Illinois Environmental Protection Agency
2520 West Iles Avenue • P.O. Box 19276 • Springfield, Illinois • 62794-9276 • 217-782-3397

JB Pritzker, Governor **James Jennings**, Acting Director

217/785-1705

CONSTRUCTION PERMIT - REVISED[1]
NSPS SOURCE

PERMITTEE
Vantage Specialties, Inc.
Attn: Ryan Robotham, SSHE Manager
3938 Porett Drive
Gurnee, Illinois 60031

I.D. No.: 097035AAQ
Application No.: 19100015
Date Received: May 28, 2025
Date Issued: March 31, 2026
Subject: Annual Cap on Emissions of Ethylene Oxide
Source Location: 3938 Porett Drive, Gurnee, Lake County

Permit is hereby granted to the above-designated Permittee to construct emission source(s) and/or air pollution control equipment consisting of changes to the Alkoxylation Area, and for setting an annual cap on the emissions of ethylene oxide of this source and requirements related to this emissions cap, as described in the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special conditions.

If you have any questions on this permit, please contact Daniel Rowell.

William D. Marr JMS 3/31/2026

William D. Marr
Manager, Permit Section
Bureau of Air

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DBR
3/31/2026

[1] This permit has been revised at the request of the Permittee to: (i) address additional control of emissions of ethylene oxide from the finishing vessels in the Alkoxylation Process by the "affected emission control system"; (ii) address repurposing an existing tank for use as a wastewater pre-treatment vessel for the Alkoxylation Process; (iii) address measures that would reduce ethylene oxide content and related emissions from the handling and processing of wastewater, including addition of a second wastewater evaporator/concentrator, addition of an air stripper column, and venting these units to the affected emission control system; and (iv) address additional sources of ethylene oxide whose emissions would not qualify as "affected process equipment" or "affected components." This revised permit does not relax the source-wide limits for ethylene oxide emissions addressed by Condition 3(a) or related requirements for monitoring, recordkeeping, and reporting.

Conditions for This Permit

Part 1: General Conditions

1. Introduction

   a. This permit sets an annual cap on the emissions of ethylene oxide of this source. It also sets accompanying requirements on the Permittee for emissions monitoring, operational monitoring, monitoring of components for leaks, recordkeeping and reporting related to emissions of ethylene oxide to address compliance with this cap. This cap and associated requirements are imposed on the Permittee pursuant to Senate Bill 1854, adopted by 101st Session of the Illinois General Assembly as Public Act 101-0023 (the "new law"). As this source uses and emits ethylene oxide, the new law requires the Permittee to obtain a permit from the Illinois Environmental Protection Agency (Illinois EPA) that is consistent with the requirements of this law. In issuing such permit, the Illinois EPA must "...impose a site-specific annual cap on ethylene oxide emissions set to protect the public health." This construction permit imposes this cap and associated requirements as they are measures that will act to reduce or control emissions of ethylene oxide of this source.

   b. This permit does not authorize changes to this source that would increase its production capacity or its emissions of ethylene oxide.

   c. For purposes of this permit:

      i. The equipment at this source that emits or may emit ethylene oxide through a vent or stack is referred to as the "affected process equipment." The affected process equipment includes the six alkoxylation reactors in the Alkoxylation Area, seven associated finishing vessels, associated wastewater pre-treatment operations at this source, and the equipment addressed by Condition 11(b). (The affected process equipment is specifically addressed in Conditions 11 to 17 of this permit.)

      ii. Piping equipment at this source that is "in ethylene oxide service," including pumps, pressure relief devices, valves, sampling connections, flanges or other connectors, compressors (if any), and closed vent systems, is referred to as the "affected components." (The affected components and the definition of "in ethylene oxide service" are specifically addressed in Conditions 18 to 22 of this permit.)

      iii. The equipment or activities at this source that emits or may emit ethylene oxide that are not affected process equipment or affected components are referred to as the "affected miscellaneous sources." (The affected miscellaneous sources are specifically addressed in Conditions 23 to 27 of this permit.)

      iv. The combination of the affected process equipment, affected components, and affected miscellaneous sources is referred to as the "affected facility."

2. Existing Regulatory and Statutory Requirements

   a. Except as provided by Condition 2(e), this permit does not affect the applicability of existing emission standards for the affected facility and associated regulatory requirements for testing, monitoring, recordkeeping and reporting related to emissions, as are addressed in

other permits. In particular, the affected facility will continue to be subject to the requirements of the federal 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 November 7, 2006, 40 CFR 60 Subpart VVa, as is addressed by Condition 2(b) of Construction Permit 15110027.

Note: This revised permit is issued based on the affected facility continuing to be subject to the NSPS, 40 CFR 60 Subpart VVa. This is because the additional components that would be installed pursuant to this revised permit, as addressed by Condition 18(b), would not result in the affected facility becoming subject to the NSPS for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After April 25, 2023, 40 CFR 60 Subpart VVb. In particular, additional components addressed by this revised permit will not: 1) be "in VOC service" and/or; 2) would not be part of a "process unit," as defined at 40 CFR 60.481(b), so there is not a modification that would cause the affected facility to become subject to the requirements of 40 CFR 60 Subpart VVb.

b. By no later than 90 days after the effective date of this revised permit, the Permittee shall submit for review and approval by the Illinois EPA an Ambient Air Monitoring Plan to address emissions of ethylene oxide of the affected facility.

i. The Ambient Air Monitoring Plan shall include, at a minimum, the following:

A. Detailed plans to collect and analyze air samples for ethylene oxide on at least a monthly basis near the property boundaries of the affected facility and at one discrete community location near the affected facility. Each monthly sampling required by this permit shall be conducted over a 24-hour sampling period.

B. A schedule for implementation.

C. The name of the independent third-party company that will be performing sampling and analysis and the company's experience with similar testing.

ii. If the Permittee elects to accept conditions added by the Illinois EPA to the Ambient Air Monitoring Plan, and/or elects to correct any deficiencies identified by the Illinois EPA in the Ambient Air Monitoring Plan, the Permittee must provide a notice of acceptance within 3 business days after receiving the Illinois EPA's conditional acceptance or denial of the plan.

iii. Upon the Illinois EPA's approval of the plan, the Permittee shall implement the Ambient Air Monitoring Plan in accordance with its approved terms.

c. i. For purposes of developing the Ambient Air Monitoring plan required by Condition 2(b), the Permittee shall use the results of dispersion modeling conducted for emissions of ethylene oxide from the affected facility that is submitted for review and approval by the Illinois EPA. For this purpose, this dispersion modeling must:

A. Be conducted using accepted USEPA Methodologies, including 40 CFR Part 51, Appendix W, except that no background ambient levels of ethylene oxide shall be used;

B. Use emissions and stack parameter data measured by the continuous emissions monitoring system (CEMS) required by Condition 13; emissions measured during the leak detection and repair (LDAR) campaigns required by Condition 19; emissions measured and calculated in accordance with Condition 25; and use 5 years of hourly meteorological data that is representative of the source's location; and

C. Use a receptor grid that extends to at least one kilometer around the affected source and ensure the modeling domain includes the area of maximum impact, with receptor spacing no greater than every 50 meters starting from the property fenceline and extending out to a distance of at least one-half kilometer, then every 100 meters extending out to a distance of at least one kilometer.

ii. The Permittee shall submit revised dispersion modeling results if the Illinois EPA accepts with conditions or declines to accept the dispersion modeling results submitted.

Note: The Permittee submitted results of dispersion modeling on October 29, 2019, and for this revised permit on May 28, 2025. The Illinois EPA approved these modeling results on November 12, 2019, and December 15, 2025, respectively. Accordingly, the results of dispersion modeling approved December 15, 2025 shall be used for purposes of developing the monitoring plan.

d. This permit does not relieve the Permittee of the responsibility to comply with all Local, State and Federal Regulations which are part of the applicable Illinois State Implementation Plan, as well as other applicable Federal, State and Local requirements.

e. Beginning with the effective date of this revised permit, the Leak Detection and Repair (LDAR) requirements addressed by Condition 8 of Construction Permit 99100090 and Condition 4.6.2(a)(i)(A) of the Clean Air Act Permit Program (CAAPP) permit issued for the source, Permit 96030159 (the "CAAPP Permit"), shall no longer apply to equipment "in ethylene oxide service" at the affected facility. This is because the LDAR requirements addressed by Condition 19 of this permit are more stringent than the requirements of Condition 8 of Construction Permit 99100090 and 4.6.2(a)(i)(A) of the CAAPP Permit.

3. Emissions Cap

a. The emissions of ethylene oxide of the source on a calendar year basis shall not exceed 110 pounds/year, of which no more than 60 pounds/year shall be non-stack emissions from affected components and emissions from affected miscellaneous sources.

i. Until January 1, 2027, compliance with this limit shall be determined from the emissions of ethylene oxide during the calendar year from affected process equipment and affected components, with the first determination of compliance addressing calendar year 2020 (i.e., the period of January 2020 through December 2020). For the purpose of this limit, emissions shall be determined in accordance

with the requirements of this permit and the provisions of a plan for collection of emission information required by the new law, provided however that the requirements of this permit may be superseded by a subsequent air pollution control permit for the source issued by the Illinois EPA.

Note: The plan for collection of emissions information required by Condition 3(a)(i) was submitted December 2019 and was approved by the Illinois EPA.

ii. Beginning January 1, 2027, compliance with this limit under this revised permit shall be determined from the emissions of ethylene oxide during the calendar year from affected process equipment, affected components, and affected miscellaneous sources, with the first determination of compliance addressing calendar year 2027 (i.e. the period of January 2027 through December 2027). For the purpose of this limit, emissions shall be determined in accordance with the applicable requirements of this revised permit.

iii. By no later than the date the continuous emissions monitoring system (CEMS) required by Condition 13(b) is certified, the Permittee shall submit to the Illinois EPA a revised plan for collection of emission information.

4. General Requirements for Good Air Pollution Control Practice

a. At all times, the Permittee shall maintain and operate the affected facility, including the emission control system and required monitoring equipment, in a manner consistent with good air pollution control practice for minimizing emissions.

5. Recordkeeping for the Affected Facility

a. The Permittee shall maintain records of the usage of ethylene oxide by the Alkoxylation Area (tons/month and tons/year).

b. The Permittee shall maintain records for the emissions of ethylene oxide from the affected process equipment, affected components, and affected miscellaneous sources, as further specified in other conditions of this permit and of the total emissions of ethylene oxide of the affected facility to address compliance with the emissions cap in Condition 3(a).

6. Requirements for Retention and Availability of Required Records

a. The Permittee shall retain all records, including logs, required by this permit for at least five years from the date of entry unless a longer retention period is specified by a particular provision and keep the records at a location at the facility that is readily accessible to the Illinois EPA and USEPA.

b. The Permittee shall make records available for inspection and copying by the Illinois EPA or USEPA upon request, including retrieving and printing on paper any records retained in an electronic format (e.g., computer) in response to an Illinois EPA or USEPA request for records during the course of a facility inspection, or provide an electronic copy of such information in a format that is acceptable to the agency making the request.

7. Notification and Reporting Requirements for the Affected Facility

a. The Permittee shall submit quarterly reports to the Illinois EPA that include the following information. These reports shall be submitted within 30 days of the end of each calendar quarter.

i. The information required to be reported in these quarterly reports by other conditions of this permit.

ii. A summary of the notifications required to be submitted by other conditions of this permit for deviations from the requirements of this permit, if any, during the quarter.

iii. For the first, second and third quarters for a calendar year: 1) The cumulative emissions of ethylene oxide in the calendar year from the affected facility in total and from affected components and affected miscellaneous sources based on emission data collected through such period(s) and, 2) If cumulative emissions are more than 25, 50 or 75 percent, respectively, of the emission cap in Condition 3(a), a discussion of whether these cumulative emissions were the result of circumstances that are expected to be present in the remainder of the calendar year.

iv. With the quarterly report for the fourth quarter in each calendar year: 1) Emissions of ethylene oxide of the affected facility, affected components and affected miscellaneous sources for the calendar year, and 2) If emissions exceed the emission cap in Condition 3(a), provide the notification for the deviation from this cap pursuant to Condition 7(b)(i) in this quarterly report.

b. The Permittee shall provide notifications to the Illinois EPA as follows:

i. A. The Permittee shall notify the Illinois EPA of deviation(s) from the requirements of this construction permit, which notifications shall include information describing the deviation(s), the probable cause of the deviation(s), the corrective actions taken, and any preventative measures taken.

B. Unless otherwise provided by this permit or in an operating permit for the source that addresses the requirements of this construction permit, these notifications shall be submitted to the Illinois EPA within five days of the deviation. For this purpose, the Permittee may submit an initial notification within five days of the deviation with a follow-up notification submitted within 30 days of the deviation if more time is needed to fully investigate the deviation and assemble the information that must be included in such notifications. In such case, the initial notification need only include information describing the deviation and the corrective actions that were taken.

ii. The Permittee shall notify the Illinois EPA as provided by Conditions 22(c) and 27(a) if the party that conducts the periodic leak detection monitoring for affected components and/or vapor space monitoring, respectively, will change.

iii. The Permittee shall notify the Illinois EPA for any event or incident that occurs at the source in which ethylene oxide is emitted from the source that is not otherwise accounted for in the emissions of affected process equipment, affected components, or affected miscellaneous sources as addressed in Parts 2, 3, and 4 of this permit,

respectively, and for which notification or reporting is not provided pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) or the Emergency Planning and Community Right-to-Know Act (EPCRA) and regulations thereunder, as would occur for an incident that involves an accident or emergency release for which the amount of ethylene oxide is less than the established reportable quantity under both CERCLA and EPCRA. For this purpose, initial and follow-up notifications shall be provided as soon as is practical after the occurrence of the incident. The initial notification shall be provided by telephone. The subsequent notification(s) shall be provided in writing and further describe the incident and provide an initial estimate of the amount of ethylene oxide that was emitted.

8. Addresses for the Illinois EPA

a. Reports and notifications required by this permit shall be sent to the Illinois EPA at one of the following addresses unless otherwise indicated:

Via USPS
Illinois EPA, Bureau of Air
Compliance Section (MC #40)
2520 West Iles Avenue
P.O. Box 19276
Springfield, Illinois 62794-9276

Via Other Means
Illinois EPA, Bureau of Air
Compliance Section (MC #40)
2520 West Iles Avenue
Springfield, Illinois 62704

b. One electronic copy of reports and notifications concerning emission testing or emissions monitoring shall be sent to EPA.BOA.SMU@Illinois.gov. For large files, the Permittee may request to use the Illinois EPA OneDrive Request File or another approved method. The facility's ID Number shall be included on all correspondence.

9. Effective Date of the Permit

a. This permit will take effect on December 18, 2019 if any ethylene oxide is present at this source on this date or otherwise on such subsequent date after December 18, 2019 that ethylene oxide is received at this source. This condition supersedes Standard Condition 1.

b. This revised permit will take effect upon issuance.

10. Provisions for Reopening of the Permit

a. The Illinois EPA may, as specifically provided for by the new law, reopen this permit if the Illinois EPA determines that the emissions of ethylene oxide from this source pose a risk to the public health as defined by the Illinois EPA.

Part 2: Permit Conditions for "Affected Process Equipment"

11. Introduction

a. The "affected process equipment" is the equipment at this source that emits or may emit ethylene oxide through a vent or stack. The affected process equipment includes the six reactors in the Alkoxylation Area at this source. The vent streams of these emission units are controlled by an emission control system (the "affected emission control system"). The affected emission control system consists of a scrubber followed by a dry bed absorption (DBA) device. The scrubber uses a water-acid solution to remove ethylene oxide from the vent streams by conversion to ethylene glycol. The DBA device uses an absorbent media to further reduce emissions of ethylene oxide. The DBA device has two separate pairs of beds so that operation is not interrupted by the periodic replacement of the media in the beds.

b. This revised permit requires the following. For purposes of this revised permit, the following shall also be considered "affected process equipment."

i. Vents of the seven finishing vessels (R30, R31, R32, R33, R34, R42, and also R8) and associated hotwell in the Alkoxylation Area (Hotwell #2) shall be exhausted to the affected emission control system.

ii. The existing product blend vessel (R-24) shall be repurposed for use as a wastewater pre-treatment vessel in the Alkoxylation Area. In this vessel, liquids received from the hotwell in the Alkoxylation Area would be reacted with an acid, such as phosphoric acid or other reactant material(s), to convert ethylene oxide dissolved in liquids into ethylene glycol. The vent of this vessel shall be exhausted to the affected emission control system. Treated liquid streams shall be transferred to the source's wastewater treatment system for further processing.

Note: Reactant materials used in this repurposed vessel, would be stored and handled using sealed totes, which is an activity that is exempt from construction permitting requirements pursuant to 35 IAC 201.146(bbb).

iii. Requires modifications to wastewater processing and handling that will reduce the concentration of ethylene oxide contained in wastewater streams processed at the source, including the following.

A. A second wastewater evaporator/concentrator system (R-36B) shall be installed to manage wastewater streams. Vents on this system shall be exhausted to the affected emission control system. Condenser R-36HX1 will also be replaced and would support the operation of the R-36B system.

Note: Condenser T-50HX1 shall also be replaced. Condenser T-50HX1 is exempt from construction permitting requirements pursuant to 35 IAC 201.146(hhh).

B. One new air stripper column (V-36B) shall be constructed for purposes of reducing ethylene oxide concentration in liquid streams leaving process vessel V-36A. The new air stripper column shall be installed in sequence

after existing vessel V-36A. The vents of air stripper column V-36B shall be exhausted to the affected emission control system.

C. The vent on the tank used to store processed wastewater for shipment off-site (Tank T-11) shall be exhausted to the affected emission control system.

12. Operation of Affected Emission Control System

a. The Permittee shall operate the affected emission control system at all times that a process gas stream containing any ethylene oxide is ducted to it from any affected process equipment.

b. Internal inspections, maintenance and repair of the affected emission control system shall be conducted without interrupting the control of emissions.

13. Emissions Monitoring

a. Until December 31, 2027, the Permittee shall continue to operate, calibrate and maintain a continuous emissions monitoring system (CEMS) on the stack of the affected emission control system to measure the concentration of ethylene oxide in the exhaust stream in parts per billion by volume (ppbv). This monitoring system shall be designed and operated to meet the requirements in USEPA's Performance Specification 15 (PS-15), "Performance Specifications for Extractive Fourier Transform Infrared Spectroscopy (FTIR) Continuous Emissions Monitor Systems in Stationary Sources," except as provided by Conditions 13(a)(i) and (ii) below, and to maintain a limit of quantification that is no greater than 20 ppbv.

i. Audit Samples: Audit samples shall be certified to ± 5 percent accuracy (Alternative to Section 9.1.1 of PS-15).

ii. Background Deviations/Quality Assurance Spike: The average spiked concentration shall be between 70 and 130 percent of the expected concentration, as provided by Section 8.6.2 of USEPA Method 320 (Alternative to Section 10.6 of PS-15).

b. By no later than December 31, 2027, the Permittee shall install, operate, calibrate and maintain a continuous emissions monitoring system (CEMS) on the stack of the affected emission control system to measure the concentration of ethylene oxide in the exhaust stream in parts per billion by volume (ppbv). This monitoring system shall be designed and operated to meet the requirements in USEPA's Performance Specification 19 (PS-19), "Performance Specifications and Test Procedures for Ethylene Oxide (ETO) Continuous Emission Monitoring Systems," and Procedure 7: "Quality Assurance Requirements for Gaseous Ethylene Oxide (ETO) Continuous Emission Monitoring Systems Used for Compliance Determination," and to maintain a limit of quantification that is no greater than 20 ppbv.

i. Until the CEMS required by Condition 13(b) is certified, the Permittee shall continue to operate and maintain the CEMS required by Condition 13(a) on the stack of the affected emission control system to measure the concentration of ethylene oxide in the exhaust stream in parts per billion by volume (ppbv). Upon certification of the CEMS required by Condition 13(b), the CEMS required by Condition 13(a) may be decommissioned.

c. The Permittee shall install, operate, calibrate and maintain a continuous monitoring system (CMS) for the affected emission control system to measure the gas flow rate so as to be able to determine the mass emissions of the affected process equipment in pounds/hour. This CMS shall be designed and operated to meet the requirements in USEPA's Performance Specification 6, "Specifications and Test Procedures for Continuous Emission Rate Monitoring Systems in Stationary Sources," 40 CFR Part 60, Appendix B, PS-6.

d. For the monitoring systems required by Conditions 13(a), (b), and (c):

i. In addition to automatically recording the data measured by each of these monitoring systems, the Permittee shall automatically record the emissions of ethylene oxide, in pounds/hour, as calculated from the data measured by these monitoring systems.

ii. The Permittee shall operate and maintain these monitoring systems to comply with the requirements of 40 CFR 63.8(c) and (g), provided, however, that the Illinois EPA shall serve as the "Administrator" for purposes of these rules, rather than the Administrator of USEPA or their authorized representative.

e. The requirements of Conditions 13(a) through (d) shall not apply to the monitoring system(s) as needed to accommodate difficulties in the initial calibrations or certification of the monitoring system(s), e.g., difficulty in obtaining suitable calibration gases, or the relocation and recertification of these system(s), provided the Permittee notifies the Illinois EPA. For relocation of the monitor, this notification shall be provided in advance of the relocation of the system(s), including a description of the relocation (e.g., to a different location in the stack), the reason(s), and the expected duration of the period until the monitoring system(s) will be certified at their new location. For other difficulties this notification shall be provided as soon as practicable.

f. For the data that is automatically recorded by these continuous monitoring systems, the Permittee shall maintain a computer terminal at a location at the source so that authorized personnel or representatives of the Illinois EPA can readily view and evaluate the recorded data during the course of an on-site inspection.

14. Operational Monitoring and Instrumentation for the Affected Emission Control System

a. For the scrubber, the Permittee shall calibrate, operate and maintain continuous monitoring systems for: 1) Scrubbant flow rate, and 2) pH of the scrubbant. Data collected by these monitoring devices shall be recorded on an hourly average and on a rolling 3-hour average, provided, however, that during a malfunction that prevents automatic recording of this data, data shall be recorded manually at least once per hour if the continuous emissions monitoring system required by Condition 13(a) or (b) is not in operation or recording valid data.

b. For the DBA device, the Permittee shall operate and maintain instrumentation to measure the temperatures before and after the heat exchanger for the inlet gas stream. This information shall be recorded at least twice during each operating day.

c. For the DBA device, the Permittee shall operate and maintain instrumentation to indicate the flow of gas to the individual pairs of beds, such as an indicator of the position of the damper

(open or closed). This information shall be recorded whenever the Permittee changes the flow of gas to the pairs of beds in the device, e.g., one pair of beds is put into service in preparation for replacement of the sorbent in the other beds.

d. The Permittee shall keep a log or other records for the operation, calibration, and maintenance of the monitoring systems and instrumentation required by Conditions 14(a) through (c) that includes information detailing all routine and non-routine maintenance performed and dates and duration of any outages.

15. Determinations of Emissions

a. For the affected process equipment, the emissions of ethylene oxide during each hour shall be determined as follows:

i. During an hour in which the emission monitoring systems required by Conditions 13(a) or (b) are operating and providing valid data, the hourly emissions shall be the emissions measured by the monitoring systems.

ii. During an hour in which the emission monitoring system(s) required by Conditions 13(a) or (b) are not operating or are not providing valid data, the hourly emissions shall be a representative value for emissions as would be measured by the monitoring systems, as addressed in the records required by Condition 16(d), which values shall consider the level or nature of operation of the Alkoxylation Area, the operating data for scrubber in the affected emissions control system and the length of time since the sorbent in the active bed in the DBA device in the affected emissions control system was replaced.

iii. The Permittee shall maintain records for any calculations used in determing emissions during an hour and data upon which the calculations were based.

b. After the initial compendium of emission values is completed, as required by Condition 16(d), the compilation of the emissions of the affected process equipment during each hour in a calendar quarter shall be completed within 20 days after the end of the calendar quarter.

c. For purposes of the emission cap in Condition 3(a), the emissions of ethylene oxide from affected process equipment in a calendar year shall be calculated as the sum of the emissions in each hour, as addressed above, during that calendar year.

16. Recordkeeping for Affected Process Equipment

a. The Permittee shall keep records for the reactors and finishing vessels in the Alkoxylation Area for the number of batches started each day by the type or category of product.

b. The Permittee shall maintain the following records for the DBA device in the affected emission control system:

i. A file containing information for:

A. The sorbent used in the device, including material name or trade name, manufacturer's name and manufacturer's data for ethylene oxide removal efficiency (percent) and absorption capacity (pounds ethylene oxide removed per pound of sorbent), with supporting documentation and/or calculations.

B. A copy of manufacturer's recommended operation and maintenance procedures for the device.

C. A copy of the Permittee's operation and maintenance procedures for the device, including the procedures for disposal of spent sorbent, which procedures may incorporate the manufacturer's recommended procedures.

ii. An operating log or other records that include:

A. The date and results of assessments conducted at least every 10 operating days for the performance of the active pair of beds for control of emissions, with the projected date by which the beds will need to be replaced by the inactive beds. These assessments shall be based on the expected loading of ethylene oxide to the DBA device considering the expected operation of the Alkoxylation Area for the next 10 days and the emissions of ethylene oxide measured by the monitoring systems required by Conditions 13(a) or (b) or, before such monitoring systems are certified, the concentration of ethylene oxide in the exhaust from the affected emission control system as measured by a portable monitoring instrument.

B. The dates that the operation of the DBA device is changed from one pair of beds to the other pair, with representative data for the monitored concentrations of ethylene oxide before and after the change.

C. The dates that the sorbent in a pair of beds is replaced, with confirmation that the DBA device continued in operation during replacement of the sorbent, as required by Condition 12(b).

D. Information identifying circumstances when the Permittee's operating and maintenance procedures were not followed, with description and information discussing the reason and the effect on emissions, if any.

iii. Records for the amount of sorbent added to the DBA device (pounds/quarter and pounds/year).

iv. Records for the amount of new sorbent for the DBA device in inventory at the source at the end of each quarter (pounds).

c. The Permittee shall maintain an operating log or other records that identify periods when the affected emission control system was not in operation and confirm compliance with Condition 12(a).

d. The Permittee shall maintain a compendium of the values for hourly emission that it will use in lieu of monitored hourly emissions for different operational scenarios, as provided for by Condition 15(a)(ii), beginning 60 days after the monitoring systems required by Conditions 13(a) or (b) are certified. This compendium shall include an analysis demonstrating that it reasonably addresses the range of operating scenarios and the value for hourly emissions that will be used for each such scenario, with the supporting operational and monitoring data and analysis upon which it is based.

17. Notification and Reporting Requirements for Affected Process Equipment

a. The Permittee shall submit Progress Reports to the Illinois EPA on a monthly basis addressing progress toward installation and certification of the monitoring systems that are required by Conditions 13(a), and (c), continuing until the reports for the certification of these systems are submitted to the Illinois EPA. These reports shall address actions during each month. These reports shall be submitted by the 15th day of the following month.

Note: The Permittee has fulfilled its obligation to submit Progress Reports for the installation and certification of the monitoring systems required by Conditions 13(a) and (c). This revised permit does not require the Permittee to submit progress reports for the monitoring system required by Condition 13(b).

b. In the quarterly reports required by Condition 7(a), the Permittee shall provide information describing changes to the monitoring systems that are required by Conditions 13(a) or (b), if any, to improve the limit of quantification of these systems, including a description of the changes, the rationale for the changes, a description of the expected and actual result of the changes, and confirmation that the changes did not negatively affect the performance of the monitoring systems.

c. For affected process equipment, the timing for the notifications for deviation(s) from the requirements of this construction permit, as required by Condition 7(b)(i), shall be as follows:

i. Notifications for the following deviations shall be submitted within 5 days:

A. Deviations involving the operational requirements of Condition 12(a) or (b).

B. Deviations involving the timing of required emission calculations.

ii. Notifications for other deviations shall be submitted with the quarterly report.

d. The Permittee shall notify the Illinois EPA within 30 days of the following events:

i. The date the vents on the finishing vessels and hotwell described in Condition 11(b)(i) are connected to the affected emission control system.

ii. The date that material is first received by the wastewater pre-treatment vessel described in Condition 11(b)(ii).

iii. The date material is first received by the wastewater evaporator/concentrator described in Condition 11(b)(iii)(A).

iv. The date the new air stripper column described in Condition 11(b)(iii)(B) is first operated.

v. The date the vents on the process vessel described in Condition 11(b)(iii)(B) are connected to the affected emission control system.

vi. The date the vents on the tank described in Condition 11(b)(iii)(C) are connected to the affected emission control system.

Part 3: Permit Conditions for "Affected Components"

18. Introduction

a. The "affected components" are the non-stack equipment components at this source that are "in ethylene oxide service", including pumps, pressure relief devices, valves, sampling connections, flanges or other connectors, compressors (if any), and closed vent systems. The emissions of the affected components are addressed by implementation of a Leak Detection and Repair (LDAR) Program. This program entails monitoring of the individual components to measure the concentration of ethylene oxide around the surface of the component. This monitoring is generally conducted in periodic "campaigns" in which monitoring is conducted for the various subject components at the facility. When the monitoring for a particular component measures an elevated level of ethylene oxide, which represents a leak, timely repairs must be made to the component to eliminate the leak.

b. This revised permit authorizes installation of additional components, including pumps, connectors, and other flanges, to support the changes to the Alkoxylation Area addressed by Conditions 11(b)(i) through (iii) and certain affected miscellaneous sources addressed by Condition 23(a)(i)(A). For purposes of this revised permit, these additional components that are "in ethylene oxide service" are considered "affected components."

19. Implementation of an Enhanced LDAR Program

a. For affected components, the Permittee shall implement a Leak Detection and Repair (LDAR) Program that includes the following enhancements and features compared to the LDAR program that is required to be implemented for the components in the Alkoxylation Area "process unit" pursuant to the NSPS, 40 CFR 60 Subpart VVa, for components that are in VOC service:

i. The program shall address components that are "in ethylene oxide service," including any such components that are not also in volatile organic compound service as defined in 40 CFR 60.481a. For this purpose, "in ethylene oxide service" shall be defined to include any piece of equipment that contains or contacts a process fluid that is at least 1.0 percent ethylene oxide by weight.

ii. A list of the identification numbers of components in ethylene oxide service shall be maintained or other method used so that components in ethylene oxide service may be distinguished from other components addressed in the recordkeeping that is part of the LDAR program required by 40 CFR 60 Subpart VVa and information for these components can be separately retrieved, compiled and reviewed.

iii. Under the enhanced program, for components for which 40 CFR 60 Subpart VVa provides for leak detection monitoring less frequently than monthly (e.g., 40 CFR 60 Subpart VVa only requires monitoring for leaks on a quarterly or annual basis), leak detection monitoring for affected components in ethylene oxide service shall be conducted on at least a monthly basis, with such monitoring separated by at least 15 days, except as provided below for components at process units that only operate for a portion of the year:

A. If the process unit operates for between 183 and 274 days during a year, monitoring of the components in that process unit during such year may be conducted on a bimonthly basis, with such monitoring separated by at least 25 days.

B. If the process unit operates for less than 183 days during a year, monitoring of the components in that process unit during such year may be conducted on a quarterly basis, with such monitoring separated by at least 35 days.

iv. The frequency or extent of monitoring for components in ethylene oxide service that are "unsafe-to-monitor" or that would be "difficult-to-monitor" (i.e., require elevation of monitoring personnel more than 2 meters above a support surface), if any, shall not be reduced or be less frequent than monitoring that is conducted for other otherwise similar components.

v. The frequency of monitoring for components in ethylene oxide service shall not be reduced based on fulfillment of the criteria for and the designation of components for "no detectable emissions."

vi. The instrument that is used to monitor components in ethylene oxide service shall have multiple scales with digital readout, with the bottom scale calibrated to measure a lower concentration of no more than 0.1 ppm.

vii. The instrument readings that are recorded when components in ethylene oxide service are monitored shall include concentration values recorded to the nearest tenth of a ppm or at least two significant digits, whichever is greater.

viii. For components in ethylene oxide service, if instrument readings that are below the detection limit of the monitoring instrument are entered as zero or the detection limit of the instrument in the records for LDAR monitoring, such records shall be accompanied by explanatory information noting that such values indicate readings that were below the detection limit of the instrument.

ix. The instrument reading that defines a leaking component for components in ethylene oxide service shall be a concentration of no more than 50 ppm, adjusted for the response factor for ethylene oxide.

b. The affected facility shall not have any open-ended valves or lines in ethylene oxide service.

20. Determinations of Emissions

a. After each periodic monitoring campaign for the affected components is conducted, the total emissions of ethylene oxide from the components during the period since the previous campaign shall be calculated as follows:

i. The emissions shall be calculated using the correlation approach for determining emissions from components at sources in the Synthetic Organic Compound Manufacturing Industry (SOCMI) set forth in USEPA's Protocol for Equipment Leak Emission Estimates, USEPA, Office of Air Quality Planning and Standard, EPA-453/R-95-017, or the latest version of or successor to this document, unless otherwise provided in a subsequent permit issued by the Illinois EPA.

ii. A. The emissions shall be calculated from the data collected for affected components in the periodic monitoring campaign and the previous monitoring campaign, including the measured concentrations for individual components, and from the data collected for any components in "non-periodic monitoring" conducted between the monitoring campaigns, such as component-specific monitoring to address the effectiveness of repairs to or preventative maintenance for particular components.

B. For any component for which there is only a single measured concentration for a period when the component was in place and in ethylene oxide service, as could occur for a component that was installed after the previous monitoring campaign or was removed between the current and the previous monitoring campaign, emissions from the component for that period shall be calculated using that single measured concentration.

C. For any component for which there was not a measured concentration for a period when the component was in place and in ethylene oxide service, as would occur if the component was both installed and removed between monitoring campaigns or for components for which leakage was identified by visual observation, the emissions of ethylene oxide from the component during such period shall be calculated using engineering principles and available information.

iii. The calculations of emissions for each monitoring campaign shall be completed within 30 days after completing the campaign.

iv. The Permittee shall maintain records for the calculations of emissions from the affected components and the data upon which these calculations were based.

b. For purposes of the emission cap in Condition 3(a), the emissions of ethylene oxide from affected components during a calendar year shall be calculated from the data for emissions for individual monitoring campaigns as addressed above, using the formula in Attachment 1.

21. Recordkeeping for Affected Components

a. For the enhanced LDAR program for affected components required by Condition 19(a), the Permittee shall keep following records:

i. The records required by 40 CFR 60 Subpart VVa.

ii. Records for the implementation of this program that address the various elements for an enhanced LDAR program set forth in Condition 19(a).

iii. A log or other records addressing deviations from the requirements for this program, including a description of each deviation, the number and types of components that were affected by the deviation, the implications of the effectiveness of the LDAR program and other information required to be reported for a deviation pursuant to Condition 7(b)(i).

b. For the records of data that is electronically recorded for the affected components, such as the records of data collected during monitoring campaigns, the Permittee shall maintain a computer terminal at a location at the source so that authorized personnel or representatives of the Illinois EPA can readily view and evaluate the recorded data during the course of an on-site inspection.

22. Notification and Reporting for Affected Components

a. In the quarterly reports required by Condition 7(a), the Permittee shall include the following information for each monitoring campaign for affected components completed during the quarter. To the extent that the specified information is not yet available (e.g., maintenance of components in response to the campaign is not completed), such information shall be reported in the subsequent quarterly report.

i. General information for each monitoring campaign, including 1) Responsible entity; 2) Start and end dates; 3) Number of monitoring personnel; 4) Total number of affected components; 5) Number of components monitored; and 6) Numbers of components, by the applicable reason (e.g., not in operation or not in ethylene oxide service at the time of the campaign), that were not monitored.

ii. Summary information for components that were not leaking for which maintenance was initiated as a result of the monitoring, including the numbers of components, by the type of component, for which maintenance was performed.

iii. Detailed information for each leaking component that was identified in the monitoring campaign, including: 1) Component Identifier; 2) Type of component; 3) Dates and times when the initial repair was completed and follow-up monitoring was conducted; 4) If further repairs were needed, dates and times when final repairs were completed and follow-up monitoring conducted, and 5) A description of the repair(s) that were completed for the component.

b. For affected components, the timing for the notifications for deviation(s) from the requirements of this construction permit, as required by Condition 7(b)(i), shall be as follows:

i. Notifications for any of the following deviations shall be submitted within five days:

A. Deviations involving the timing of a required monitoring campaign.

B. Deviations involving the timing of required calculations of emissions for an individual monitoring campaign.

ii. Notifications for other deviations shall be submitted with the quarterly report.

c. The Permittee shall notify the Illinois EPA if the party conducting the periodic monitoring campaigns for affected components will change, e.g., from one contractor to another contractor, from a contractor to the Permittee, or from the Permittee to a contractor. This notification shall: 1) Identify the new party and describe the new party's qualifications and capabilities to conduct the required monitoring; and 2) Provide the date when it is expected that the new party would first conduct monitoring. This notification shall be submitted to

Illinois EPA at least 30 days in advance of the date that a monitoring campaign is first expected to be conducted by the new party, or otherwise as soon as is practicable.

d. The Permittee shall notify the Illinois EPA within 30 days of the date construction of any affected components, as provided for by Condition 18(b), is completed, unless installation of these components are addressed by the notifications addressed by Condition 17(d) of this permit. This notification shall include a listing of the affected components installed that identifies the component and describes the type of component.

Part 4: Permit Conditions for "Affected Miscellaneous Sources"

23. Introduction

a. The "affected miscellaneous sources" are equipment and activities at this source described below that emit or may emit ethylene oxide that are not "affected process equipment" (Conditions 11 to 17) or "affected components" (Conditions 18 to 22). Emissions of ethylene oxide from affected miscellaneous sources are included in the source-wide limit (110 pounds/year) and the combined limit that also includes affected components (60 pounds/year) in Condition 3(a).

i. Wastewater Handling

A. Storage Tanks

Existing Tank T-144, which has been idled, may be reactivated and repurposed to serve as a backup to Tank T-145. Tank T-145 is used to store wastewater pending discharge to a municipal wastewater sewer or loadout to trucks for disposal off-site. As part of this reactivation, the floor and liner of Tank T-144 may be replaced and a level controller shall be installed to regulate the volume of materials stored in the tank. The level controller would reduce potential emissions of ethylene oxide from the displacement of vapors in the tank from loading of materials in to the tank. Prior to reactivation of the tank, the Permittee shall install a conservation valve on T-144.

Notwithstanding whether the Permittee reactivates Tank T-144, the Permittee shall install a conservation valve on Tank T-145, but Tank T-145 would not be otherwise physically modified or undergo a change in the method of operation.

Note: Reactivated Tank T-144 would qualify as an insignificant activity for purposes of the CAAPP, pursuant to 35 IAC 201.210(a)(1) and 201.211. Accordingly, it is exempt from construction permitting requirements pursuant to 35 IAC 201.146(kkk). Notwithstanding this exemption, this revised permit addresses emissions of ethylene oxide from Tanks T-144 and 145 and related requirements for monitoring, recordkeeping, and determination of emissions as well as the requirement to equip these tanks with conservation valves.

B. Manholes

Wastewater processed by the wastewater treatment system that is discharged to a municipal wastewater sewer may contain small amounts of ethylene oxide that may be emitted through gaps between the ground and covers of the manholes of the plant's wastewater discharge sewers. The Permittee shall install gaskets and apply sealant on the covers of these manholes to reduce emissions of ethylene oxide from the manholes.

C. Snake Pit

The wastewater treatment operations at the affected facility include a sump pit referred to as the "Snake Pit." The Snake Pit is located inside an enclosed building. This Snake Pit is a potential source of ethylene oxide emissions when the liquid level in the sump increases.

ii. Research and Development Laboratory

The Research and Development Laboratory ("R & D Lab") is used for bench-scale research and product development. Small quantities of ethylene oxide may be used in the R & D Lab's four reactors. Emissions from each reactor are controlled by bench-scale scrubbers in series. While there would be no physical changes to or changes to the method of operation of the R & D Lab reactors and associated scrubbers, this revised permit addresses emissions of ethylene oxide emissions of the R & D Lab.

Note: The R & D Lab is an insignificant activity for purposes of the CAAPP pursuant to 35 IAC 201.210(b)(27)(D) and would be exempt from construction permitting requirements pursuant to 35 IAC 201.146(kkk). Notwithstanding this exemption, this revised permit addresses emissions of ethylene oxide from the R & D Lab and related requirements for monitoring, recordkeeping, and determinations of emissions as well as the requirement to control ethylene oxide emissions using the bench-scale scrubbers.

24. Monitoring and Instrumentation

a. For each of the wastewater handling units or activities described in Condition 23(a)(i)(A) and (C), the Permittee shall conduct vapor space monitoring for ethylene oxide emissions on a monthly basis using portable instrumentation, with such monitoring separated by at least 15 days. For this purpose, the Permittee may coordinate this monitoring with the LDAR monitoring required by Condition 19.

i. The instrument that is used for vapor space monitoring shall have multiple scales with digital readout, with the bottom scale calibrated to measure a lower concentration of no more than 0.1 ppm.

ii. The instrument readings that are recorded shall include concentration values recorded to the nearest tenth of a ppm or at least two significant digits, whichever is greater.

iii. If instrument readings that are below the detection limit of the monitoring instrument are entered as zero or the detection limit of the instrument in the records for vapor space monitoring, such records shall be accompanied by explanatory information noting that such values indicate readings that were below the detection limit of the instrument.

b. For the manholes described in Condition 23(a)(i)(B), after gaskets and seals have been applied to the manholes, the Permittee shall conduct monitoring for ethylene oxide concentration around the exterior of the gaskets and seals on a monthly basis using portable

instrumentation, with such monitoring separated by at least 15 days. For this purpose, the Permittee may coordinate this monitoring with the LDAR monitoring required by Condition 19. Instrumentation used for this monitoring shall comply with the requirements of Condition 24(a)(i) through (iii).

c. For Tank T-145, and prior to reactivation of Tank T-144, the Permittee shall install, operate, and maintain instrumentation to measure and record the level of material stored in these tanks. For this purpose, this instrumentation shall take and record measurements no less frequently than once per hour and reduce these measurements to a daily average.

d. For the scrubbers controlling emissions from the reactors in the R & D Lab described in Condition 23(a)(ii), the Permittee shall measure the following parameters on a monthly basis:

i. pH of the scrubbant.

ii. Volume of scrubbant (liters, measured using height of liquid in scrubber. centimeters).

25. Determinations of Emissions

a. For purposes of the emission cap in Condition 3(a), the emissions of ethylene oxide from affected miscellaneous sources shall be determined as follows.

i. For Storage Tanks T-144 (provided this tank is reactivated and repurposed pursuant to Condition 23(a)(i)(A)) and T-145 and the Snake Pit, emissions during a calendar year shall be calculated from the data measured during monthly vapor space monitoring required by Condition 24(a). Vapor displacement for these calculations shall be based on data recorded as required by Condition 24(c) and/or supporting documentation.

ii. For the manholes, emissions during a calendar year shall be calculated from the data measured during monthly monitoring required by Condition 24(b), and supporting documentation and calculations for any adjustments made to address gaskets and sealants.

iii. For the R & D Lab, emissions during a calendar year shall be calculated from the records required by Condition 26(b)(i) and (iii), with supporting documentation and calculations.

26. Recordkeeping for Affected Miscellaneous Sources

a. For the records of data that is electronically recorded during monitoring required by Conditions 24(a) through (c), the Permittee shall maintain a computer terminal at a location at the source so that authorized personnel or representatives of the Illinois EPA can readily view and evaluate the recorded data during the course of an on-site inspection. For this purpose, the Permittee may use the same computer terminal required by 21(b).

b. The Permittee shall maintain the following records for the R & D Lab:

i. Usage of ethylene oxide (liters/month).

ii. pH and volume (liters) of scrubbant materials of the scrubbers at the beginning of each month.

iii. A file for the control efficiency of the scrubbers (percentage), with supporting documentation and calculations.

27. Notification and Reporting Requirements for Affected Miscellaneous Sources

a. The Permittee shall notify the Illinois EPA if the party conducting the vapor space monitoring required by Condition 26(a) will change, e.g., from one contractor to another contractor, from a contractor to the Permittee, or from the Permittee to a contractor. This notification shall: 1) Identify the new party and describe the new party's qualifications and capabilities to conduct the required monitoring; and 2) Provide the date when it is expected that the new party would first conduct monitoring. This notification shall be submitted to Illinois EPA at least 30 days in advance of the date that vapor space monitoring is first expected to be conducted by the new party, or otherwise as soon as is practicable.

b. The Permittee shall notify the Illinois EPA within 30 days of the following events:

i. Completion of reactivation of Tank T-144.

ii. Completion of installation of gaskets and application of sealant on manhole covers.

ATTACHMENT 1

DETERMINATION OF THE ANNUAL EMISSIONS OF ETHYLENE OXIDE FROM COMPONENTS

The mass of emissions of ethylene oxide from affected components for a calendar year shall be determined in accordance with the following formula.

$$Emissions = E_1(F_1) + \sum_{i=2}^{n} E_i + E_{n+1}(F_{n+1})$$

Where:

E_1 = The mass of emissions of ethylene oxide as determined from the initial monitoring of components conducted in January of the calendar year, which determination is also based on the data from the monitoring of components conducted in December of the preceding year.

E_i = The determinations of the mass of emissions of ethylene oxide from components during the calendar year, inclusive, which determinations are based on only the data from monitoring of components conducted during the calendar year. For example, with monitoring conducted on a monthly basis, the summation would address 11 determinations of emissions (n = 11). The first determination of emissions (E_3) would address the emissions of the period between monitoring conducted in January and in February. The last determination of emissions (E_n) would address emissions for the period between the monitoring conducted in November and in December.

E_{n+1} = The mass of emissions of ethylene oxide as determined from the initial monitoring of components conducted in January of the subsequent calendar year, which determination is also based on the monitoring data from the monitoring of components conducted in December of the calendar year.

F_1 = The ratio of the number of days in the calendar year until monitoring was first conducted for components in the calendar year and the total number of days between the date that monitoring was last conducted in the previous year and the date that monitoring was first conducted in the calendar year. For example, if monitoring of components was conducted on the 20th day in both January of the current year and December of the previous year, F_1 would be 20/31 or 0.645 (20 days in the calendar year divided by 31 days between the monitoring conducted in December and January).

F_{n+1} = The ratio of the number of days in the calendar year after the date that monitoring was last conducted for components in the calendar year and the total number of days between that date and the date that monitoring was first conducted in the subsequent calendar year. For example, if monitoring of components was conducted on the 15th day in both December of the current year and January of the subsequent year, F_{n+1} would be 16/31 or 0.516 (16 days in the calendar year divided by 31 days between the monitoring conducted in December and January).

Illinois Environmental Protection Agency

2520 West Iles Avenue • P.O. Box 19276 • Springfield, Illinois • 62794-9276 • 217-782-3397

JB Pritzker, Governor **James Jennings**, Acting Director

STANDARD CONDITIONS FOR CONSTRUCTION/DEVELOPMENT PERMITS ISSUED BY THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

The Illinois Environmental Protection Act (Illinois Revised Statutes, Chapter 111-1/2, Section 1039) authorizes the Environmental Protection Agency to impose conditions on permits which it issues.

The following conditions are applicable unless superseded by special condition(s).

1. Unless this permit has been extended or it has been voided by a newly issued permit, this permit will expire one year from the date of issuance, unless a continuous program of construction or development on this project has started by such time.

2. The construction or development covered by this permit shall be done in compliance with applicable provisions of the Illinois Environmental Protection Act, and Regulations adopted by the Illinois Pollution Control Board.

3. There shall be no deviations from the approved plans and specifications unless a written request for modification, along with plans and specifications as required, shall have been submitted to the Agency and a supplemental written permit issued.

4. The Permittee shall allow any duly authorized agent of the Agency upon the presentation of credentials, at reasonable times:

   a. to enter the Permittee's property where actual or potential effluent, emission or noise sources are located or where any activity is to be conducted pursuant to this permit,

   b. to have access to and copy any records required to be kept under the terms and conditions of this permit,

   c. to inspect, including during any hours of operation of equipment constructed or operated under this permit, such equipment and any equipment required to be kept, used, operated, calibrated and maintained under this permit,

   d. to obtain and remove samples of any discharge or emission of pollutants, and

   e. to enter and utilize any photographic, recording, testing, monitoring or other equipment for the purpose of preserving, testing, monitoring, or recording any activity, discharge, or emission authorized by this permit.

5. The issuance of this permit:

   a. shall not be considered as in any manner affecting the title of the premises upon which the permitted facilities are to be located,

   b. does not release the Permittee from any liability for damage to person or property caused by or resulting from the construction, maintenance, or operation of the proposed facilities,

   c. does not release the Permittee from compliance with the other applicable statues and regulations of the United States, of the State of Illinois, or with applicable local laws, ordinances and regulations,

   d. does not take into consideration or attest to the structural stability of any units or parts of the project, and

e. in no manner implies or suggests that the Agency (or its officers, agents or employees) assumes any liability, directly or indirectly, for any loss due to damage, installation, maintenance, or operation of the proposed equipment or facility.

6. a. Unless a joint construction/operation permit has been issued, a permit for operation shall be obtained from the Agency before the equipment covered by this permit is placed into operation.

   b. For purposes of shakedown and testing, unless otherwise specified by a special permit condition, the equipment covered under this permit may be operated for a period not to exceed thirty (30) days.

7. The Agency may file a complaint with the Board for modification, suspension or revocation of a permit:

   a. upon discovery that the permit application contained misrepresentations, misinformation or false statements or that all relevant facts were not disclosed, or

   b. upon finding that any standard or special conditions have been violated, or

   c. upon any violations of the Environmental Protection Act or any regulation effective thereunder as a result of the construction or development authorized by this permit.