

West Virginia Department of Environmental Protection

Harold D. Ward
Cabinet Secretary

Title V Operating Permit Revision

For Minor Modification Permitting Action Under 45CSR30 and Title V of the Clean Air Act

Permit Action Number: MM01 **SIC:** 2869
Name of Permittee: Union Carbide Corporation
Facility Name/Location: Institute Facility
County: Kanawha County
Permittee Mailing Address: P.O. Box 8361, South Charleston, WV 25303

Description of Permit Revision: Revised condition 3.3.1.b to address Petition No. III-2023-16.
Revised citations for conditions 3.1.6 and 3.3.1 to address changes
to numbering in the WV Code.

Title V Permit Information:

Permit Number: R30-03900005-2023 (2 of 2)
Issued Date: August 10, 2023
Effective Date: August 24, 2023
Expiration Date: August 10, 2028

Directions To Facility: From I-64, take the Institute exit, turn right onto State Route 25. Plant
entrance is located about 1/4 mile west on Route 25.

THIS PERMIT REVISION IS ISSUED IN ACCORDANCE WITH THE WEST VIRGINIA AIR POLLUTION CONTROL ACT (W.VA. CODE §§ 22-5-1 ET SEQ.) AND 45CSR30 - "REQUIREMENTS FOR OPERATING PERMITS." THE PERMITTEE IDENTIFIED AT THE FACILITY ABOVE IS AUTHORIZED TO OPERATE THE STATIONARY SOURCES OF AIR POLLUTANTS IDENTIFIED HEREIN IN ACCORDANCE WITH ALL TERMS AND CONDITIONS OF THIS PERMIT.

Laura M. Crowder

Laura M. Crowder
Digitally signed by: Laura M. Crowder
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Date: 2024.09.23 12:23:50 -0400

Laura M. Crowder
Director, Division of Air Quality

September 23, 2024

Date Issued

Permit Number: **R30-03900005-2023**
Permittee: **Union Carbide Corporation**
Facility Name: **Institute Facility**
Business Unit: **Logistics (Group 2 of 2)**
Permittee Mailing Address: **P. O. Box 8361, South Charleston, WV 25303**

This permit is issued in accordance with the West Virginia Air Pollution Control Act (West Virginia Code §§ 22-5-1 et seq.) and 45CSR30 — Requirements for Operating Permits. The permittee identified at the above-referenced facility is authorized to operate the stationary sources of air pollutants identified herein in accordance with all terms and conditions of this permit.

Facility Location:	Institute, Kanawha County, West Virginia
Telephone Number:	(304) 747-7000
Type of Business Entity:	Corporation
Facility Description:	Supply and services group for the EO distribution process.
SIC Codes:	2869
UTM Coordinates:	432.189 km Easting • 4,248.754 km Northing • Zone 17

Permit Writer: Jonathan Carney

Any person whose interest may be affected, including, but not necessarily limited to, the applicant and any person who participated in the public comment process, by a permit issued, modified or denied by the Secretary may appeal such action of the Secretary to the Air Quality Board pursuant to article one [§§ 22B-1-1 et seq.], Chapter 22B of the Code of West Virginia. West Virginia Code §22-5-14.

Issuance of this Title V Operating Permit does not supersede or invalidate any existing permits under 45CSR13, 14 or 19, although all applicable requirements from such permits governing the facility's operation and compliance have been incorporated into the Title V Operating Permit.

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Appendix AConsent Order CO-R21-97-41 ATTACHMENTS A and B

1.0 Emission Units and Active R13, R14, and R19 Permits

1.1 Emission Units

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Control Device
C9704	410 B or 410A	Tank 9704	1969	Primary Flare B410 or Secondary Flare A410
C9705	410B or 410A	Tank 9705	1969	Primary Flare B410 or Secondary Flare A410
C9745	410A	Flare Knock out Pot C9745	1989	Secondary Flare A410
C9746	410B	Flare Seal Pot C9746	1991	Primary Flare B410
C9747	410B	Flare Knock out Pot C9747	1990	Primary Flare B410
PMP	410B or 410A	Priming Pot	1990	Primary Flare B410 or Secondary Flare A410
EOTC	410B or 410A	EO Tank Car Rack	1988	Primary Flare B410 or Secondary Flare A410

1.2. Active R13, R14, and R19 Permits

The underlying authority for any conditions from R13, R14, and/or R19 permits contained in this operating permit is cited using the original permit number (e.g. R13-1234). The current applicable version of such permit(s) is listed below.

Permit Number	Date of Issuance
None	

2.0 General Conditions

2.1 Definitions

- 2.1.1. All references to the "West Virginia Air Pollution Control Act" or the "Air Pollution Control Act" mean those provisions contained in W.Va. Code §§ 22-5-1 to 22-5-18.
- 2.1.2. The "Clean Air Act" means those provisions contained in 42 U.S.C. §§ 7401 to 7671q, and regulations promulgated thereunder.
- 2.1.3. "Secretary" means the Secretary of the Department of Environmental Protection or other person to whom the Secretary has delegated authority or duties pursuant to W.Va. Code §§ 22-1-6 or 22-1-8 (45CSR§30-2.39.). The Director of the Division of Air Quality is the Secretary's designated representative for the purposes of this permit.
- 2.1.4. Unless otherwise specified in a permit condition or underlying rule or regulation, all references to a "rolling yearly total" shall mean the sum of the monthly data, values or parameters being measured, monitored, or recorded, at any given time for the previous twelve (12) consecutive calendar months.

2.2 Acronyms

CAAA	Clean Air Act Amendments	NSPS	New Source Performance Standards
CBI	Confidential Business Information	PM	Particulate Matter
CEM	Continuous Emission Monitor	PM₁₀	Particulate Matter less than 10µm in diameter
CES	Certified Emission Statement	pph	Pounds per Hour
C.F.R. or CFR	Code of Federal Regulations	ppm	Parts per Million
CO	Carbon Monoxide	PSD	Prevention of Significant Deterioration
C.S.R. or CSR	Codes of State Rules	psi	Pounds per Square Inch
DAQ	Division of Air Quality	SIC	Standard Industrial Classification
DEP	Department of Environmental Protection	SIP	State Implementation Plan
FOIA	Freedom of Information Act	SO₂	Sulfur Dioxide
HAP	Hazardous Air Pollutant	TAP	Toxic Air Pollutant
HON	Hazardous Organic NESHAP	TPY	Tons per Year
HP	Horsepower	TRS	Total Reduced Sulfur
lbs/hr or lb/hr	Pounds per Hour	TSP	Total Suspended Particulate
LDAR	Leak Detection and Repair	USEPA	United States Environmental Protection Agency
m	Thousand	UTM	Universal Transverse Mercator
MACT	Maximum Achievable Control Technology	VEE	Visual Emissions Evaluation
mm	Million	VOC	Volatile Organic Compounds
mmBtu/hr	Million British Thermal Units per Hour		
mmft³/hr or mmcf/hr	Million Cubic Feet Burned per Hour		
NA or N/A	Not Applicable		
NAAQS	National Ambient Air Quality Standards		
NESHAPS	National Emissions Standards for Hazardous Air Pollutants		
NO_x	Nitrogen Oxides		

2.3. Permit Expiration and Renewal

- 2.3.1. Permit duration. This permit is issued for a fixed term of five (5) years and shall expire on the date specified on the cover of this permit, except as provided in 45CSR§30-6.3.b. and 45CSR§30-6.3.c.
[45CSR§30-5.1.b.]
- 2.3.2. A permit renewal application is timely if it is submitted at least six (6) months prior to the date of permit expiration.
[45CSR§30-4.1.a.3.]
- 2.3.3. Permit expiration terminates the source's right to operate unless a timely and complete renewal application has been submitted consistent with 45CSR§30-6.2. and 45CSR§30-4.1.a.3.
[45CSR§30-6.3.b.]
- 2.3.4. If the Secretary fails to take final action to deny or approve a timely and complete permit application before the end of the term of the previous permit, the permit shall not expire until the renewal permit has been issued or denied, and any permit shield granted for the permit shall continue in effect during that time.
[45CSR§30-6.3.c.]

2.4. Permit Actions

- 2.4.1. This permit may be modified, revoked, reopened and reissued, or terminated for cause. The filing of a request by the permittee 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.
[45CSR§30-5.1.f.3.]

2.5. Reopening for Cause

- 2.5.1. This permit shall be reopened and revised under any of the following circumstances:
- a. Additional applicable requirements under the Clean Air Act or the Secretary's legislative rules become applicable to a major source with a remaining permit term of three (3) or more years. Such a reopening shall be completed not later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to 45CSR§30-6.6.a.1.A. or B.
 - b. Additional requirements (including excess emissions requirements) become applicable to an affected source under Title IV of the Clean Air Act (Acid Deposition Control) or other legislative rules of the Secretary. Upon approval by U.S. EPA, excess emissions offset plans shall be incorporated into the permit.
 - c. The Secretary or U.S. EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.
 - d. The Secretary or U.S. EPA determines that the permit must be revised or revoked and reissued to assure compliance with the applicable requirements.

[45CSR§30-6.6.a.]

2.6. Administrative Permit Amendments

- 2.6.1. The permittee may request an administrative permit amendment as defined in and according to the procedures specified in 45CSR§30-6.4.
[45CSR§30-6.4.]

2.7. Minor Permit Modifications

- 2.7.1. The permittee may request a minor permit modification as defined in and according to the procedures specified in 45CSR§30-6.5.a.
[45CSR§30-6.5.a.]

2.8. Significant Permit Modification

- 2.8.1. The permittee may request a significant permit modification, in accordance with 45CSR§30-6.5.b., for permit modifications that do not qualify for minor permit modifications or as administrative amendments.
[45CSR§30-6.5.b.]

2.9. Emissions Trading

- 2.9.1. No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for in the permit and that are in accordance with all applicable requirements.
[45CSR§30-5.1.h.]

2.10. Off-Permit Changes

- 2.10.1. Except as provided below, a facility may make any change in its operations or emissions that is not addressed nor prohibited in its permit and which is not considered to be construction nor modification under any rule promulgated by the Secretary without obtaining an amendment or modification of its permit. Such changes shall be subject to the following requirements and restrictions:
- a. The change must meet all applicable requirements and may not violate any existing permit term or condition.
 - b. The permittee must provide a written notice of the change to the Secretary and to U.S. EPA within two (2) business days following the date of the change. Such written notice shall describe each such change, including the date, any change in emissions, pollutants emitted, and any applicable requirement that would apply as a result of the change.
 - c. The change shall not qualify for the permit shield.
 - d. The permittee shall keep records describing all changes made at the source that result in emissions of regulated air pollutants, but not otherwise regulated under the permit, and the emissions resulting from those changes.
 - e. No permittee may make any change subject to any requirement under Title IV of the Clean Air Act (Acid Deposition Control) pursuant to the provisions of 45CSR§30-5.9.

- f. No permittee may make any changes which would require preconstruction review under any provision of Title I of the Clean Air Act (including 45CSR14 and 45CSR19) pursuant to the provisions of 45CSR§30-5.9.

[45CSR§30-5.9.]

2.11. Operational Flexibility

- 2.11.1. The permittee may make changes within the facility as provided by § 502(b)(10) of the Clean Air Act. Such operational flexibility shall be provided in the permit in conformance with the permit application and applicable requirements. No such changes shall be a modification under any rule or any provision of Title I of the Clean Air Act (including 45CSR14 and 45CSR19) promulgated by the Secretary in accordance with Title I of the Clean Air Act and the change shall not result in a level of emissions exceeding the emissions allowable under the permit.

[45CSR§30-5.8]

- 2.11.2. Before making a change under 45CSR§30-5.8., the permittee shall provide advance written notice to the Secretary and to U.S. EPA, describing the change to be made, the date on which the change will occur, any changes in emissions, and any permit terms and conditions that are affected. The permittee shall thereafter maintain a copy of the notice with the permit, and the Secretary shall place a copy with the permit in the public file. The written notice shall be provided to the Secretary and U.S. EPA at least seven (7) days prior to the date that the change is to be made, except that this period may be shortened or eliminated as necessary for a change that must be implemented more quickly to address unanticipated conditions posing a significant health, safety, or environmental hazard. If less than seven (7) days notice is provided because of a need to respond more quickly to such unanticipated conditions, the permittee shall provide notice to the Secretary and U.S. EPA as soon as possible after learning of the need to make the change.

[45CSR§30-5.8.a.]

- 2.11.3. The permit shield shall not apply to changes made under 45CSR§30-5.8., except those provided for in 45CSR§30-5.8.d. However, the protection of the permit shield will continue to apply to operations and emissions that are not affected by the change, provided that the permittee complies with the terms and conditions of the permit applicable to such operations and emissions. The permit shield may be reinstated for emissions and operations affected by the change:

- a. If subsequent changes cause the facility's operations and emissions to revert to those authorized in the permit and the permittee resumes compliance with the terms and conditions of the permit, or
- b. If the permittee obtains final approval of a significant modification to the permit to incorporate the change in the permit.

[45CSR§30-5.8.c.]

- 2.11.4. "Section 502(b)(10) changes" are changes that contravene an express permit term. Such changes do not include changes that would violate applicable requirements or contravene enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements.

[45CSR§30-2.40]

2.12. Reasonably Anticipated Operating Scenarios

- 2.12.1. The following are terms and conditions for reasonably anticipated operating scenarios identified in this permit.
- a. Contemporaneously with making a change from one operating scenario to another, the permittee shall record in a log at the permitted facility a record of the scenario under which it is operating and to document the change in reports submitted pursuant to the terms of this permit and 45CSR30.
 - b. The permit shield shall extend to all terms and conditions under each such operating scenario; and
 - c. The terms and conditions of each such alternative scenario shall meet all applicable requirements and the requirements of 45CSR30.

[45CSR§30-5.1.i.]

2.13. Duty to Comply

- 2.13.1. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the West Virginia Code and the Clean Air Act and is grounds for enforcement action by the Secretary or USEPA; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

[45CSR§30-5.1.f.1.]

2.14. Inspection and Entry

- 2.14.1. The permittee shall allow any authorized representative of the Secretary, upon the presentation of credentials and other documents as may be required by law, to perform the following:
- a. At all reasonable times (including all times in which the facility is in operation) enter upon the permittee's premises where a source is located or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
 - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
 - c. Inspect at reasonable times (including all times in which the facility is in operation) any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit;
 - d. Sample or monitor at reasonable times substances or parameters to determine compliance with the permit or applicable requirements or ascertain the amounts and types of air pollutants discharged.

[45CSR§30-5.3.b.]

2.15. Schedule of Compliance

- 2.15.1. For sources subject to a compliance schedule, certified progress reports shall be submitted consistent with the applicable schedule of compliance set forth in this permit and 45CSR§30-4.3.h., but at least every six (6) months, and no greater than once a month, and shall include the following:
- a. Dates for achieving the activities, milestones, or compliance required in the schedule of compliance, and dates when such activities, milestones or compliance were achieved; and
 - b. An explanation of why any dates in the schedule of compliance were not or will not be met, and any preventative or corrective measure adopted.

[45CSR§30-5.3.d.]

2.16. Need to Halt or Reduce Activity not a Defense

- 2.16.1. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. However, nothing in this paragraph shall be construed as precluding consideration of a need to halt or reduce activity as a mitigating factor in determining penalties for noncompliance if the health, safety, or environmental impacts of halting or reducing operations would be more serious than the impacts of continued operations.

[45CSR§30-5.1.f.2.]

2.17. Reserved

2.18. Federally-Enforceable Requirements

- 2.18.1. All terms and conditions in this permit, including any provisions designed to limit a source's potential to emit and excepting those provisions that are specifically designated in the permit as "State-enforceable only", are enforceable by the Secretary, USEPA, and citizens under the Clean Air Act.

[45CSR§30-5.2.a.]

- 2.18.2. Those provisions specifically designated in the permit as "State-enforceable only" shall become "Federally-enforceable" requirements upon SIP approval by the USEPA.

2.19. Duty to Provide Information

- 2.19.1. The permittee shall furnish to the Secretary within a reasonable time any information the Secretary may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Secretary copies of records required to be kept by the permittee. For information claimed to be confidential, the permittee shall furnish such records to the Secretary along with a claim of confidentiality in accordance with 45CSR31. If confidential information is to be sent to USEPA, the permittee shall directly provide such information to USEPA along with a claim of confidentiality in accordance with 40 C.F.R. Part 2.

[45CSR§30-5.1.f.5.]

2.20. Duty to Supplement and Correct Information

- 2.20.1. Upon becoming aware of a failure to submit any relevant facts or a submittal of incorrect information in any permit application, the permittee shall promptly submit to the Secretary such supplemental facts or corrected information.

[45CSR§30-4.2.]

2.21. Permit Shield

- 2.21.1. Compliance with the conditions of this permit shall be deemed compliance with any applicable requirements as of the date of permit issuance provided that such applicable requirements are included and are specifically identified in this permit or the Secretary has determined that other requirements specifically identified are not applicable to the source and this permit includes such a determination or a concise summary thereof.

[45CSR§30-5.6.a.]

- 2.21.2. Nothing in this permit shall alter or affect the following:

- a. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance; or
- b. The applicable requirements of the Code of West Virginia and Title IV of the Clean Air Act (Acid Deposition Control), consistent with § 408 (a) of the Clean Air Act.
- c. The authority of the Administrator of U.S. EPA to require information under § 114 of the Clean Air Act or to issue emergency orders under § 303 of the Clean Air Act.

[45CSR§30-5.6.c.]

2.22. Credible Evidence

- 2.22.1. Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defenses otherwise available to the permittee including but not limited to any challenge to the credible evidence rule in the context of any future proceeding.

[45CSR§30-5.3.e.3.B.]

2.23. Severability

- 2.23.1. The provisions of this permit are severable. If any provision of this permit, or the application of any provision of this permit to any circumstance is held invalid by a court of competent jurisdiction, the remaining permit terms and conditions or their application to other circumstances shall remain in full force and effect.

[45CSR§30-5.1.e.]

2.24. Property Rights

- 2.24.1. This permit does not convey any property rights of any sort or any exclusive privilege.

[45CSR§30-5.1.f.4]

2.25. Acid Deposition Control

- 2.25.1. Emissions shall not exceed any allowances that the source lawfully holds under Title IV of the Clean Air Act (Acid Deposition Control) or rules of the Secretary promulgated thereunder.
- a. No permit revision shall be required for increases in emissions that are authorized by allowances acquired pursuant to the acid deposition control program, provided that such increases do not require a permit revision under any other applicable requirement.
 - b. No limit shall be placed on the number of allowances held by the source. The source may not, however, use allowances as a defense to noncompliance with any other applicable requirement.
 - c. Any such allowance shall be accounted for according to the procedures established in rules promulgated under Title IV of the Clean Air Act.

[45CSR§30-5.1.d.]

- 2.25.2. Where applicable requirements of the Clean Air Act are more stringent than any applicable requirement of regulations promulgated under Title IV of the Clean Air Act (Acid Deposition Control), both provisions shall be incorporated into the permit and shall be enforceable by the Secretary and U. S. EPA.

[45CSR§30-5.1.a.2.]

3.0 Facility-Wide Requirements

3.1 Limitations and Standards

- 3.1.1. **Open burning.** The open burning of refuse by any person is prohibited except as noted in 45CSR§6-3.1. [45CSR§6-3.1.]
- 3.1.2. **Open burning exemptions.** The exemptions listed in 45CSR§6-3.1 are subject to the following stipulation: Upon notification by the Secretary, no person shall cause or allow any form of open burning during existing or predicted periods of atmospheric stagnation. Notification shall be made by such means as the Secretary may deem necessary and feasible. [45CSR§6-3.2.]
- 3.1.3. **Asbestos.** The permittee is responsible for thoroughly inspecting the facility, or part of the facility, prior to commencement of demolition or renovation for the presence of asbestos and complying with 40 C.F.R. § 61.145, 40 C.F.R. § 61.148, and 40 C.F.R. § 61.150. The permittee, owner, or operator must notify the Secretary at least ten (10) working days prior to the commencement of any asbestos removal on the forms prescribed by the Secretary if the permittee is subject to the notification requirements of 40 C.F.R. § 61.145(b)(3)(i). The USEPA, the Division of Waste Management and the Bureau for Public Health - Environmental Health require a copy of this notice to be sent to them. [40 C.F.R. §61.145(b) and 45CSR34]
- 3.1.4. **Odor.** No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor at any location occupied by the public. [45CSR§4-3.1 State-Enforceable only.]
- 3.1.5. **Standby plan for reducing emissions.** When requested by the Secretary, the permittee shall prepare standby plans for reducing the emissions of air pollutants in accordance with the objectives set forth in Tables I, II, and III of 45CSR11. [45CSR§11-5.2]
- 3.1.6. **Emission inventory.** The permittee is responsible for submitting, on an annual basis, an emission inventory in accordance with the submittal requirements of the Division of Air Quality. [W.Va. Code § 22-5-4(a)(1415)]
- 3.1.7. **Ozone-depleting substances.** For those facilities performing maintenance, service, repair or disposal of appliances, the permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 C.F.R. Part 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:
- a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the prohibitions and required practices pursuant to 40 C.F.R. §§ 82.154 and 82.156.
 - b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 C.F.R. § 82.158.

- c. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 C.F.R. § 82.161.

[40 C.F.R. 82, Subpart F]

- 3.1.8. **Risk Management Plan.** This stationary source, as defined in 40 C.F.R. § 68.3, is subject to Part 68. This stationary source shall submit a risk management plan (RMP) by the date specified in 40 C.F.R. Part 68.10. This stationary source shall certify compliance with the requirements of Part 68 as part of the annual compliance certification as required by 40 C.F.R. Part 70 or 71.

[40 C.F.R. 68]

3.2. Monitoring Requirements

- 3.2.1. None.

3.3. Testing Requirements

- 3.3.1. **Stack testing.** As per provisions set forth in this permit or as otherwise required by the Secretary, in accordance with the West Virginia Code, underlying regulations, permits and orders, the permittee shall conduct test(s) to determine compliance with the emission limitations set forth in this permit and/or established or set forth in underlying documents. The Secretary, or his duly authorized representative, may at his option witness or conduct such test(s). Should the Secretary exercise his option to conduct such test(s), the operator shall provide all necessary sampling connections and sampling ports to be located in such manner as the Secretary may require, power for test equipment and the required safety equipment, such as scaffolding, railings and ladders, to comply with generally accepted good safety practices. Such tests shall be conducted in accordance with the methods and procedures set forth in this permit or as otherwise approved or specified by the Secretary in accordance with the following:
 - a. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with 40 C.F.R. Parts 60, 61, and 63, if applicable, in accordance with the Secretary's delegated authority and any established equivalency determination methods which are applicable.
 - b. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with applicable requirements which do not involve federal delegation. In specifying or approving such alternative testing to the test methods, the Secretary, to the extent possible, shall utilize the same equivalency criteria as would be used in approving such changes under Section 3.3.1.a. of this permit. [If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit shall be revised in accordance with 45CSR§30-6.4. or 45CSR§30-6.5 as applicable.](#)
 - c. All periodic tests to determine mass emission limits from or air pollutant concentrations in discharge stacks and such other tests as specified in this permit shall be conducted in accordance with an approved test protocol. Unless previously approved, such protocols shall be submitted to the Secretary in writing at least thirty (30) days prior to any testing and shall contain the information set forth by the Secretary. In addition, the permittee shall notify the Secretary at least fifteen (15) days prior to any testing so the Secretary may have the opportunity to observe such tests. This notification shall include the actual date and time during which the test will be conducted and, if appropriate, verification that the tests will fully conform to a referenced protocol previously approved by the Secretary.

- d. The permittee shall submit a report of the results of the stack test within 60 days of completion of the test. The test report shall provide the information necessary to document the objectives of the test and to determine whether proper procedures were used to accomplish these objectives. The report shall include the following: the certification described in paragraph 3.5.1; a statement of compliance status, also signed by a responsible official; and, a summary of conditions which form the basis for the compliance status evaluation. The summary of conditions shall include the following:
 1. The permit or rule evaluated, with the citation number and language.
 2. The result of the test for each permit or rule condition.
 3. A statement of compliance or non-compliance with each permit or rule condition.

[WV Code §§ 22-5-4(a)(~~14-15-16~~) and 45CSR13]

3.4. Recordkeeping Requirements

- 3.4.1. **Monitoring information.** The permittee shall keep records of monitoring information that include the following:
 - a. The date, place as defined in this permit and time of sampling or measurements;
 - b. The date(s) analyses were performed;
 - c. The company or entity that performed the analyses;
 - d. The analytical techniques or methods used;
 - e. The results of the analyses; and
 - f. The operating conditions existing at the time of sampling or measurement.

[45CSR§30-5.1.c.2.A.]

- 3.4.2. **Retention of records.** The permittee shall retain records of all required monitoring data and support information for a period of at least five (5) years from the date of monitoring sample, measurement, report, application, or record creation date. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Where appropriate, records may be maintained in computerized form in lieu of the above records.

[45CSR§30-5.1.c.2.B.]

- 3.4.3. **Odors.** For the purposes of 45CSR4, the permittee shall maintain a record of all odor complaints received, any investigation performed in response to such a complaint, and any responsive action(s) taken.

[45CSR§30-5.1.c. State-Enforceable only.]

3.5. Reporting Requirements

- 3.5.1. **Responsible official.** Any application form, report, or compliance certification required by this permit to be submitted to the DAQ and/or USEPA shall contain a certification by the responsible official that states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.
[45CSR§§30-4.4. and 5.1.c.3.D.]
- 3.5.2. A permittee may request confidential treatment for the submission of reporting required under 45CSR§30-5.1.c.3. pursuant to the limitations and procedures of W.Va. Code § 22-5-10 and 45CSR31.
[45CSR§30-5.1.c.3.E.]
- 3.5.3. Except for the electronic submittal of the annual compliance certification and semi-annual monitoring reports to the DAQ and USEPA as required in 3.5.5 and 3.5.6 below, all notices, requests, demands, submissions and other communications required or permitted to be made to the Secretary of DEP and/or USEPA shall be made in writing and shall be deemed to have been duly given when delivered by hand, or mailed first class or by private carrier with postage prepaid to the address(es), or submitted in electronic format by e-mail as set forth below or to such other person or address as the Secretary of the Department of Environmental Protection may designate:

DAQ:

Director
WVDEP
Division of Air Quality
601 57th Street SE
Charleston, WV 25304

US EPA:

Section Chief
U. S. Environmental Protection Agency, Region III
Enforcement and Compliance Assurance Division
Air, RCRA and Toxics Branch Section (3ED21)
Four Penn Center
1600 John F Kennedy Boulevard
Philadelphia, PA 19103-2852

DAQ Compliance and Enforcement¹:

DEPAirQualityReports@wv.gov

¹For all self-monitoring reports (MACT, GACT, NSPS, etc.), stack tests and protocols, Notice of Compliance Status reports, Initial Notifications, etc.

- 3.5.4. **Fees.** The permittee shall pay fees on an annual basis in accordance with 45CSR§30-8.
[45CSR§30-8.]
- 3.5.5. **Compliance certification.** The permittee shall certify compliance with the conditions of this permit on the forms provided by the DAQ. In addition to the annual compliance certification, the permittee may be required to submit certifications more frequently under an applicable requirement of this permit. The annual certification shall be submitted to the DAQ and USEPA on or before March 15 of each year, and shall certify compliance for the period ending December 31. The permittee shall maintain a copy of the certification on site for five (5) years from submittal of the certification. The annual certification shall be submitted in electronic format by e-mail to the following addresses:

DAQ:
DEPAirQualityReports@wv.gov

US EPA:
R3_APD_Permits@epa.gov

[45CSR§30-5.3.e.]

- 3.5.6. **Semi-annual monitoring reports.** The permittee shall submit reports of any required monitoring on or before September 15 for the reporting period January 1 to June 30 and on or before March 15 for the reporting period July 1 to December 31. All instances of deviation from permit requirements must be clearly identified in such reports. All required reports must be certified by a responsible official consistent with 45CSR§30-4.4. The semi-annual monitoring reports shall be submitted in electronic format by e-mail to the following address:

DAQ:
DEPAirQualityReports@wv.gov

[45CSR§30-5.1.c.3.A.]

- 3.5.7. **Reserved.**

- 3.5.8. **Deviations.**

- a. In addition to monitoring reports required by this permit, the permittee shall promptly submit supplemental reports and notices in accordance with the following:
1. Reserved.
 2. Any deviation that poses an imminent and substantial danger to public health, safety, or the environment shall be reported to the Secretary immediately by telephone or email. A written report of such deviation, which shall include the probable cause of such deviation, and any corrective actions or preventative measures taken, shall be submitted by the responsible official within ten (10) days of the deviation.
 3. Deviations for which more frequent reporting is required under this permit shall be reported on the more frequent basis.
 4. All reports of deviations shall identify the probable cause of the deviation and any corrective actions or preventative measures taken.

[45CSR§30-5.1.c.3.C.]

- b. The permittee shall, in the reporting of deviations from permit requirements, including those attributable to upset conditions as defined in this permit, report the probable cause of such deviations and any corrective actions or preventive measures taken in accordance with any rules of the Secretary.

[45CSR§30-5.1.c.3.B.]

- 3.5.9. **New applicable requirements.** If any applicable requirement is promulgated during the term of this permit, the permittee will meet such requirements on a timely basis, or in accordance with a more detailed schedule if required by the applicable requirement.

[45CSR§30-4.3.h.1.B.]

- 3.5.10. **Reports of excess emissions.** Except as provided in 3.5.11, the owner or operator of any facility containing sources subject to 45CSR§21-5. shall, for each occurrence of excess emissions expected to last more than 7 days, within 1 business day of becoming aware of such occurrence, supply the Director by letter with the following information:

- a. The name and location of the facility;
- b. The subject sources that caused the excess emissions;
- c. The time and date of first observation of the excess emissions; and
- d. The cause and expected duration of the excess emissions.
- e. For sources subject to numerical emission limitations, the estimated rate of emissions (expressed in the units of the applicable emission limitation) and the operating data and calculations used in determining the magnitude of the excess emissions; and
- f. The proposed corrective actions and schedule to correct the conditions causing the excess emissions.

[45CSR§21-5.2; CO-R21-97-41, III.3 (State-Enforceable only)]

- 3.5.11. **Variance.** If the provisions of 45CSR21 cannot be satisfied due to repairs made as the result of routine maintenance or in response to the unavoidable malfunction of equipment, the Director may permit the owner or operator of a source subject to 45CSR21 to continue to operate said source for periods not to exceed 10 days upon specific application to the Director. Such application shall be made prior to the making of repairs and, in the case of equipment malfunction, within 24 hours of the equipment malfunction. Where repairs will take in excess of 10 days to complete, additional time periods may be granted by the Director. In cases of major equipment failure, additional time periods may be granted by the Director provided a corrective program has been submitted by the owner or operator and approved by the Director. During such time periods, the owner or operator shall take all reasonable and practicable steps to minimize VOC emissions.

[45CSR§21-9.3; CO-R21-97-41, III.3 (State-Enforceable only)]

3.6. Compliance Plan

- 3.6.1. None.

3.7. Permit Shield

- 3.7.1. The permittee is hereby granted a permit shield in accordance with 45CSR§30-5.6. The permit shield applies provided the permittee operates in accordance with the information contained within this permit.
- 3.7.2. The following requirements specifically identified are not applicable to the source based on the determinations set forth below. The permit shield shall apply to the following requirements provided the conditions of the determinations are met.
 - a. None.

4.0 EO Distribution

4.1 Limitations and Standards

4.1.1. **Group 1 Storage Vessels.** For each storage vessel located at a 40 C.F.R. 63, Subpart PPP affected source, the owner or operator shall comply with the HON storage vessel requirements of 40 C.F.R. §§63.119 through 63.123 and the HON leak inspection provisions in 40 C.F.R. §63.148, with the differences noted in 40 C.F.R. §§63.1432 (b) through (p). The applicable provisions for a Group 1 storage vessel with a closed vent system and flare are as follows: [45CSR34; 40 C.F.R. §63.1432(a)]

4.1.1.1. The owner or operator shall reduce hazardous air pollutants emissions to the atmosphere by operating and maintaining a closed vent system and control device in accordance with 4.1.1.1.a through 4.1.1.1.d. [45CSR34; 40 C.F.R. §§63.119(a)(2) and 63.119(e)]

a. The Primary Flare (B410) shall be designed and operated to reduce inlet emissions of total organic HAP by 95 percent or greater and shall meet the specifications described in the general control device requirements of 40 C.F.R. §63.11(b) listed below.

- (1) Flares shall be steam-assisted, air-assisted, or non-assisted.
- (2) Flares shall be operated at all times when emissions may be vented to them.
- (3) Flares shall be designed for and operated with no visible emissions, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours. Test Method 22 in appendix A of part 60 of this chapter shall be used to determine the compliance of flares with the visible emission provisions of this part. The observation period is 2 hours and shall be used according to Method 22.
- (4) Flares shall be operated with a flame present at all times. The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame.
- (5) An owner/operator has the choice of adhering to the heat content specifications in paragraph (a)(5)(ii) of this section, and the maximum tip velocity specifications in paragraph (a)(6) or (a)(7) of this section, or adhering to the requirements in paragraph (a)(5)(i) of this section.

(i)

(A) Flares shall be used that have a diameter of 3 inches or greater, are nonassisted, have a hydrogen content of 8.0 percent (by volume) or greater, and are designed for and operated with an exit velocity less than 37.2 m/sec (122 ft/sec) and less than the velocity V_{max} , as determined by the following equation:

$$V_{max} = (X_{H2} - K_1) * K_2$$

Where:

V_{max} = Maximum permitted velocity, m/sec.

K_1 = Constant, 6.0 volume-percent hydrogen.

K_2 = Constant, 3.9(m/sec)/volume-percent hydrogen.

X_{H2} = The volume-percent of hydrogen, on a wet basis, as calculated by using the American Society for Testing and Materials (ASTM) Method D1946-77. (Incorporated by reference as specified in § 63.14).

(B) The actual exit velocity of a flare shall be determined by the method specified in paragraph (a)(6)(i) of this section.

- (ii) Flares shall be used only with the net heating value of the gas being combusted at 11.2 MJ/scm (300 Btu/scf) or greater if the flare is steam-assisted or air-assisted; or with the net heating value of the gas being combusted at 7.45 M/scm (200 Btu/scf) or greater if the flares is non-assisted. The net heating value of the gas being combusted in a flare shall be calculated using the following equation:

$$H_T = K \sum_{i=1}^n C_i H_i$$

Where:

H_T = Net heating value of the sample, MJ/scm; where the net enthalpy per mole of offgas is based on combustion at 25 °C and 760 mm Hg, but the standard temperature for determining the volume corresponding to one mole is 20 °C.

K = Constant =

$$1.740 \times 10^{-7} \left(\frac{1}{\text{ppmv}} \right) \left(\frac{\text{g-mole}}{\text{scm}} \right) \left(\frac{\text{MJ}}{\text{kcal}} \right)$$

where the standard temperature for (g-mole/scm) is 20 °C.

C_i = Concentration of sample component i in ppmv on a wet basis, as measured for organics by Test Method 18 and measured for hydrogen and carbon monoxide by American Society for Testing and Materials (ASTM) D1946-77 or 90 (Reapproved 1994) (incorporated by reference as specified in § 63.14).

H_i = Net heat of combustion of sample component i , kcal/g-mole at 25 °C and 760 mm Hg. The heats of combustion may be determined using ASTM D2382-76 or 88 or D4809-95 (incorporated by reference as specified in § 63.14) if published values are not available or cannot be calculated.

n = Number of sample components.

(6)

- (i) Steam-assisted and non-assisted flares shall be designed for and operated with an exit velocity less than 18.3 m/sec (60 ft/sec), except as provided in paragraphs (a)(6)(ii) and (a)(6)(iii) of this section. The actual exit velocity of a flare shall be determined by dividing by the volumetric flow rate of gas being combusted (in units of emission standard temperature and pressure), as determined by Test Method 2, 2A, 2C, or 2D in appendix A to 40 CFR part 60 of this chapter, as appropriate, by the unobstructed (free) cross-sectional area of the flare tip.

(ii) Steam-assisted and non-assisted flares designed for and operated with an exit velocity, as determined by the method specified in paragraph (a)(6)(i) of this section, equal to or greater than 18.3 m/sec (60 ft/sec) but less than 122 m/sec (400 ft/sec), are allowed if the net heating value of the gas being combusted is greater than 37.3 MJ/scm (1,000 Btu/scf).

(iii) Steam-assisted and non-assisted flares designed for and operated with an exit velocity, as determined by the method specified in paragraph (a)(6)(i) of this section, less than the velocity V_{max} , as determined by the method specified in this paragraph, but less than 122 m/sec (400 ft/sec) are allowed. The maximum permitted velocity, V_{max} , for flares complying with this paragraph shall be determined by the following equation:

$$\text{Log}_{10}(V_{max}) = (H_T + 28.8)/31.7$$

Where:

V_{max} = Maximum permitted velocity, m/sec.

28.8 = Constant.

31.7 = Constant.

H_T = The net heating value as determined in paragraph (a)(5) of this section.

(7) Air-assisted flares shall be designed and operated with an exit velocity less than the velocity V_{max} . The maximum permitted velocity, V_{max} , for air-assisted flares shall be determined by the following equation:

$$V_{max} = 8.71 + 0.708(H_T)$$

Where:

V_{max} = Maximum permitted velocity, m/sec.

8.71 = Constant.

0.708 = Constant.

H_T = The net heating value as determined in paragraph (a)(5)(ii) of this section.

[45CSR34; 40 C.F.R. §§63.119(e)(1)]

- b. Periods of planned routine maintenance of the control device, during which the control device does not meet the specifications of 4.1.1.1.a shall not exceed 240 hours per year. **[45CSR34; 40 C.F.R. §63.119(e)(3)]**
- c. The specifications and requirements in 4.1.1.1.a for control devices do not apply during periods of planned routine maintenance. **[45CSR34; 40 C.F.R. §63.119(e)(4)]**
- d. The specifications and requirements in 4.1.1.1.a for control devices do not apply during a control system malfunction. **[45CSR34; 40 C.F.R. §63.119(e)(5)]**

(Tank 9704 and Tank 9705)

4.1.2. **Maintenance Wastewater.** The owner or operator of each 40 C.F.R. 63, Subpart PPP affected source, shall comply with the HON maintenance wastewater requirements of 40 C.F.R. §63.105, with the exceptions noted in 40 C.F.R. §§63.1433 (b)(1) through (3). The applicable provisions for maintenance wastewater are as follows: **[45CSR34; 40 C.F.R. §63.1433(b)]**

4.1.2.1. Each owner or operator of a source subject to 40 C.F.R. §63.105, Subpart F shall comply with the requirements of 4.1.2.1.a through 4.1.2.1.c for maintenance wastewaters containing those organic HAP's listed in table 9 of 40 C.F.R. 63, Subpart G and meet the definition of organic HAP in 40 C.F.R. §63.1423. **[45CSR34; 40 C.F.R. §63.105(a); 40 C.F.R. §63.1433(b)(1)]**

- a. The owner or operator shall prepare a description of maintenance procedures for management of wastewaters generated from the emptying and purging of equipment in the process during temporary shutdowns for inspections, maintenance, and repair (i.e., a maintenance-turn-around) and during periods which are not shutdowns (i.e., routine maintenance). The descriptions shall: **[45CSR34; 40 C.F.R. §63.105(b)]**
 - i. Specify the process equipment or maintenance tasks that are anticipated to create wastewater during maintenance activities. **[45CSR34; 40 C.F.R. §63.105(b)(1)]**
 - ii. Specify the procedures that will be followed to properly manage the wastewater and control organic HAP emissions to the atmosphere; and **[45CSR34; 40 C.F.R. §63.105(b)(2)]**
 - iii. Specify the procedures to be followed when clearing materials from process equipment. **[45CSR34; 40 C.F.R. §63.105(b)(3)]**
 - b. The owner or operator shall modify and update the information required by 4.1.2.1.a as needed following each maintenance procedure based on the actions taken and the wastewaters generated in the preceding maintenance procedure. **[45CSR34; 40 C.F.R. §63.105(c)]**
 - c. The owner or operator shall implement the procedures described in 4.1.2.1.a and 4.1.2.1.b as part of the start-up, shutdown, and malfunction plan required under 40 C.F.R. §63.6(e)(3). **[45CSR34; 40 C.F.R. §63.105(d)]**
- 4.1.3. **Equipment Leaks.** The permittee shall comply with all applicable standards of 40 C.F.R. 63, Subpart H – “National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks”, except §63.165 and as specified in 40 C.F.R. §§63.1434(b) through (h). The pertinent equipment leak standards include: 40 C.F.R. §§63.162 (Standards: General), 63.163 (Standards: Pumps in light liquid service), 63.165 (Standards: Pressure relief devices in gas/vapor service), 63.166 (Standards: Sampling connection systems), 63.167 (Standards: Open-ended valves or lines), 63.168 (Standards: Valves in gas/vapor service and in light liquid service), 63.171 (Standards: Delay of repair), 63.172 (Standards: Closed-vent systems and control devices), 63.173 (Standards: Agitators in gas/vapor service and in light liquid service), and 63.174 (Standards: Connectors in gas/vapor service and in light liquid service). **[45CSR34; 40 C.F.R. §63.1434(a); 40 C.F.R. 63, Subpart H; 40 C.F.R. §§63.162, 63.163, 63.165, 63.166, 63.167, 63.168, 63.171, 63.172, 63.173, and 63.174; 45CSR§27-4.1 (State-Enforceable only); CO-R27-2023-06, Order for Compliance, Condition 11 (State-Enforceable only)].**
- 4.1.4. The permittee shall comply with the following applicable requirements from CO-R21-97-41 for EO Distribution:
- 4.1.4.1. On or after the effective date of Consent Order CO-R21-97-41 (October 20, 1997), the COMPANY shall, reduce VOC emissions in accordance with the alternate emissions reduction plan (AERP). The permittee shall reduce VOC emissions as set forth in Attachment A of CO-R21-97-41; and shall continue to comply with such emissions reduction requirements and the emission limits set forth in Attachment A as Consent Order CO-R21-97-41 expressly provides. Compliance with the emission limits set forth in Attachment A of Consent Order CO-R21-97-41 shall be demonstrated by test or monitoring data, approved emission factors, material balances, and/or representative calculations in accordance with 45CSR21.

The Attachment A limits from Consent Order CO-R21-97-41 for EO Distribution are provided in APPENDIX A of this permit. **[45CSR§21-40 (State-Enforceable only); CO-R21-97-41, III.1 and Attachment A (State-Enforceable only); June 14, 2006 letter from J. L. Blatt]**

- 4.1.4.2. At all times, including periods of start-up, shutdown, and malfunction, the COMPANY shall maintain and operate the VOC emitting sources and associated air pollution control devices subject to the provisions of Consent Order CO-R21-97-41 in a manner consistent with good air pollution control practices for minimizing emissions. Compliance with the emission limits set forth in Attachment A of Consent Order CO-R21-97-41 shall be demonstrated at all times unless exception periods are provided for in accordance with this paragraph. The COMPANY shall comply with 3.5.10 and 3.5.11 (45CSR§§21-5.2 and 9.3) with respect to all periods of non-compliance with the emission limitations and emission reduction requests set forth in Attachment A of Consent Order CO-R21-97-41 resulting from unavoidable malfunctions of equipment. In the event that the emission limitation and/or emission reduction requirements for a source listed in Attachment A of CO-R21-97-41 cannot be met during routine start-ups, shutdowns, or routine maintenance activities, the COMPANY shall, within 180 days of the effective date of Consent Order CO-R21-97-41 (October 20, 1997), submit an operation and VOC emissions mitigation plan for such periods. If such plan is submitted, it shall contain the information outlined in Attachment B of CO-R21-97-41 and provided in APPENDIX A of this permit, and shall become an Appendix to Consent Order CO-R21-97-41. The Director may require reasonable revisions to the COMPANY's plan if he or she finds the routine start-up, shutdown, or maintenance resulting in excess VOC emissions not addressed by the plan occur or that the plan fails to provide for operation in a manner consistent with good air pollution control practices for minimizing emissions. VOC emissions and associated control procedures conforming to the COMPANY's plan submitted under this provision shall not be subject to the variance approval process of 3.5.11 (45CSR§21-9.3) provided that the COMPANY maintains test, monitoring, operating, and maintenance records containing sufficient information and detail to enable the COMPANY and the Director to verify compliance with the plan and associated VOC emissions control requirements. These records shall be maintained on-site for not less than three (3) years and be made available to the Director or his or her authorized representative upon request. The Director also may request submission of copies of such records. **[45CSR§21-40 (State-Enforceable only); CO-R21-97-41, III.3 and Attachment B (State-Enforceable only)]**
- 4.1.4.3. Unless granted a variance pursuant to 3.5.11, the COMPANY shall operate all emission control equipment for those emission sources listed in Attachment A of Consent Order CO-R21-97-41, at all times when the production unit is in operation or when any VOC emitting activity is occurring. In the event that the control equipment is inoperable, the production unit shall be shut down or the activity shall be discontinued as expeditiously as possible. **[45CSR§21-40 (State-Enforceable only); CO-R21-97-41, IV.7 (State-Enforceable only)]**
- 4.1.5. **45CSR§21-37 Requirements for Equipment Leaks.** The permittee shall comply with all applicable requirements of 45CSR§21-37 – “Leaks from Synthetic Organic Chemical, Polymer, and Resin Manufacturing Equipment.” The pertinent equipment leak standards include Sections 45CSR§§21-37.3 through 37.8. To the extent that implementation of the requirements of 40 C.F.R. 60, 40 C.F.R. 61, or 40 C.F.R. 63 results in monitoring and repair, consistent with 45CSR§21-37, of all components in VOC service in any synthetic organic chemical, polymer, or resin manufacturing process unit, compliance with these federally enforceable standards will satisfy the requirements of 45CSR§21-37. **[45CSR§§21-37.3 through 37.8 and 37.1.c (State-Enforceable only); CO-R21-97-41, III.2 (State-Enforceable only)]**

4.1.6. Emissions to the air of ethylene oxide from EO Distribution shall not exceed the following:

Emission Source	Item	Emission Point	Ethylene Oxide Emission Limit after BAT	
			lb/hr*	lb/yr**
South Charleston Header Double Vent & Valve EO Sample Analyzer Lines 9704 Surge Tank 9705 Surge Tank Priming Pot Vent Tank Car Blowdown from EO Tank Car Unloading (6 spots) 512 Vapor Traps 514 Vapor Traps Miscellaneous Clean Ups	Flares	410B/410A	0.29	1,900
Equipment leaks from Ethylene Oxide Distribution Operations	LDAR Program	Fugitive	N/A	

* Hourly limit is based on a 24-hour average. Only applies to Flare emissions.

** Limit is based on a calendar year.

[45CSR§27-3.1 (State-Enforceable only); CO-R27-2023-06, Order for Compliance, Condition 9 (State-Enforceable only)]

4.1.7. No person shall cause, suffer, allow or permit particulate matter to be discharged from any incinerator into the open air in excess of the quantity determined by use of the following formula:

$$\text{Emissions (lb/hr)} = F \times \text{Incinerator Capacity (tons/hr)}$$

Where, the factor, F, is as indicated in Table I below:

Table I: Factor F, for Determining Maximum Allowable Particulate Emissions

Incinerator Capacity	Factor F
A. Less than 15,000 lbs/hr	5.43
B. 15,000 lbs/hr or greater	2.72

For flares B410 and A410, the 45CSR§6-4.1 hourly particulate emission limit is 1.19 lbs/hr.

(B410 and A410) **[45CSR§6-4.1]**

4.1.8. No person shall cause, suffer, allow or permit emission of smoke into the atmosphere from any incinerator which is twenty (20%) percent opacity or greater. *(B410 and A410)* **[45CSR§6-4.3]**

- 4.1.9. The provisions of 4.1.8 shall not apply to smoke which is less than forty (40%) percent opacity, for a period or periods aggregating no more than eight (8) minutes per start-up. (B410 and A410) [45CSR§6-4.4]
- 4.1.10. Owners and operators of chemical processing units or facilities subject to the requirements of 45CSR27 shall employ BAT to prevent or control toxic air pollution discharges in the loading and unloading of railcars and tank trucks with toxic air pollutants or material mixtures containing toxic air pollutants. [45CSR§27-7.1 (State-Enforceable Only); CO-R27-2023-06, Order for Compliance, Condition 12 (State-Enforceable Only)]

4.2. Monitoring Requirements

- 4.2.1. **Group 1 Storage Vessels.** For each storage vessel located at a 40 C.F.R. 63, Subpart PPP affected source, the owner or operator shall comply with the HON storage vessel requirements of 40 C.F.R. §§63.119 through 63.123 and the HON leak inspection provisions in 40 C.F.R. §63.148, with the differences noted in 40 C.F.R. §§63.1432 (b) through (p). The monitoring requirements for a Group 1 storage vessel with a closed vent system and flare are as follows: [45CSR34; 40 C.F.R. §63.1432(a)]
- 4.2.1.1. To demonstrate compliance with 4.1.1 (storage vessel equipped with a closed vent system and control device) using a flare, the owner or operator shall comply with the requirements in 4.2.1.1.a through 4.2.1.1.d [45CSR34; 40 C.F.R. §63.120(e)]
- a. The owner or operator shall demonstrate compliance with the requirements of 4.1.1.1.c (planned routine maintenance of a flare, during which the flare does not meet the specifications of 4.1.1.1.a, shall not exceed 240 hours per year) by including in each Periodic Report required by 40 C.F.R. §63.1439(e)(6) the information specified in 4.5.3.1.a. [45CSR34; 40 C.F.R. §63.120(e)(3); 40 C.F.R. §63.1432(l)]
- b. The owner or operator shall continue to meet the general control device requirements specified in 40 C.F.R. §63.11(b). [45CSR34; 40 C.F.R. §63.120(e)(4)]
- c. Except as provided in 4.2.1.1.d, each closed vent system shall be inspected as specified in 40 C.F.R. §63.148. The inspections required to be performed in accordance with 40 C.F.R. §63.148(c) shall be done during filling of the storage vessel. [45CSR34; 40 C.F.R. §63.120(e)(5)]
- d. For any fixed roof tank and closed vent system that is operated and maintained under negative pressure, the owner or operator is not required to comply with the requirements specified in 40 C.F.R. §63.148. [45CSR34; 40 C.F.R. §63.120(e)(6)]
(Tank 9704 and Tank 9705)
- 4.2.2. For the purpose of determining compliance with the opacity limits set forth in Sections 4.1.8 and 4.1.9 for flares B410 and A410, the permittee shall conduct visual emissions monitoring at a frequency of at least once per month with a maximum of forty-five (45) days between consecutive readings, unless there is a plant shutdown. Following a shutdown that prevents observations within forty (45) days, visual monitoring must be performed within seven (7) days of return to operation. These checks shall be performed during periods of operation of emission sources that vent from the referenced emission points for a sufficient time interval, but not less than one (1) minute to determine if there is a visible emission. If visible emissions are identified during the visible emission check, or at any other time regardless of operations, the permittee shall conduct a visual emission evaluation per 40 C.F.R. 60, Appendix A, Method 9 within three (3) days of the first identification of visible emissions. A 40 C.F.R. 60, Appendix A, Method 9 evaluation shall not be required if the visible emission condition is corrected within seventy-two (72) hours after the visible emission and the sources are operating at normal conditions. (B410 and A410) [45CSR§30-5.1.c]

4.3. Testing Requirements

- 4.3.1. **Equipment Leaks.** The permittee shall comply with all applicable test methods and procedures of 40 C.F.R. 63, Subpart H – “National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks” as specified in 40 C.F.R. §63.180, except as specified in 40 C.F.R. §§63.1434(b) through (g). **[45CSR34; 40 C.F.R. §63.1434(a); 40 C.F.R. 63, Subpart H; 40 C.F.R. §63.180]**
- 4.3.2. The permittee shall comply with all applicable provisions of 45CSR§21-41 regarding test methods and compliance procedures to demonstrate compliance with 4.1.4, except as otherwise approved by the Director. **[45CSR§21-41; CO-R21-97-41, III.5 (State-Enforceable only)]**
- 4.3.3. **45CSR§21-37 Testing Requirements for Equipment Leaks.** The permittee shall comply with all applicable test methods and procedures of 45CSR§21-37 – “Leaks from Synthetic Organic Chemical, Polymer, and Resin Manufacturing Equipment” as specified in 45CSR§21-37.9. To the extent that implementation of the requirements of 40 C.F.R. 60, 40 C.F.R. 61, or 40 C.F.R. 63 results in monitoring and repair, consistent with 45CSR§21-37, of all components in VOC service in any synthetic organic chemical, polymer, or resin manufacturing process unit, compliance with these federally enforceable standards will satisfy the requirements of 45CSR§21-37. **[45CSR§§21-37.1.c and 37.9 (State-Enforceable only); CO-R21-97-41, III.2 (State-Enforceable only)]**
- 4.3.4. At such reasonable times as the Director may designate, the operator of any incinerator shall be required to conduct or have conducted stack tests to determine the particulate matter loading, by using 40 C.F.R. 60, Appendix A, Method 5 or other equivalent EPA approved method approved by the Director, in exhaust gases. Such tests shall be conducted in such manner as the Director may specify and be filed on forms and in a manner acceptable to the Director. The Director, or the Director’s authorized representative, may at the Director’s option witness or conduct such stack tests. Should the Director exercise his option to conduct such tests, the operator will provide all the necessary sampling ports to be located in such manner as the Director may require, power for test equipment and the required safety equipment such as scaffolding, railings and ladders to comply with generally accepted good safety practices. *(B410 and A410)* **[45CSR§6-7.1]**

4.4. Recordkeeping Requirements

- 4.4.1. For each storage vessel located at a 40 C.F.R. 63, Subpart PPP affected source, the owner or operator shall comply with the HON storage vessel requirements of 40 C.F.R. §§63.119 through 63.123 and the HON leak inspection provisions in 40 C.F.R. §63.148, with the differences noted in 40 C.F.R. §§63.1432 (b) through (p). The recordkeeping requirements for a Group 1 storage vessel with a closed vent system and flare are as follows: **[45CSR34; 40 C.F.R. §63.1432(a)]**
- 4.4.1.1. Each owner or operator of a Group 1 or Group 2 storage vessel shall keep readily accessible records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel. This record shall be kept as long as the storage vessel retains Group 1 or Group 2 status and is in operation. **[45CSR34; 40 C.F.R. §63.123(a)]**
- 4.4.1.2. The permittee shall keep in a readily accessible location a record of the planned routine maintenance performed on the control device including the duration of each time the control device does not meet the specifications of 4.1.1.1.a due to the planned routine maintenance. Such record shall include the information specified in 4.4.1.2.a and 4.4.1.2.b. **[45CSR34; 40 C.F.R. §§63.123(f) and 63.123(f)(2)]**

- a. The first time of day and date the requirements of 4.1.1.1.a were not met at the beginning of the planned routine maintenance, and [45CSR34; 40 C.F.R. §63.123(f)(2)(i)]
 - b. The first time of day and date the requirements of 4.1.1.1.a were met at the conclusion of the planned routine maintenance. [45CSR34; 40 C.F.R. §63.123(f)(2)(ii)]
- 4.4.1.3. To demonstrate compliance with 4.1.1.1.a and 4.2.1.1.b for Group 1 storage vessels with a closed vent system and flare meeting the requirements of 40 C.F.R. §63.11(b), the permittee shall keep readily accessible records of the following: [45CSR§30-12.7]
- a. Hourly records of whether the monitor was continuously operating and whether a flame was continuously present at the pilot light during each hour. [45CSR§30-12.7]
 - b. Records of the times and duration of all periods during which all pilot flames are absent. [45CSR§30-12.7]

(Tank 9704 and Tank 9705)

- 4.4.2. **Maintenance Wastewater.** The owner or operator of each 40 C.F.R. 63, Subpart PPP affected source, shall comply with the HON maintenance wastewater requirements of 40 C.F.R. §63.105, with the exceptions noted in 40 C.F.R. §§63.1433 (b)(1) through (3). The HON provisions for recordkeeping requirements for maintenance wastewater are as follows: [45CSR34; 40 C.F.R. §63.1433(b)]
- 4.4.2.1. **Maintenance Wastewater.** The owner or operator shall maintain a record of the information required by 4.1.2.1.a and 4.1.2.1.b as part of the start-up, shutdown, and malfunction plan required under 40 C.F.R. §63.6(e)(3). [45CSR34; 40 C.F.R. §63.105(e)]
- 4.4.3. **Equipment Leaks.** The permittee shall comply with all applicable recordkeeping requirements of 40 C.F.R. 63, Subpart H – “National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks” as specified in 40 C.F.R. §63.181, except as specified in 40 C.F.R. §§63.1434(b) through (g). [45CSR34; 40 C.F.R. §63.1434(a); 40 C.F.R. 63, Subpart H; 40 C.F.R. §63.181]
- 4.4.4. **45CSR§21-37 Recordkeeping Requirements for Equipment Leaks.** The permittee shall comply with all applicable recordkeeping requirements of 45CSR§21-37 – “Leaks from Synthetic Organic Chemical, Polymer, and Resin Manufacturing Equipment” as specified in 45CSR§21-37.10, with the exception that all records shall be maintained for a period of five (5) years instead of three (3) years. To the extent that implementation of the requirements of 40 C.F.R. 60, 40 C.F.R. 61, or 40 C.F.R. 63 results in monitoring and repair, consistent with 45CSR§21-37, of all components in VOC service in any synthetic organic chemical, polymer, or resin manufacturing process unit, compliance with these federally enforceable standards will satisfy the requirements of 45CSR§21-37. [45CSR§§21-37.1.c and 37.10 (State-Enforceable only); 45CSR§30-5.1.c; CO-R21-97-41, III.2 (State-Enforceable only)]
- 4.4.5. The permittee shall maintain records of all monitoring data required by Section 4.2.2 of this permit, documenting the date and time of each visible emission check, the emission point or equipment identification number, the name or means of identification of the responsible observer, the results of the check, and, if necessary, all corrective actions taken. Should a visible emission observation be required to be performed per the requirements specified in 40 C.F.R. 60, Appendix A, Method 9, the data records of each observation shall be maintained per the requirements of 40 C.F.R. 60, Appendix A, Method 9. For an emission unit out of service during the normal monthly evaluation, the record of observation may note “out of service” (OOS) or equivalent. These records shall be maintained on site for a period of five years and shall be made available to the Director or his authorized representative upon request. *(B410 and A410)* [45CSR§30-5.1.c]

- 4.4.6. The facility shall keep records of calculations used to show compliance with the emission limits referenced in condition 4.1.6. All records shall be maintained onsite for a period of at least five (5) years and made available to DAQ personnel upon request. **[CO-R27-2023-06, Order for Compliance, Conditions 10 and 13 (State-Enforceable Only)]**

4.5. Reporting Requirements

- 4.5.1. The permittee shall submit Periodic Reports as specified in 40 C.F.R. §§63.1439(e)(6), except that semi-annual periodic monitoring reports are due within 60 calendar days following June 30 and December 31, for each calendar year. The reports cover the periods January 1 through June 30 and July 1 through December 31. **[45CSR34; 40 C.F.R. §63.1432(l); 40 C.F.R. §63.1439(e)(6)]**
- 4.5.2. The permittee shall submit reports of start-up, shutdown, and malfunction required by 40 C.F.R. §63.1439(b)(1). The start-up, shutdown and malfunction reports may be submitted on the same schedule as the Periodic Reports required under 4.5.1. **[45CSR34; 40 C.F.R. §§63.1439(b)(1)]**
- 4.5.3. For each storage vessel located at a 40 C.F.R. 63, Subpart PPP affected source, the owner or operator shall comply with the HON storage vessel requirements of 40 C.F.R. §§63.119 through 63.123 and the HON leak inspection provisions in 40 C.F.R. §63.148, with the differences noted in 40 C.F.R. §63.1432 (b) through (p). The reporting requirements for a Group 1 storage vessel with a closed vent system and flare are as follows: **[45CSR34; 40 C.F.R. §63.1432(a)]**
- 4.5.3.1. An owner or operator who elects to comply with 4.1.1 by installing a closed vent system and control device shall submit, as part of the next Periodic Report required by 40 C.F.R. §63.1439(e)(6), the information specified in 4.5.3.1.a and 4.5.3.1.b. **[45CSR34; 40 C.F.R. §§63.122(a)(4), 63.122(g) and 63.152(c); 40 C.F.R. §63.1432(l)]**
- a. As required by 4.2.1.1.a, the Periodic Report shall include the information specified in 4.5.3.1.a.i and 4.5.3.1.a.ii for those planned routine maintenance operations that would require the control device not to meet the requirements of 4.1.1.1.a. **[45CSR34; 40 C.F.R. §63.122(g)(1)]**
- i. A description of the planned routine maintenance that is anticipated to be performed for the control device during the next 6 months. This description shall include the type of maintenance necessary, planned frequency of maintenance, and lengths of maintenance periods. **[45CSR34; 40 C.F.R. §63.122(g)(1)(i)]**
- ii. A description of the planned routine maintenance that was performed for the control device during the previous 6 months. This description shall include the type of maintenance performed and the total number of hours during those 6 months that the control device did not meet the requirements of 4.1.1.1.a due to planned routine maintenance. **[45CSR34; 40 C.F.R. §63.122(g)(1)(ii)]**
- b. If a flare is used, the Periodic Report shall describe each occurrence when the flare does not meet the general control device requirements specified in 40 C.F.R. §63.11(b) and shall include the information specified in 4.5.3.1.b.i and 4.5.3.1.b.ii. **[45CSR34; 40 C.F.R. §63.122(g)(3)]**
- i. Identification of the flare which does not meet the general requirements specified in 40 C.F.R. §63.11(b), and **[45CSR34; 40 C.F.R. §63.122(g)(3)(i)]**
- ii. Reason the flare did not meet the general requirements specified in 40 C.F.R. §63.11(b). **[45CSR34; 40 C.F.R. §63.122(g)(3)(ii)]**
- (Tank 9704 and Tank 9705)*

- 4.5.4. **Equipment Leaks.** The permittee shall comply with all applicable reporting requirements of 40 C.F.R. 63, Subpart H – “National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks” as specified in 40 C.F.R. §63.182, except as specified in 40 C.F.R. §§63.1434(b) through (g). [**45CSR34; 40 C.F.R. §63.1434(a); 40 C.F.R. 63, Subpart H; 40 C.F.R. §63.182**]
- 4.5.5. **45CSR§21-37 Reporting Requirements for Equipment Leaks.** The permittee shall comply with all applicable reporting requirements of 45CSR§21-37 – “Leaks from Synthetic Organic Chemical, Polymer, and Resin Manufacturing Equipment” as specified in 45CSR§§21-37.11 and 5.2. To the extent that implementation of the requirements of 40 C.F.R. 60, 40 C.F.R. 61, or 40 C.F.R. 63 results in monitoring and repair, consistent with 45CSR§21-37, of all components in VOC service in any synthetic organic chemical, polymer, or resin manufacturing process unit, compliance with these federally enforceable standards will satisfy the requirements of 45CSR§21-37. [**45CSR§§21-37.1.c, 37.11, and 5.2 (State-Enforceable only); CO-R21-97-41, III.2 (State-Enforceable only)**]

4.6. Compliance Plan

- 4.6.1. None.

**APPENDIX A – Consent Order CO-R21-97-41
ATTACHMENTS A AND B**

ATTACHMENT A

Process Area Description and Identification Number	Name of Process Equipment Vented to Control Device and Equipment Identification Number	Maximum Theoretical Emissions (MTE) of the Source (lbs/hr)	Emission Point Identification Number	Control Device Identification Number	Control Device Description	Efficiency of Control Device	Maximum Allowable Hours of Operation (hrs/yr)	Maximum Allowable VOC Emissions	
								lbs/hr	tons/yr
Distribution 401 ¹	Header to Primary Flare ¹	144.55 ¹	410B	B410 ¹	FL	99 ¹	8760 ¹	0.29 ¹	1.27 ^{1,2}
Distribution 401 ¹	Header to Backup Flare ¹	144.55 ¹	410A	A410 ¹	FL	99 ¹			

FL - Flare

¹ Revised based on June 14, 2006 letter from J. L. Blatt.

² Compliance with this annual limit shall be met through compliance with the more stringent 1,900 lb/yr total ethylene oxide emission limit in condition 4.1.6.

ATTACHMENT B

ROUTINE/NORMAL OPERATING & MAINTENANCE SCENARIOS RESULTING IN EXCESS EMISSIONS*

Process Area Description and Identification Number	Emission Point Identification Number	Description of Excess Emission Scenario SU – Start-up SD – Shutdown M – Maintenance (Describe Activity)	Description of Controls and Measures used to Minimize VOC Emissions (During each Scenario)	Duration of Excess Emission Scenario (Hours)	Typical/Maximum Number of Events per Year /	Average/Peak VOC Emissions per Event (Pounds per Hour) /

*Do not include malfunction scenarios