the owner or operator of a synthetic organic chemical or polymer manufacturing plant shall maintain a leaking components monitoring log which shall contain, at a minimum, the following information:
 - I. The name of the process unit where the component is located;
 - II. The type of component (e.g., valve, seal);
 - III. The identification number of the component;
 - IV. The date on which a leaking component is discovered;
 - V. The date on which a leaking component is repaired;
 - VI. The date and instrument reading of the recheck procedure after a leaking component is repaired;
 - VII. A record of the calibration of the monitoring instrument;
 - VIII. The identification number of leaking components which cannot be repaired until process unit shutdown; and

IX. The total number of valves in light liquid service and in gas service inspected; the total number and the percentage of these valves found leaking during the monitoring period.

E. Pursuant to 35 IAC 218.425(c), copies of the monitoring log shall be made available to the IEPA, upon verbal or written request, prior to or at the time of inspection pursuant to Section 4(d) of the Act at any reasonable time.

c. i. **Volatile Organic Material (VOM) Requirements for Other Process Components, Valves and Fittings**

A. Pursuant to 35 IAC 218.966(c), any leaks from components subject to the control requirements of 35 IAC 218.966(a) [see Section 4.3 of this permit] shall be subject to the following control measures:

I. Repair any component from which a leak of VOL can be observed. The repair shall be completed as soon as practicable but no later than 15 days after the leak is found, unless the leaking component cannot be repaired until the process unit is shut down, in which case the leaking component must be repaired before the unit is restarted.

ii. Compliance Method (VOM Requirements)

Recordkeeping

A. For any leak which cannot be readily repaired within one hour after detection, the following records shall be kept. These records shall be maintained by the owner or operator for a minimum of two years after the date on which they are made. Copies of the records shall be made available to the Agency or USEPA upon verbal or written request.

1. The name and identification of the leaking component;
2. The date and time the leak is detected;
3. The action taken to repair the leak; and
4. The date and time the leak is repaired.

3. Non-Applicability Determinations

- a. The chemical manufacturing operations are not subject to the New Source Performance Standards (NSPS) for Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006, 40 CFR Part 60 Subpart VVa, because the changes to chemical manufacturing operations in Construction Permit 10120018 do not constitute a new, modified or reconstructed affected facility for the purposes of Subpart VVa.
- b. The chemical manufacturing operations are not subject to the New Source Performance Standards (NSPS) for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for which Construction, Reconstruction, or Modification Commenced After January 5, 1981, and on or Before November 7, 2006, 40 CFR Part 60 Subpart VV, because the source was originally constructed prior to January 5, 1981 and no modification or reconstruction occurred between January 5, 1981 and November 7, 2006.
- c. The process components, valves, and fittings associated with emission unit Groups G04, G06, G08 are not subject to 35 IAC 218 Subpart Q: Leaks from Synthetic Organic Chemical

and Polymer Manufacturing Plant because these components are not used to manufacture the synthetic organic chemicals or polymers listed in Appendix A of 35 IAC Subpart 218.

- d. These emission units are not subject to 40 CFR Part 64, Compliance Assurance Monitoring (CAM) for Major Stationary Sources, because the emission units do not use an add-on control device to achieve compliance with an emission limitation or standard and do not have potential pre-control device emissions of the applicable regulated air pollutant that equals or exceeds major source threshold levels.

4. Other Requirements

As of the date of issuance of this permit, there are no other requirements that need to be included in this Condition.

5. Reporting Requirements

The Permittee shall submit the following information pursuant to Section 39.5(7)(f) of the Act. Addresses are included in Attachment 3.

a. Prompt Reporting

- i. A. Pursuant to Section 39.5(7)(f)(ii) of the Act, the Permittee shall promptly notify the IEPA, Air Compliance Section, within 30 days of deviations from applicable requirements as follows unless a different period is specified by a particular permit provision, i.e., NSPS or NESHAP requirement:
- I. Requirements in Conditions 4.6.2(a)(i) and 4.6.2(b)(i).
- B. All such deviations shall be summarized and reported as part of the Semiannual Monitoring Report required by Condition 3.5(b).
- ii. The Permittee shall notify the IEPA, Air Compliance Section, of all other deviations as part of the Semiannual Monitoring Report required by Condition 3.5(b).
- iii. The deviation reports shall contain at a minimum the following information:
- A. Date and time of the deviation.
- B. Emission unit(s) and/or operation involved.
- C. The duration of the event.
- D. Probable cause of the deviation.
- E. Corrective actions or preventative measures taken.

b. State Reporting

- i. Pursuant to 35 IAC 218.426, the owner or operator of a synthetic organic chemical or polymer manufacturing plant subject to the 35 IAC 218.421 through 218.430 shall:
- A. Submit quarterly reports to the Agency on or before March 31, June 30, September 30, and December 31 of each year, listing all leaking components identified pursuant to 35 IAC 218.423 but not repaired within 15 days, all leaking components awaiting process unit shutdown, the total number of components inspected, the type of components inspected, and the total number of components found leaking, the total number of valves in light liquid service and in gas service inspected, and the number and percentage of valves in light liquid service and in gas service found leaking.

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- B. Submit a signed statement with the report attesting that all monitoring and repairs were performed as required under 35 IAC 218.421 through 218.427

4.7 Dry Material Processing

1. Emission Units and Operations

<i>Emission Units</i>	<i>Pollutants Being Regulated</i>	<i>Original Construction Date</i>	<i>Modification/ Reconstruction Date</i>	<i>Air Pollution Control Devices or Measures</i>	<i>Monitoring Devices</i>
E07 Belt Flaker System (Belt, Grinder, Hopper 1 & 2, Drum Fill Station, Bagger)	PM	2011	N/A	Baghouse	Pressure Drop

2. Applicable Requirements

For the emission units in Condition 4.7.1 above, the Permittee shall comply with the following applicable requirements pursuant to Sections 39.5(7)(a), 39.5(7)(b), and 39.5(7)(d) of the Act.

a. i. Opacity Requirements

A. Pursuant to 35 IAC 212.123(a), no person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units subject to 35 IAC 212.122, except as provided in 35 IAC 212.123(b).

ii. Compliance Method (Opacity Requirements)

Monitoring

A. Pursuant to Sections 39.5(7)(b) and (d) of the Act, at a minimum, the Permittee shall perform observations for opacity from each emission unit in accordance with Method 22 for visible emissions at least once every calendar year. If visible emissions are observed, the Permittee shall take corrective action within 4 hours of such observation. Corrective action may include, but is not limited to, shut down of the affected emission unit and/or maintenance and repair. If corrective action was taken the Permittee shall perform a follow-up observation for visible emissions in accordance with Method 22. If visible emissions continue, then measurements of opacity in accordance with Method 9 and Section 7.1 shall be conducted within 7 days in accordance with Condition 2.4.

Recordkeeping

B. Pursuant to Section 39.5(7)(b) of the Act, the Permittee shall keep records for each observation for opacity conducted. These records shall include, at a minimum: date and time the observation was performed, name(s) of observing personnel, identification of which equipment was observed, whether or not the equipment was running properly, the findings of the observation including the presence of any visible emissions, and a description of any corrective action taken including if the corrective action took place within 4 hours of the observation.

C. Pursuant to Section 39.5(7)(b) of the Act, the Permittee shall keep records for all opacity measurements made in accordance with USEPA Method 9.

b. i. Particulate Matter Requirements (PM)

A. Pursuant to 35 IAC 212.321(a), no person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit which, either alone or in combination with the

emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in 35 IAC 212.321(c). (See Section 7.2)

ii. Compliance Method (PM Requirements)

Recordkeeping

A. Pursuant to Section 39.5(7)(b) of the Act, the Permittee shall keep the following records related to PM emissions from each emission unit:

- I. A file containing the method used by the Permittee to determine emissions of PM, with supporting documentation.
- II. The throughput of the system, ton/mo and ton/year.
- III. The emissions of PM from the system, ton/mo and ton/yr (12 month rolling average, calculated on at least a monthly basis), with supporting calculations.

3. Non-Applicability Determinations

As of the date of issuance of this permit, non-applicability of regulations of concern are not set for the belt flaker system.

4. Other Requirements

As of the date of issuance of this permit, there are no other requirements that need to be included in this Condition.

5. Reporting Requirements

The Permittee shall submit the following information pursuant to Section 39.5(7)(f) of the Act. Addresses are included in Attachment 3.

a. Prompt Reporting

- i. A. Pursuant to Section 39.5(7)(f)(ii) of the Act, the Permittee shall promptly notify the IEPA, Air Compliance Section, within 30 days of deviations from applicable requirements as follows unless a different period is specified by a particular permit provision, i.e., NSPS or NESHAP requirement:
 - I. Requirements in Conditions 4.7.2(a)(i) and 4.7.2(b)(i)
- B. All such deviations shall be summarized and reported as part of the Semiannual Monitoring Report required by Condition 3.5(b).
- ii. The Permittee shall notify the IEPA, Air Compliance Section, of all other deviations as part of the Semiannual Monitoring Report required by Condition 3.5(b).
- iii. The deviation reports shall contain at a minimum the following information:
 - A. Date and time of the deviation.
 - B. Emission unit(s) and/or operation involved.
 - C. The duration of the event.

- D. Probable cause of the deviation.
- E. Corrective actions or preventative measures taken.

Section 5 - Additional Title I Requirements

1. Construction Permits

a. Construction Permit #10120018 [T1]

i. Emission Units and Operations

<i>Section</i>	<i>Emission Units</i>	<i>Pollutants Being Regulated</i>
4.1	Natural gas fired Boiler (21 mmBtu/hr) B1	PM, VOM, CO, and NO _x
4.1	Natural gas fired Boiler (21 mmBtu/hr) B2	PM, VOM, CO, and NO _x
4.1	Natural gas fired Boiler (20.9 mmBtu/hr) B5	PM, VOM, CO, and NO _x
4.1	Natural gas fired Boiler (7.5 mmBtu/hr) B7	PM, VOM, CO, and NO _x
4.2	Natural gas fired Oil Heater (10 mmBtu/hr) B3	PM, VOM, CO, and NO _x
4.2	Natural gas fired Oil Heater (10 mmBtu/hr) B6	PM, VOM, CO, and NO _x
4.2	Natural Gas fired Oil Heater (12 mmBtu/hr) B8	PM, VOM, CO, and NO _x

ii. Applicable Requirements

In addition to the requirements in Section 4 of this permit for the emission units in Condition 5.1(a)(i) above, the Permittee shall comply with the following applicable requirements pursuant to Sections 39.5(7)(a), 39.5(7)(b), and 39.5(7)(d) of the Act.

- A. Pursuant to Construction Permit 10120018, total PM/PM₁₀ emissions from all boilers and oil heaters shall not exceed 0.8 lbs/hr and 3.3 tons/year. [T1]
- B. Pursuant to Construction Permit 10120018, total VOM emissions from all boilers and oil heaters shall not exceed 0.55 lbs/hr and 2.42 tons/year. [T1]
- C. Pursuant to Construction Permit 10120018, total CO emissions from all boilers and oil heaters shall not exceed 8.41 lbs/hr and 37.0 tons/year. [T1]
- D. Pursuant to Construction Permit 10120018, total NO_x emissions from all boilers and oil heaters shall not exceed 10.0 lbs/hr and 44.0 tons/year. [T1]

iii. Compliance Method

- A. Pursuant to Section 39.5(7)(b) of the Act, the Permittee shall maintain records of the monthly and annual emissions of PM, VOM, CO, and NO_x from each boiler and oil heater with supporting calculations (tons/month and tons/year).

b. Construction Permit #10120018 [T1]

i. Emission Units and Operations

<i>Section</i>	<i>Emission Units</i>	<i>Pollutants Being Regulated</i>
4.3	Reactor R1 (Alkoxylation)	VOM, HAP
4.3	Reactor R2 (Alkoxylation)	VOM, HAP
4.3	Reactor R3 (Alkoxylation)	VOM, HAP
4.3	Reactor R4 (Alkoxylation)	VOM, HAP
4.3	Reactor R5 (Alkoxylation)	VOM, HAP
4.3	Reactor R7 (Alkoxylation)	VOM, HAP
4.3	Reactor R8 (Esterification/Finishing/Special Projects)	VOM, HAP
4.3	Reactor R9 (Esterification/Finishing/Special Projects)	VOM, HAP
4.3	Reactor R15 (Esterification/Finishing/Special Projects)	VOM, HAP
4.3	Reactor R17 (Esterification/Finishing/Special Projects)	VOM, HAP
4.3	Reactor R19 (Esterification/Finishing/Special Projects)	VOM, HAP
4.3	Finish Tank F1/Reactor R30(Alkoxylation)	VOM, HAP
4.3	Finish Tank F2/Reactor R31 (Alkoxylation)	VOM, HAP
4.3	Finish Tank F3/Reactor R32 (Alkoxylation)	VOM, HAP
4.3	Finish Tank F4/Reactor R33(Alkoxylation)	VOM, HAP
4.3	Finish Tank F5/Reactor R34 (Alkoxylation)	VOM, HAP
4.3	Premix Tanks (Qty. 2) (Alkoxylation)	VOM, HAP
4.3	Reactor R36 (Wastewater Concentrator)	VOM, HAP
4.3	Tank T50 (Wastewater Concentrator)	VOM, HAP
4.3	Tank T154 (Wastewater Concentrator)	VOM, HAP
4.5	T-101 Ethylene Oxide Storage Tank (Alkoxylation) (30,000 gal)	VOM, HAP
4.5	T-103 Propylene Oxide Storage Tank (Alkoxylation) (30,000 gal)	VOM, HAP
4.6	Alkoxylation Oxide Components	VOM, HAP

ii. Applicable Requirements

In addition to the requirements in Section 4 of this permit for the emission units in Condition 5.1(b)(i) above, the Permittee shall comply with the following applicable requirements pursuant to Sections 39.5(7)(a), 39.5(7)(b), and 39.5(7)(d) of the Act.

A. Pursuant to Construction Permit 10120018 VOM emissions from the chemical production operations shall not exceed the following limits:

Operation/Emission Unit	VOM Emission	
	(Lb/Hr [*])	(T/Yr)
Alkoxylation Operation		
Controlled Units (R37 Scrubber): High-Emitting Products	5.0	1.5
Other Products	1.02	4.5
F1-F5 Finishing Vessels	0.5	2.2
Esters Operation		

Operation/Emission Unit	VOM Emission	
	(Lb/Hr [*])	(T/Yr)
Esters Reactors:		
High-Emitting Products	1.0	0.67
Other Products	0.35	1.53
Barometric Contact Cooling Tower	0.1	0.42
Wastewater Operation		
T50 and R36	1.37	6.05
Leaking Components***		
Alkoxylation Components	---	4.69

* Batch average.

*** Compliance with the component leakage limits shall be determined using appropriate methodology for estimating VOM emissions from equipment leaks developed by USEPA, such as the emission factors in USEPA's Protocol for Equipment Leak Emission Estimates, EPA-453/R-95-017, or other commonly accepted methodology, such as the Texas Commission on Environmental Quality's Air Permit Technical Guidance for Chemical Sources: Equipment Leak Fugitives, including the use of emission factors specific to equipment in ethylene oxide/propylene oxide service.

B. Operational and Production Requirements

- I. Pursuant to Construction Permit 10120018, total production of the alkoxylation operation (Emission Unit Group G02) shall not exceed 100 million pounds per year.
- II. Pursuant to Construction Permit 10120018, total production of high-emitting products within the alkoxylation operation (Emission Unit Group G02) shall not exceed 2 million pounds per year and 600 hours per year of reactor operation.
- III. Pursuant to Construction Permit 10120018, total production within the esterification operation (Emission Unit Group G03) shall not exceed 70 million pounds per year.
- IV. Pursuant to Construction Permit 10120018, production of high-emitting products within the esterification operation (Emission Unit Group G03) shall not exceed 4.5 million pounds per year and 1340 hours per year of reactor operation.

Note - "Hours per year of reactor operation" does not include time when the reactor is storing finished product at the end of the batch, pending transfer to another vessel or container.

iii. Compliance Method

- A. Pursuant to 39.5(7)(b) and (d) of the Act, the Permittee shall maintain records of the VOM and total HAP emissions of each emission unit in the chemical production operations permitted, based on operating information and applicable factors, with supporting calculations (tons/month and tons/year), compliance with annual limits shall be determined on a monthly basis from a running total of 12 months of data (the sum of the data for the current month plus the preceding 11 months).

- B. Pursuant to Construction Permit 10120018, the Permittee shall keep the following records:
 - I. The production of each chemical production operation (pounds/month and pounds/year, by each product or category of product).
 - II. The total production of each chemical production operation (pounds/month and pounds/year).

c. Reporting Requirements

The Permittee shall submit the following information pursuant to Section 39.5(7)(f) of the Act. Addresses are included in Attachment 3.

i. Prompt Reporting

- A. I. Pursuant to Section 39.5(7)(f)(ii) of the Act, the Permittee shall promptly notify the IEPA, Air Compliance Section, within 30 days of deviations from applicable requirements as follows unless a different period is specified by a particular permit provision, i.e., NSPS or NESHAP requirement:

Requirements in Conditions 5.1(a)(ii)(A), 5.1(a)(ii)(B), 5.1(a)(ii)(C), 5.1(a)(ii)(D), 5.1(b)(ii)(A) and 5.1(b)(ii)(B).
- II. All such deviations shall be summarized and reported as part of the Semiannual Monitoring Report required by Condition 3.5(b).
- B. The Permittee shall notify the IEPA, Air Compliance Section, of all other deviations as part of the Semiannual Monitoring Reports required by Condition 3.5(b).
- C. The deviation reports shall contain at a minimum the following information:
 - I. Date and time of the deviation.
 - II. Emission unit(s) and/or operation involved.
 - III. The duration of the event.
 - IV. Probable cause of the deviation.
 - V. Corrective actions or preventative measures taken.

Section 6 - Insignificant Activities Requirements

1. Insignificant Activities Subject to Specific Regulations

This condition is reserved for insignificant activities, as defined in 35 IAC 201.210 and 201.211, which are subject to specific standards promulgated pursuant Sections 111, 112, 165, or 173 of the Clean Air Act, see Sections 9.1(d) and 39.5(6)(a) of the Act. As of the date of issuance of this permit, there are no such insignificant activities present at the source.

2. Insignificant Activities in 35 IAC 201.210(a)

In addition to any insignificant activities identified in Condition 6.1, the following additional activities at the source constitute insignificant activities pursuant to 35 IAC 201.210 and 201.211:

<i>Insignificant Activity</i>	<i>Number of Units</i>	<i>Insignificant Activity Category</i>	<i>35 IAC 218 Subpart RR Status</i>
Esters Area Leaking Components	NA	35 IAC 201.210(a)(1) and 201.211	218.960(a)(2) excluded [Subpart Q]
Hot Well Exhaust Fan HW1	1	35 IAC 201.210(a)(1) and 201.211	218.960(d) exempt
Hot Well HW2, HW4, and HW5	3	35 IAC 201.210(a)(1) and 201.211	218.960(d) exempt
Hot Well Vent HW3 and HW6	2	35 IAC 201.210(a)(1) and 201.211	218.960(d) exempt
Tanks T020, T031, T032, T047, and T051	5	35 IAC 201.210(a)(1) and 201.211	218.960(a)(2) excluded [Subpart B]
Truck Loading	2	35 IAC 201.210(a)(1) and 201.211	218.960(a)(2) excluded [Subpart B]
Drumming of Chemicals with HAPs [Building 3 Drumming Area]	1	35 IAC 201.210(a)(1) and 201.211	218.960(d) exempt
Bisphenol Handling System (BPA)	1	35 IAC 201.210(a)(2) or (a)(3)	218.960(d) exempt
Bisphenol Melting System (R-38)	1	35 IAC 201.210(a)(2) or (a)(3)	218.960(d) exempt
Blend Reactor R24	1	35 IAC 201.210(a)(2) or (a)(3)	218.960(d) exempt
Cooling Towers E15, E16, and E17	3	35 IAC 201.210(a)(2) or (a)(3)	N/A - not part of miscellaneous chemical manufacturing process
Permeate Tanks	3	35 IAC 201.210(a)(2) or (a)(3)	218.960(a)(2) excluded [Subpart B]
South Pit	1	35 IAC 201.210(a)(2) or (a)(3)	218.960(d) exempt
North Pit	1	35 IAC 201.210(a)(2) or (a)(3)	218.960(d) exempt
UF Sump Exhaust Fan	1	35 IAC 201.210(a)(2) or (a)(3)	218.960(d) exempt
Vessel Air Sweep Exhaust Fans	4	35 IAC 201.210(a)(2) or (a)(3)	218.960(d) exempt
Tanks T010, T011, T012, and T057	4	35 IAC 201.210(a)(2) or (a)(3)	218.960(a)(2) excluded [Subpart B]
Flaker/Ribbon Blender E6 and E8	2	35 IAC 201.210(a)(2) or (a)(3)	218.960(d) exempt
Holding Tanks/Blending Tanks/Weigh Tanks	38	35 IAC 201.210(a)(2) or (a)(3)	218.960(d) exempt
Waste Water Tanks T123, T126, T127, T135, T136, T144, and T145	7	35 IAC 201.210(a)(2) or (a)(3)	218.960(a)(2) excluded [Subpart B]
Drumming of Chemicals without HAPs [Alkox, Esters, and Building 3 Drumming Areas]	3	35 IAC 201.210(a)(2) or (a)(3)	218.960(d) exempt
Direct combustion units used for comfort heating and fuel combustion emission units as further detailed in 35 IAC 201.210(a)(4).	11	35 IAC 201.210(a)(4)	218.960(g) excluded

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Section 6 - Insignificant Activities Requirements

<i>Insignificant Activity</i>	<i>Number of Units</i>	<i>Insignificant Activity Category</i>	<i>35 IAC 218 Subpart RR Status</i>
Equipment used to fill drums, pails, or other containers (excluding aerosol cans) as further detailed in 35 IAC 201.210(a)(8). [Alkox, Esters, and Building 3 Drumming Areas]	3	35 IAC 201.210(a)(8)	218.960(d) exempt
Storage tanks of virgin or rerefined distillate oil, hydrocarbon condensate from natural gas pipeline or storage systems, lubricating oil, or residual fuel oil. [T080]	1	35 IAC 201.210(a)(11)	218.960(a)(2) excluded [Subpart B]
Gas turbines and stationary reciprocating internal combustion engines < 112 kW (150 HP). [40 Hp and 70 Hp natural gas-fired emergency generators]	2	35 IAC 201.210(a)(15)	N/A- not part of miscellaneous chemical manufacturing process
Gas Turbines and Engines between 112 KW and 1,118 KW (150 and 1,500 HP) that are emergency or standby units. [244 Hp diesel-powered fire water pump engine]	1	35 IAC 201.210(a)(16)	N/A- not part of miscellaneous chemical manufacturing process
Any size storage tanks containing exclusively soaps, detergents, surfactants, waxes, glycerin, vegetable oils, greases, animal fats, sweetener, corn syrup, aqueous salt solutions, or aqueous caustic solutions where an organic solvent has not been mixed.	64	35 IAC 201.210(a)(17)	218.960(a)(2) excluded [Subpart B]

3. Insignificant Activities in 35 IAC 201.210(b)

Pursuant to 35 IAC 201.210, the source has identified insignificant activities as listed in 35 IAC 201.210(b)(1) through (28) as being present at the source. The source is not required to individually list the activities.

4. Applicable Requirements

Insignificant activities in Conditions 6.1 and 6.2 are subject to the following general regulatory limits notwithstanding status as insignificant activities. The Permittee shall comply with the following requirements, as applicable:

- a. Pursuant to 35 IAC 212.123(a), no person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units subject to 35 IAC 212.122, except as provided in 35 IAC 212.123(b).
- b. Pursuant to 35 IAC 212.321 or 212.322 (see Conditions 7.2(a) and (b)), no person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any process emission unit which, either alone or in combination with the emission of particulate matter from all other similar process emission units at a source or premises, exceed the allowable emission rates specified 35 IAC 212.321 or 212.322 and 35 IAC Part 266.
- c. Pursuant to 35 IAC 214.301, no person shall cause or allow the emission of sulfur dioxide into the atmosphere from any process emission source to exceed 2,000 ppm, except as provided in 35 IAC Part 214.
- d. Pursuant to 35 IAC 218.301, no person shall cause or allow the discharge of more than 8 lbs/hr of organic material into the atmosphere from any emission source, except as provided in 35 IAC 218.302, 218.303, 218.304 and the following exception: If no odor nuisance exists the limitation of 35 IAC 218 Subpart G shall apply only to photochemically reactive material. Note that this condition does not apply to the insignificant activity storage tanks, as storage tanks do not use VOC.

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- e. Pursuant to 35 IAC 218.122(b), no person shall cause or allow the loading of any organic material into any stationary tank having a storage capacity of greater than 250 gal, unless such tank is equipped with a permanent submerged loading pipe, submerged fill, or an equivalent device approved by the IEPA according to 35 IAC Part 201 or unless such tank is a pressure tank as described in 35 IAC 218.121(a) or is fitted with a recovery system as described in 35 IAC 218.121(b)(2). Exception as provided in 35 IAC 218.122(c): If no odor nuisance exists the limitations of 35 IAC 218.122 shall only apply to the loading of volatile organic liquid with a vapor pressure of 2.5 psia or greater at 70°F.
- f. Pursuant to 35 IAC 218.182, for each cold cleaning degreaser, the Permittee shall comply with the applicable equipment and operating requirements of 35 IAC 218.182, except as provided in 35 IAC 218.181.
- g. Pursuant to 35 IAC 218 Subpart RR, VOM emissions from each insignificant activity that is exempt from 35 IAC 218 Subpart RR control requirements pursuant to 35 IAC 218.960(d) shall not equal or exceed 1.0 tons per calendar year; and total VOM emissions from these insignificant activities, in conjunction with applicable emission units in Section 4 of this permit relying on 35 IAC 218.960(d), shall not exceed 5.0 tons per calendar year.

5. Compliance Method

Pursuant to Section 39.5(7)(b) of the Act, the source shall maintain records of the following items for the insignificant activities in Conditions 6.1 and 6.2:

- a. List of all insignificant activities, including insignificant activities added as specified in Condition 6.6, the categories the insignificant activities fall under, and supporting calculations as needed for any insignificant activities listed in 35 IAC 201.210(a)(1) through (3).
- b. Potential to emit emission calculations before any air pollution control device for any insignificant activities listed in 35 IAC 201.210(a)(1) through (3).

6. Notification Requirements for Insignificant Activities

The source shall notify the IEPA accordingly to the addition of insignificant activities:

a. Notification 7 Days in Advance

- i. Pursuant to 35 IAC 201.212(b), for the addition of an insignificant activity that would be categorized under 35 IAC 201.210(a)(1) and 201.211 and is not currently identified in Conditions 6.1 or 6.2, a notification to the IEPA Permit Section 7 days in advance of the addition of the insignificant activity is required. Addresses are included in Attachment 3. The notification shall include the following pursuant to 35 IAC 201.211(b):
 - A. A description of the emission unit including the function and expected operating schedule of the unit.
 - B. A description of any air pollution control equipment or control measures associated with the emission unit.
 - C. The emissions of regulated air pollutants in lb/hr and ton/yr.
 - D. The means by which emissions were determined or estimated.
 - E. The estimated number of such emission units at the source.
 - F. Other information upon which the applicant relies to support treatment of such emission unit as an insignificant activity.

- ii. Pursuant to 35 IAC 201.212(b), for the addition of an insignificant activity that would be categorized under 35 IAC 201.210(a)(2) through 201.210(a)(18) and is not currently identified in Conditions 6.1 or 6.2, a notification to the IEPA Permit Section 7 days in advance of the addition of the insignificant activity is required. Addresses are included in Attachment 3.
- iii. Pursuant to Sections 39.5(12)(a)(i)(b) and 39.5(12)(b)(iii) of the Act, the permit shield described in Section 39.5(7)(j) of the Act (see Condition 2.7) shall not apply to any addition of an insignificant activity noted above.

b. Notification Required at Renewal

Pursuant to 35 IAC 201.212(a) and 35 IAC 201.146(kkk), for the addition of an insignificant activity that would be categorized under 35 IAC 201.210(a) and is currently identified in Conditions 6.1 or 6.2, a notification is not required until the renewal of this permit.

c. Notification Not Required

Pursuant to 35 IAC 201.212(c) and 35 IAC 201.146(kkk), for the addition of an insignificant activity that would be categorized under 35 IAC 201.210(b) as describe in Condition 6.3, a notification is not required.

Section 7 - Other Requirements

1. Testing

- a. Pursuant to Section 39.5(7)(a) of the Act, a written test protocol shall be submitted at least sixty (60) days prior to the actual date of testing, unless it is required otherwise in applicable state or federal statutes. The IEPA may at the discretion of the Compliance Section Manager (or designee) accept protocol less than 60 days prior to testing provided it does not interfere with the IEPA's ability to review and comment on the protocol and does not deviate from the applicable state or federal statutes. The protocol shall be submitted to the IEPA, Compliance Section and IEPA, Stack Test Specialist for its review. Addresses are included in Attachment 3. This protocol shall describe the specific procedures for testing, including as a minimum:
- i. The name and identification of the emission unit(s) being tested.
 - ii. Purpose of the test, i.e., permit condition requirement, IEPA or USEPA requesting test.
 - iii. The person(s) who will be performing sampling and analysis and their experience with similar tests.
 - iv. The specific conditions under which testing will be performed, including a discussion of why these conditions will be representative of maximum emissions and the means by which the operating parameters for the emission unit and any control equipment will be determined.
 - v. The specific determinations of emissions and operation which are intended to be made, including sampling and monitoring locations.
 - vi. The test method(s) that will be used, with the specific analysis method, if the method can be used with different analysis methods. Include if emission tests averaging of 35 IAC 283 will be used.
 - vii. Any minor changes in standard methodology proposed to accommodate the specific circumstances of testing, with detailed justification. This shall be included as a waiver of the test procedures. If a waiver has already been obtained by the IEPA or USEPA, then the waiver shall be submitted.
 - viii. Any proposed use of an alternative test method, with detailed justification. This shall be included as a waiver of the test procedures. If a waiver has already been obtained by the IEPA or USEPA, then the waiver shall be submitted.
 - ix. Sampling of materials, QA/QC procedures, inspections, etc.
- b. The IEPA, Compliance Section shall be notified prior to these tests to enable the IEPA to observe these tests pursuant to Section 39.5(7)(a) of the Act as follows:
- i. Notification of the expected date of testing shall be submitted in writing a minimum of thirty (30) days prior to the expected test date, unless it is required otherwise in applicable state or federal statutes.
 - ii. Notification of the actual date and expected time of testing shall be submitted in writing a minimum of five (5) working days prior to the actual date of the test. The IEPA may at its discretion of the Compliance Section Manager (or designee) accept notifications with shorter advance notice provided such notifications will not interfere with the IEPA's ability to observe testing.
- c. Copies of the Final Report(s) for these tests shall be submitted to the IEPA, Compliance Section within fourteen (14) days after the test results are compiled and finalized but

no later than ninety (90) days after completion of the test, unless it is required otherwise in applicable state or federal statutes or the IEPA may at the discretion of the Compliance Section Manager (or designee) an alternative date is agreed upon in advance pursuant to Section 39.5(7)(a) of the Act. The Final Report shall include as a minimum:

- i. General information including emission unit(s) tested.
 - ii. A summary of results.
 - iii. Discussion of conditions during each test run (malfunction/breakdown, startup/shutdown, abnormal processing, etc.).
 - iv. Description of test method(s), including description of sampling points, sampling train, analysis equipment, and test schedule.
 - v. Detailed description of test conditions, including:
 - A. Process information, i.e., mode(s) of operation, process rate, e.g. fuel or raw material consumption.
 - B. Control equipment information, i.e., equipment condition and operating parameters during testing.
 - C. A discussion of any preparatory actions taken, i.e., inspections, maintenance and repair.
 - vi. Data and calculations, including copies of all raw data sheets and records of laboratory analyses, sample calculations, and data on equipment calibration.
 - vii. An explanation of any discrepancies among individual tests or anomalous data.
 - viii. Results of the sampling of materials, QA/QC procedures, inspections, etc.
 - ix. Discussion of whether protocol was followed and description of any changes to the protocol if any occurred.
 - x. Demonstration of compliance showing whether test results are in compliance with applicable state or federal statutes.
- d. Copies of all test reports and other test related documentation shall be kept on site as required by Condition 2.5(b) pursuant to Section 39.5(7)(e)(ii) of the Act.

2. PM Process Weight Rate Requirements

a. New Process Emission Units - 35 IAC 212.321

New Process Emission Units For Which Construction or Modification Commenced On or After April 14, 1972 [35 IAC 212.321].

- i. No person shall cause or allow the emission of PM into the atmosphere in any one hour period from any new process emission unit which, either alone or in combination with the emission of PM from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in 35 IAC 212.321(c). See Condition 7.2(a)(iii) below. [35 IAC 212.321(a)]
- ii. Interpolated and extrapolated values of the data in 35 IAC 212.321(c) shall be determined by using the equation [35 IAC 212.321(b)]:

$$E = A(P)^B$$

Where:

P = Process weight rate (T/hr)
E = Allowable emission rate (lbs/hr)

A. Process weight rates of less than 450 T/hr:

A = 2.54
B = 0.53

B. Process weight rates greater than or equal to 450 T/hr:

A = 24.8
B = 0.16

iii. Limits for New Process Emission Units [35 IAC 212.321(c)]:

<u>P</u> <u>(T/hr)</u>	<u>E</u> <u>(lbs/hr)</u>	<u>P</u> <u>(T/hr)</u>	<u>E</u> <u>(lbs/hr)</u>
0.05	0.55	25.00	14.00
0.10	0.77	30.00	15.60
0.20	1.10	35.00	17.00
0.30	1.35	40.00	18.20
0.40	1.58	45.00	19.20
0.50	1.75	50.00	20.50
0.75	2.40	100.00	29.50
1.00	2.60	150.00	37.00
2.00	3.70	200.00	43.00
3.00	4.60	250.00	48.50
4.00	5.35	300.00	53.00
5.00	6.00	350.00	58.00
10.00	8.70	400.00	62.00
15.00	10.80	450.00	66.00
20.00	12.50	500.00	67.00

3. Emissions Reduction Market System (ERMS) Requirements

- a. Pursuant to 35 IAC Part 205, ERMS seasonal emissions of VOM during the seasonal allotment period from May 1 through September 30 shall not exceed 10 tons/year.
- b. Pursuant to 35 IAC 205, the Permittee shall maintain the following records to allow the confirmation of actual VOM emissions during the seasonal allotment period:
 - i. Records of operating data and other information for each individual emission unit or group of related emission units at the source, as specified in Sections 3 and 4 of this permit, as appropriate, to determine actual VOM emissions during the seasonal allotment period.
 - ii. Records of the VOM emissions, in tons, during the seasonal allotment period, with supporting calculations, for each individual emission unit or group of related emission units at the source, determined in accordance with the procedures specified in Sections 3 and 4 of this permit.
 - iii. Total VOM emissions from the source, in tons, during each seasonal allotment period, which shall be compiled by November 30 of each year.
- c. Pursuant to 35 IAC Section 205.150(c), in the event that the source's VOM emissions during the seasonal allotment period equal or exceed 10 tons, the source shall become a participating source in the ERMS and beginning with the following seasonal allotment period, shall comply with 35 IAC Part 205, by holding allotment trading units (ATUs) for its VOM emissions during each seasonal allotment period, unless the source obtains exemption from the ERMS by operating with seasonal VOM emissions of no more than 15 tons pursuant to a limitation applied for and established in its CAAPP permit.

4. Compliance Assurance Monitoring (CAM) Requirements

a. CAM Provisions

i. Proper Maintenance

Pursuant to 40 CFR 64.7(b), at all times, the source shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.

ii. Continued Operation

Pursuant to 40 CFR 64.7(c), except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the source shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit (PSEU) is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of 40 CFR Part 64, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The source shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

iii. Response to Excursions or Exceedances

A. Pursuant to 40 CFR 64.7(d)(1), upon detecting an excursion or exceedance, the source shall restore operation of the PSEU (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.

B. Pursuant to 40 CFR 64.7(d)(2), determination of whether the source has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include but is not limited to, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system and the process.

b. Monitoring - Monitoring

Pursuant to 40 CFR 64.7(a), the source shall comply with the monitoring requirements of the CAM Plans as described in 7.4(e) below, pursuant to 40 CFR Part 64 as submitted in the source's CAM plan application.

c. Monitoring - Recordkeeping

Pursuant to 40 CFR 64.9(b)(1), the source shall maintain records of the monitoring data, monitor performance data, corrective actions taken, monitoring equipment maintenance, and other supporting information related to the monitoring requirements established for CAM.

d. Monitoring - Reporting

Pursuant to Sections 39.5(7)(b) and (f) of the Act, the source shall submit the following reporting requirements:

i. Semiannual Reporting

As part of the required Semiannual Monitoring Reports, the source shall submit a CAM report including the following at a minimum:

- A. Summary information on the number, duration, and cause of excursions or exceedances, and the corrective actions taken pursuant to 40 CFR 64.6(c)(3) and 64.9(a)(2)(i).
- B. Summary information on the number, duration, and cause for monitoring equipment downtime incidents, other than downtime associated with zero and span or calibration checks pursuant to 40 CFR 64.6(c)(3) and 64.9(a)(2)(ii).

e. CAM Plans

The following tables contain the CAM Plans in this CAAPP permit:

Table	Emission Unit Section	PSEU Designation	Pollutant
7.4.1	4.3	Alkoxylation Operation -Units Controlled by R-37 Scrubber	VOM, HAP
7.4.2	4.3	Wastewater Concentrator Systems	VOM, HAP

Table 7.4.1 - CAM Plan

Emission Unit Section:	4.3
PSEU Designation:	Alkoxylation Operation -Units Controlled by R-37 Scrubber
Pollutant:	VOM, HAP

Indicators:	#1) Scrubbant Flow Rate	#2) Scrubbant Glycol Content
General Criteria		
The Monitoring Approach Used to Measure the Indicators:	Flow Meter	Glycol Analyzer
The Indicator Range Which Provides a Reasonable Assurance of Compliance:	The minimum value of 100 gal/min is programmed into the control room interlocks/automation system which prevents the scrubber from venting when the parameter falls outside of the range. Therefore, a scrubber shutdown under such circumstance does not constitute an excursion or exceedance.	The maximum value of 10% glycol is programmed into the control room interlocks/automation system which prevents the scrubber from venting when the parameter falls outside of the range. Therefore, a scrubber shutdown under such circumstance does not constitute an excursion or exceedance.

Section 7 - Other Requirements
7.4 - Compliance Assurance Monitoring (CAM) Requirements

Quality Improvement Plan (QIP) Threshold Levels:	10 days per 6-month semiannual period	10 days per 6-month semiannual period
Performance Criteria		
The Specifications for Obtaining Representative Data:	Flow meter installed at the inlet of the scrubber	Glycol analyzer installed at the inlet of the scrubber
Verification Procedures to Confirm the Operational Status of the Monitoring:	Flow meter is calibrated when annual preventive maintenance is performed	Annual preventive maintenance including calibration of the glycol analyzer is performed
Quality Assurance and Quality Control (QA/QC) Practices that Ensure the Validity of the Data:	Annual preventive maintenance and operation according to manufacturer instructions	Annual preventive maintenance and operation according to manufacturer instructions
The Monitoring Frequency:	Continuously	Continuously
The Data Collection Procedures That Will Be Used:	Electronic records	Electronic records
The Data Averaging Period For Determining Whether an Excursion or Exceedance Has Occurred:	Hourly (only needed in the event of interlock failure) Instantaneous (without interlock failure)	Hourly (only needed in the event of interlock failure) Instantaneous (without interlock failure)

Table 7.4.1 - CAM Plan

Emission Unit Section:	4.3
PSEU Designation:	Alkoxylation Operation -Units controlled by R-37 Scrubber
Pollutant:	VOM, HAP

Indicators:	#3) Scrubbant pH	#4) Scrubber Pressure Drop
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General Criteria		
The Monitoring Approach Used to Measure the Indicators:	pH sensor	Pressure drop measured across scrubber
The Indicator Range Which Provides a Reasonable Assurance of Compliance:	The maximum value of pH 4 is programmed into the control room interlocks/automation system for automated pH adjustment. The system prevents the scrubber from venting when the parameter falls outside of the	The maximum value of 8.0 inches of water is programmed into the control room interlocks/automation system which prevents the scrubber from venting when the parameter falls outside of the range. Therefore, a scrubber shutdown

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	range. Therefore, a scrubber shutdown under such circumstance does not constitute an excursion or exceedance.	under such circumstance does not constitute an excursion or exceedance.
Quality Improvement Plan (QIP) Threshold Levels:	10 days per 6-month semiannual period	10 days per 6-month semiannual period
Performance Criteria		
The Specifications for Obtaining Representative Data:	pH sensor installed on the circulation line	Pressure gauge installed across scrubber
Verification Procedures to Confirm the Operational Status of the Monitoring:	Annual preventive maintenance including calibration of the pH sensor is performed	Annual preventive maintenance including calibration of the pressure sensor is performed
Quality Assurance and Quality Control (QA/QC) Practices that Ensure the Validity of the Data:	Annual preventive maintenance and operation according to manufacturer instructions	Annual preventive maintenance and operation according to manufacturer instructions
The Monitoring Frequency:	Continuously	Continuously
The Data Collection Procedures That Will Be Used:	Electronic records	Electronic records
The Data Averaging Period For Determining Whether an Excursion or Exceedance Has Occurred:	Hourly (only needed in the event of interlock failure) Instantaneous (without interlock failure)	Hourly (only needed in the event of interlock failure) Instantaneous (without interlock failure)

Table 7.4.2 - CAM Plan

Emission Unit Section:	4.3
PSEU Designation:	Wastewater Concentrator Systems (R36, T50, T154)
Pollutant:	VOM, HAP

Indicators:	#1) Cooling Water Flow Status	#2) Cooling Water System Inlet Temperature
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General Criteria		
The Monitoring Approach Used to Measure the Indicators:	Daily Visual Inspection	Temperature Monitor

Section 7 - Other Requirements
7.4 - Compliance Assurance Monitoring (CAM) Requirements

The Indicator Range Which Provides a Reasonable Assurance of Compliance:	Water flow valve open when wastewater emissions are to be controlled (i.e., the unit is in operation)	Water temperature is maintained below the maximum value of 150°F
Quality Improvement Plan (QIP) Threshold Levels:	10 days per 6-month semiannual period	10 days per 6-month semiannual period
Performance Criteria		
The Specifications for Obtaining Representative Data:	Visual inspection occurs at the water line valve	Temperature of the cooling water system supply sent to the condensers is monitored
Verification Procedures to Confirm the Operational Status of the Monitoring:	Routine preventive maintenance and cleaning of the condensers	Routine preventive maintenance and cleaning of the condensers Calibration of temperature monitor
Quality Assurance and Quality Control (QA/QC) Practices that Ensure the Validity of the Data:	Routine preventive maintenance and operation according to manufacturer instructions	Temperature monitor reviewed for accuracy on an as needed basis
The Monitoring Frequency:	Daily	Hourly
The Data Collection Procedures That Will Be Used:	Daily log sheet maintained	Electronic records
The Data Averaging Period For Determining Whether an Excursion or Exceedance Has Occurred:	N/A	N/A

Section 8 - State Only Requirements

1. Permitted Emissions for Fees

The annual emissions from the source for purposes of "Duties to Pay Fees" of Condition 2.3(e), not considering insignificant activities as addressed by Section 6, shall not exceed the following limitations. The overall source emissions shall be determined by adding emissions from all emission units. Compliance with these limits shall be determined on a calendar year basis. The Permittee shall maintain records with supporting calculations of how the annual emissions for fee purposes were calculated. This Condition is set for the purpose of establishing fees and is not federally enforceable. See Section 39.5(18) of the Act.

<i>Pollutant</i>	<i>Tons/Year</i>
Volatile Organic Material	33.87
Sulfur Dioxide	0.30
Particulate Matter	4.71
Nitrogen Oxides	44.0
HAP, not included in VOM or PM	-
Total	82.88

Attachment 1 - List of Emission Units at This Source

<i>Section</i>	<i>Emission Units</i>	<i>Description</i>
4.1	Boiler B1	Natural gas-fired boiler (21 mmBtu/hr)
4.1	Boiler B2	Natural gas-fired boiler (21 mmBtu/hr)
4.1	Boiler B5	Natural gas-fired boiler (20.9 mmBtu/hr)
4.1	Boiler B7	Natural gas-fired boiler (7.5 mmBtu/hr)
4.2	Oil Heater B3	Natural gas-fired oil heater (10 mmBtu/hr)
4.2	Oil Heater B6	Natural gas-fired oil heater (10 mmBtu/hr)
4.2	Oil Heater B8	Natural gas-fired oil heater (12 mmBtu/hr)
4.3	Reactor R1	Reactor vessel used in the alkoxylation process
4.3	Reactor R2	Reactor vessel used in the alkoxylation process
4.3	Reactor R3	Reactor vessel used in the alkoxylation process
4.3	Reactor R4	Reactor vessel used in the alkoxylation process
4.3	Reactor R7	Reactor vessel used in the alkoxylation process
4.3	Finish Tank F1/Reactor R30	Used as a finishing tank or reactor in alkoxylation process
4.3	Finish Tank F2/Reactor R31	Used as a finishing tank or reactor in alkoxylation process
4.3	Finish Tank F3/Reactor R32	Used as a finishing tank or reactor in alkoxylation process
4.3	Finish Tank F4/Reactor R33	Used as a finishing tank or reactor in alkoxylation process
4.3	Finish Tank F5/Reactor R34	Used as a finishing tank or reactor in alkoxylation process
4.3	Premix Tank	Tank used for premixing raw ingredients
4.3	Premix Tank	Tank used for premixing raw ingredients
4.3	Reactor R8	Reactor vessel used in the esterification process/finishing/special projects
4.3	Reactor R9	Reactor vessel used in the esterification process/finishing/special projects
4.3	Reactor R15	Reactor vessel used in the esterification process/finishing/special projects
4.3	Reactor R17	Reactor vessel used in the esterification process/finishing/special projects
4.3	Reactor R19	Reactor vessel used in the esterification process/finishing/special projects
4.3	Reactor R18	Reactor vessel
4.3	Reactor R36	Reactor vessel used for wastewater concentration
4.3	Tank T50	Tank used to hold wastewater for wastewater concentrator
4.3	Tank T154	Tank used to hold wastewater for wastewater concentrator
4.4	Reactor R22	Reactor vessel used in the esterification process
4.4	Reactor R23	Reactor vessel used in the esterification process
4.4	Reactor R29	Reactor vessel used in the esterification process
4.4	Reactor R16	Reactor vessel used in silicone fluids/silicone textile softeners/silicone and organic defoamers

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Attachment 1 - List of Emission Units at This Source

<i>Section</i>	<i>Emission Units</i>	<i>Description</i>
4.4	Reactor R20	Reactor vessel used in silicone fluids/silicone textile softeners/silicone and organic defoamers
4.4	Reactor R28	Reactor vessel used in silicone fluids/silicone textile softeners/silicone and organic defoamers
4.4	Reactor R21	Reactor vessel
4.4	Process Tank 121	Tank used in silicone fluids/silicone textile softeners/silicone and organic defoamers
4.4	Reactor R35	Reactor vessel
4.4	Barometric Contact Cooling Tower TWR 2	Cooling tower
4.5	Ethylene Oxide Storage Tank	Pressure vessel for ethylene oxide storage (30,000 gallons)
4.5	Propylene Oxide Storage Tank	Pressure vessel for propylene oxide storage (30,000 gallons)
4.6	Alkoxylation Process Components, Valves, and Fittings (Emission Unit Group G02)	Component, fitting, and piping leak detection and repair program
4.6	Other Process Components, Valves, and Fittings (Emission Unit Groups G04, G06, G08)	Component, fitting, and piping leak detection and repair program
4.7	Belt Flaker System	Produces dry product in flake form

Attachment 2 - Acronyms and Abbreviations

acfm	Actual cubic feet per minute
ACMA	Alternative Compliance Market Account
Act	Illinois Environmental Protection Act [415 ILCS 5/1 et seq.]
AP-42	Compilation of Air Pollutant Emission Factors, Volume 1, Stationary Point and Other Sources (and Supplements A through F), USEPA, Office of Air Quality Planning and Standards, Research Triangle Park, NC 27711
ATU	Allotment trading unit
BACT	Best Available Control Technology
BAT	Best Available Technology
Btu	British Thermal Units
CAA	Clean Air Act [42 U.S.C. Section 7401 et seq.]
CAAPP	Clean Air Act Permit Program
CAIR	Clean Air Interstate Rule
CAM	Compliance Assurance Monitoring
CEMS	Continuous Emission Monitoring System
CFR	Code of Federal Regulations
CISWI	Commercial Industrial Solid Waste Incinerator
CO	Carbon monoxide
CO ₂	Carbon dioxide
COMS	Continuous Opacity Monitoring System
CPMS	Continuous Parameter Monitoring System
dscf	Dry standard cubic foot
dscm	Dry standard cubic meter
ERMS	Emissions Reduction Market System
°F	Degrees Fahrenheit
GHG	Greenhouse gas
GACT	Generally Acceptable Control Technology
gr	Grains
HAP	Hazardous air pollutant
Hg	Mercury
HMIWI	Hospital medical infectious waste incinerator
Hp	Horsepower
hr	Hour
H ₂ S	Hydrogen sulfide
I.D. No.	Identification number of source, assigned by IEPA
IAC	Illinois Administrative Code
ILCS	Illinois Compiled Statutes
IEPA	Illinois Environmental Protection Agency
kw	Kilowatts
LAER	Lowest Achievable Emission Rate
lbs	Pound

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m	Meter
MACT	Maximum Achievable Control Technology
M	Thousand
MM	Million
mos	Month
MSDS	Material Safety Data Sheet
MSSCAM	Major Stationary Sources Construction and Modification (Non-attainment New Source Review)
MW	Megawatts
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO _x	Nitrogen oxides
NSPS	New Source Performance Standards
NSR	New Source Review
PB	Lead
PEMS	Predictive Emissions Monitoring System
PM	Particulate matter
PM ₁₀	Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 microns as measured by applicable test or monitoring methods
PM _{2.5}	Particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 microns as measured by applicable test or monitoring methods
ppm	Parts per million
ppmv	Parts per million by volume
ppmw	Parts per million by weight
PSD	Prevention of Significant Deterioration
PSEU	Pollutant-Specific Emission Unit
psia	Pounds per square inch absolute
PTE	Potential to emit
RACT	Reasonable Available Control Technology
RMP	Risk Management Plan
scf	Standard cubic feet
SCR	Selective catalytic reduction
SIP	State Implementation Plan
SO ₂	Sulfur dioxide
T1	Title I - identifies Title I conditions that have been carried over from an existing permit
T1N	Title I New - identifies Title I conditions that are being established in this permit
T1R	Title I Revised - identifies Title I conditions that have been carried over from an existing permit and subsequently revised in this permit
USEPA	United States Environmental Protection Agency
VOM	Volatile organic material

Attachment 3 - Contact and Reporting Addresses

<p style="text-align: center;">IEPA Compliance Section</p> <p style="text-align: center;">IEPA Stack Test Specialist</p> <p style="text-align: center;">IEPA Air Quality Planning Section</p> <p style="text-align: center;">IEPA Air Regional Field Operations Regional Office #1</p> <p style="text-align: center;">IEPA Permit Section</p>	<p>Illinois EPA, Bureau of Air Compliance & Enforcement Section (MC 40) 1021 North Grand Avenue East P.O. Box 19276 Springfield, IL 62794-9276 Phone No.: 217/782-2113</p> <p>Illinois EPA, Bureau of Air Compliance Section Source Monitoring - Third Floor 9511 Harrison Street Des Plaines, IL 60016 Phone No.: 847/294-4000</p> <p>Illinois EPA, Bureau of Air Air Quality Planning Section (MC 39) 1021 North Grand Avenue East P.O. Box 19276 Springfield, IL 62794-9276 Phone No.: 217/782-2113</p> <p>Illinois EPA, Bureau of Air Regional Office #1 9511 Harrison Street Des Plaines, IL 60016 Phone No.: 847/294-4000</p> <p>Illinois EPA, Bureau of Air Permit Section (MC 11) 1021 North Grand Avenue East P.O. Box 19506 Springfield, IL 62794-9506 Phone No.: 217/785-1705</p>
<p style="text-align: center;">USEPA Region 5 - Air Branch</p>	<p>USEPA (AR - 17J) Air and Radiation Division 77 West Jackson Boulevard Chicago, IL 60604 Phone No.: 312/353-2000</p>

Attachment 4 - Example Certification by a Responsible Official

SIGNATURE BLOCK	
NOTE: THIS CERTIFICATION MUST BE SIGNED BY A RESPONSIBLE OFFICIAL. APPLICATIONS WITHOUT A SIGNED CERTIFICATION WILL BE DEEMED AS INCOMPLETE.	
I CERTIFY UNDER PENALTY OF LAW THAT, BASED ON INFORMATION AND BELIEF FORMED AFTER REASONABLE INQUIRY, THE STATEMENTS AND INFORMATION CONTAINED IN THIS APPLICATION ARE TRUE, ACCURATE AND COMPLETE. ANY PERSON WHO KNOWINGLY MAKES A FALSE, FICTITIOUS, OR FRAUDULENT MATERIAL STATEMENT, ORALLY OR IN WRITING, TO THE ILLINOIS EPA COMMITS A CLASS 4 FELONY. A SECOND OR SUBSEQUENT OFFENSE AFTER CONVICTION IS A CLASS 3 FELONY. (415 ILCS 5/44(H))	
AUTHORIZED SIGNATURE:	
BY: _____	_____
AUTHORIZED SIGNATURE	TITLE OF SIGNATORY
_____	_____/_____/_____
TYPED OR PRINTED NAME OF SIGNATORY	DATE

Vantage Specialties, Inc.
I.D. No.: 097035AAQ
Permit No.: 96030159

Date Received: 10-24-2005
Date Issued: TBD