



February 20, 2025

Ms. Mary Greene
Director, Air Enforcement Division
Office of Civil Enforcement
United States Environmental Protection Agency
Mail Code 2242-A
1200 Pennsylvania Ave, N.W.
William Jefferson Clinton Building/Room 1119
Washington, DC 20460-0001

Submittal of Additional Information Requested
Request for Extension of Compliance Time – Two Projects
Compliance with the Ethylene Oxide Provisions
40 CFR 63 Subpart G — *National Emission Standards for Hazardous Air Pollutants for the Synthetic Organic Chemical Manufacturing Industry (HON Rule)*
Union Carbide Corporation – Hahnville, St. Charles Parish, Louisiana
Title V Operating Permit No. 2814-V5 – Methyl Glycol Ethers Plant
Title V Operating Permit No. 2421-V10 – Ethanolamines Plant
Title V Operating Permit No. 1909-V3 – Higher Glycols Plant
Title V Operating Permit No. 476-V9 – Oxide Plant

Dear Ms. Greene,

This letter and the attached information provides additional information requested by USEPA in a letter December 20, 2024, regarding our request for an extension to the current July 15, 2026, due date for compliance with all ethylene oxide requirements in EPA's amendments to the HON air pollution rule (40 CFR 63 Subparts F, G, and H).

Our request for a compliance extension and these projects involve:

- Recommissioning of a flare and adding the required instrumentation to collect process vents and one storage tank in Ethylene Oxide service from the Methyl Glycol Ethers Plant and the Higher Glycols Plant; and
- Installation of a process wastewater reactor system, called a Purge Glycol Reactor, to react small concentrations of ethylene oxide in process wastewater streams from the Methyl Glycol Ethers Plant, the Higher Glycols Plant, the Oxide Plant, and Site Logistics to other chemical compounds.

Request for an Extension of Compliance
St. Charles Operations

These projects represent only a small subset of the HON implementation projects at the site and we seek an extension of compliance time only for what is absolutely necessary.

Pursuant to 40 CFR 63.6(i)(4)(i) and (ii) of the MACT rule general provisions our St. Charles Operations site is requesting a one-year extension from the compliance date of July 15, 2026, to July 15, 2027, for the two projects identified above. This extension is necessary in order to properly engineer the projects, order and obtain the equipment, and then construct and start-up the projects. Moreover, while the projects are being completed, we will take steps to protect against imminent endangerment, including by prioritizing our completion of other projects at the site that have higher air emissions. More details on our request and the schedule for implementation for the projects is included in the attached information, and we would be pleased to provide more details upon request.

If you have any questions or require additional information, please contact Mr. Tom Nichols at (985) 783-3250; email: tnichols@dow.com or Mr. Russell Wozniak of our Environmental Expertise organization at (361) 571-5420; email: wozniara@dow.com.

Sincerely,

Nattaya B.

Nattaya Boonsombat
Responsible Care Leader
St. Charles Operations

cc:

Mr. Steve Thompson
Air Enforcement Branch Chief
EPA Region 6
Compliance Assurance and Enforcement Division
1201 Elm St., Suite 500
Dallas, TX 75270-2102

LDEQ Office of Environmental Compliance
P.O. Box 4312
Baton Rouge, LA 70821-4312

Attachment

Request for Extension of Compliance

SECTION I GENERAL INFORMATION

A. Print or type the following information for each facility for which you are requesting an extension of compliance (§63.9(b)(2)(i)-(ii))

Operating Permit Number (OPTIONAL)		Facility I.D. Number (OPTIONAL)	
Permits 2814-V5, 2421-V10, 476-V9, and 1909-V3			
Responsible Official's Name/Title			
Nattaya Boonsombat/Responsible Care Leader			
Street Address			
355 Highway 3142			
City	State	ZIP Code	
Hahnville	Louisiana	70057	
Facility Name (if different from Responsible Official's Name)			
St. Charles Operations			
Facility Street Address (If different than Responsible Official's Street Address)			
Facility Local Contact Name		Title	Phone (OPTIONAL)
Tom Nichols		EH&S Leveraged Air Specialist	1-985-783-3250
City	State	ZIP Code	
Hahnville	Louisiana	70057-0059	

B. Indicate the relevant standard or other requirement that is the basis for this request for this compliance extension request:

Pursuant to 40 CFR 63.6(i)(4)(i) and (ii) of the MACT rule General Provisions our St, Charles Operations site is requesting a one-year extension from the compliance date of July 15, 2026, to July 15, 2027, for the following projects and associated regulatory citations: Project #1 – Dow is changing this project from a Thermal Oxidizer to a Flare - 40 CFR 63 Subpart G – 40 CFR 63.108 and 63.124 – Process Vents that are in ethylene oxide service – procedures to determine compliance. Project #2 – Purge Glycol Reactor Project - 40 CFR 63 Subpart G 40 CFR 63.138 – Process wastewater provisions – performance standards for treatment processes managing Group 1 wastewater streams and/or residuals removed from Group 1 wastewater streams; and 40 CFR 63.138(b)(3) – Control options: Group 1 wastewater streams for Table 9 compounds – Reduce, by removal or destruction, the concentration of ethylene oxide to a level less than 1 parts per million by weight as determined in the procedures in
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§63.145(b) of this subpart; and the following general control provisions for Group 1 process wastewater streams:

- 40 CFR 63.132 – Process wastewater provisions – general
- 40 CFR 63.133 – Process wastewater provisions – wastewater tanks
- 40 CFR 63.134 – Process wastewater provisions – surface impoundments
- 40 CFR 63.135 – Process wastewater provisions – containers
- 40 CFR 63.136 – Process wastewater provisions – individual drain systems
- 40 CFR 63.137 – Process wastewater provisions – oil-water separators

Project #3 – Dow is removing this project from the extension request. ~~Revised Emission Control System for Start-up Vents – 40 CFR 63 Subpart G – 40 CFR 63.124 – Process Vents and Storage Vessels that are in ethylene oxide service – procedures to determine compliance.~~

C.

Reasons why additional time is needed

A one-year extension is needed in order to properly engineer and construct these projects. Typically, it takes 36 months to complete projects similar to these. Key steps in the engineering, procurement, and construction process are:

Major Steps in Process	Estimated Time to Complete (Months)
Testing to determine "In EO Service" and Pre-FEED Project Scoping	6
Front End Engineering Design (FEED)	12
Detailed Design Engineering	9
Procurement (Obtaining Vendor Bids, Vendor Questions & Selection, Equipment Fabrication & Delivery to site)	19 (overlaps with engineering)
Construction of Required Equipment, Piping and Instrumentation	10 (overlaps with detailed engineering)
Develop Operating Procedures, Commissioning Equipment, and Placing Into Service	1 – 1.5 months
Total Estimated Time for Project including testing to determine "In EO Service":	36

Note: Some steps like Procurement overlap with Front End Engineering Design, Detailed Design Engineering, and Construction. Construction also overlaps with Detailed Design Engineering

SECTION II**CERTIFICATION** (Note: you may edit the text in this section as deemed appropriate)

Based upon information and belief formed after a reasonable inquiry, I, as a responsible official of the above-mentioned facility, certify the information contained in this request is accurate and true to the best of my knowledge.

Name of Responsible Official (Print or Type)	Title	Date (mm/dd/yy)
Nattaya Boonsombat	Responsible Care Leader	02 / 20 / 25
Signature of Responsible Official		
Nattaya B.		

Note: Responsible official is defined under §63.2 as any of the following: the president, vice-president, secretary, or treasurer of the company that owns the plant; the owner of the plant; the plant engineer or supervisor; a government official if the plant is owned by the Federal, State, city, or county government; or a ranking military officer if the plant is located on a military installation.

SECTION III**COMPLIANCE SCHEDULE INFORMATION**

A. Describe the controls that will be installed at your facility to ensure compliance with the relevant standard. (§63.6(i)(6)(i)(A)) – See the descriptions for each project below:

Project #1 – Dow is changing this project from a thermal oxidizer to a flare. An existing flare system will be recommissioned and repurposed to collect and control any process vents in Ethylene Oxide service from the Methyl Glycol Ethers Plant and the Higher Glycols Plant. The existing system will be instrumented to comply with the monitoring requirements for flares, and a new stand-alone flare stack will be constructed. There are some small process vents from these two HON covered plants that have minimal ethylene oxide emissions, but each process vent stream with 1 ppmv or more ethylene oxide must be controlled.

Project #2 – Installation of a process wastewater reactor system, called a Purge Glycol Reactor, to react small concentrations of ethylene oxide in process wastewater streams from the Oxide Plant and Site Logistics Area, Methyl Glycol Ethers Plant, and the Higher Glycols Plant to other chemical compounds. The reactor system will be operated at an elevated temperature and pressure to react low concentrations of ethylene oxide to other organic compounds. These small process wastewater streams from these three HON covered process units have minimal ethylene oxide emissions, but each process wastewater stream with 1 ppmw or more ethylene oxide must be controlled.

Project #3 – Dow is removing this project from the extension request.

Due to small levels of emissions associated with these sources, the health of persons will be protected from imminent endangerment, as required by 40 CFR §63.6(i)(4)(ii).

B. Describe your compliance schedule by specifying the date by which you will complete each of the following steps toward achieving compliance: (§63.6(i)(6)(i)(B)(1)-(4)):

A compliance schedule, including the date by which each step toward compliance will be reached. At a minimum, the list of dates shall include:

(1) The date by which on-site construction, installation of emission control equipment, or a process change is planned to be initiated.

On-site construction for these projects is planned to be initiated by August 1, 2026.

(2) The date by which final compliance is to be achieved.

Compliance for these projects is expected to be achieved by July 15, 2027.

(3) The date by which on-site construction, installation of emission control equipment, or a process change is to be completed; and

On-site construction is planned to be completed by June 1, 2027, for these projects.

(4) The date by which final compliance is to be achieved;

Start-up of these systems and compliance is expected to be achieved by July 15, 2027.

**Additional Information Requested by EPA
in December 20, 2024 Letter and 40 CFR 63.6(i)(10)**

Each of the requested items is provided for each project. Dow is no longer seeking a compliance extension for Project #3.

Project #1 – Recommissioning and placing back into service an existing flare with the required instrumentation for the HON rule.

- **Identify each affected source covered by the extension:**

There are four process vents that will be collected and piped to the revised flare system:

Source Vent or Tank Vent	Emission Point Number	Plant
DRC Jet Exhaust	815	Higher Glycols
Jet Seal Pot	816	Higher Glycols
Methanol Recovery Column Vent	46D	Methyl Glycol Ethers
MGE Vacuum Jet Exhaust	40	Methyl Glycol Ethers

- **Specify the termination date of the extension.**

The termination date of the extension will be July 15, 2027, for the start-up of the existing flare with all required instrumentation. The termination date of the extension will be December 12, 2027, for the Notification of Compliance Status Report and other associated requirements as detailed below.

- **Specify the dates by which steps toward compliance are to be taken, if appropriate**

As noted above, construction is expected to commence on this project by August 1, 2026, with the goal of completing construction by June 1, 2027.

- **Specify other applicable requirements to which the compliance extension applies (e.g., performance tests).**

We also propose extensions to the following items related to the start-up of the existing flare system and the testing, monitoring, recordkeeping, and reporting requirements:

#1 - Flare Monitoring Requirements and Records – §63.108(m)

Dow proposes an extension for the flare monitoring requirements until July 15, 2027, to allow time for the flare to be placed into service and to confirm monitors are functional.

#2 - Flare Monitoring Requirements and Records – §63.117(a)(5)

Dow proposes an extension of these requirements until December 12, 2027, since the requirements in this section require the flare to be operational and typically align with the submittal of the Notification of Compliance Status report.

#3 - Flare Recordkeeping Requirements for Loss of All Pilot Flames - §63.118(f)(5)

Dow proposes an extension for the flare recordkeeping requirements in this section until July 15, 2027, to allow time for the flare to be placed into service and to confirm the pilot flame monitors are functional.

#4 - Notification of Compliance Status Report - §63.152(b)(7)

Dow proposes that the due date for this report be extended to December 12, 2027, to align with a date 150 days after the requested date extension for having the flare in service.

#5 – Periodic Report - §63.152(c) and §63.108(l)(2)

Dow proposes that the due date for this report be extended to December 12, 2027, to align with a date 150 days after the requested date extension for having the flare in service. Portions of these sections require some flare operating data, such as periods during which operating values are outside of the applicable operating limits specified in 63.670(d) through (f) of Subpart CC (e.g., exit velocity, NHVcz, NHVdil).

- Specify any additional conditions that the Administrator (or the State) deems necessary to assure installation of the necessary controls and protection of the health of persons during the extension period.

No additional information is being provided with this update.

Project #2 – Installation of a process wastewater reactor system, called a Purge Glycol Reactor

- **Identify each affected source covered by the extension:**

There are five process wastewater streams that will be collected and piped to the new treatment system:

Process Wastewater Stream	Plant
CO2 Regenerator Condenser Tails	Oxide
Oxide Flare Knock-Out Pot	Oxide
Jet Hotwell Overflow Wastewater	Methyl Glycol Ethers
Polyjet Condensate	Higher Glycols
DRC 1 st and 2 nd Stage Steam Condensate	Higher Glycols

- **Specify the termination date of the extension.**

The termination date of the extension will be July 15, 2027, for the installation of the Purge Glycol Reactor system and the termination date of the extension will be December 12, 2027, for the Notification of Compliance Status Report and other associated requirements as detailed below.

- **Specify the dates by which steps toward compliance are to be taken, if appropriate**

As noted above, construction is expected to commence on this project by August 1, 2026, with the goal of completing construction by June 1, 2027. A performance demonstration along with establishment of operating parameters for continuous monitoring will be conducted after the start-up date.

- **Specify other applicable requirements to which the compliance extension applies (e.g., performance tests).**

Dow also proposes extensions to the following items related to the installation of the Purge Glycol Reactor and the testing, monitoring, recordkeeping, and reporting requirements:

#1 – Performance Demonstration and Establishing Parameter Monitoring Ranges – §63.146(a) and §63.151(f)(1) – (f)(3)

Dow proposes that the requirement in §63.146(a) for the owner/operator to submit a request to monitor alternative parameters according to the procedures in 63.151(f) be extended to July 15, 2027 to align with the start-up date of the Purge Glycol Reactor.

Dow proposes that all due dates to complete the requirements in §63.151(f)(1) – (3) be extended to December 12, 2027 to allow time for a performance demonstration and setting of parameters after the Purge Glycol Reactor starts operation.

Table 12 of the HON rule refers to §63.151(f), which requires compliance with paragraphs (f)(1) – (3) as copied below. Dow proposes an extension to December 12, 2027 to complete the performance demonstration, establish parameter monitoring ranges, and commence monitoring. This is five months after the requested extension date of July 15, 2027 to have the Purge Glycol Reactor installed. The rule text for §63.151(f) and (1) – (3) is provided below:

The owner or operator who has been directed by any section of this subpart that expressly references this paragraph to set unique monitoring parameters or who requests approval to monitor a different parameter than those listed in § 63.114 for process vents, § 63.127 for transfer, or § 63.143 for process wastewater of this subpart shall submit the information specified in paragraphs (f)(1), (f)(2), and (f)(3) of this section with the operating permit application or as otherwise specified by the permitting authority.
40 CFR 63.151(f).

- (1) A description of the parameter(s) to be monitored to ensure the control technology or pollution prevention measure is operated in conformance with its design and achieves the specified emission limit, percent reduction, or nominal efficiency, and an explanation of the criteria used to select the parameter(s).
- (2) A description of the methods and procedures that will be used to demonstrate that the parameter indicates proper operation of the control device, the schedule for this demonstration, and a statement that the owner or operator will establish a range for the monitored parameter as part of the Notification of Compliance Status report required in § 63.152(b) of this subpart, unless this information has already been included in the operating permit application.
- (3) The frequency and content of monitoring, recording, and reporting if monitoring and recording is not continuous, or if reports of daily average values when the monitored parameter value is outside the range established in the operating permit or Notification of Compliance Status will not be included in Periodic Reports required under § 63.152(c) of this subpart. The rationale for the proposed monitoring, recording, and reporting system shall be included.

#2 – Wastewater Parameter Exceedance Reporting - §63.146(d)(3)

Dow proposes that the due date for reporting monitoring results for each operating day during when the daily average of any monitored parameter approved in accordance with 63.151(f) was outside the range established in the Notification of Compliance Status be extended to December 12, 2027. This will allow to us conduct testing and setting of operating parameters after the system starts-up on or before July 15, 2027. This will also align with the submittal of the Notification of Compliance Status report. The identification of the treatment process, the parameter that was of range, and the date the parameter was out of range must be reported.

#3 – Wastewater Recordkeeping - §63.147(b)(4) and (e)

Dow proposes that the requirement in §63.147(b)(4) be extended to December 12, 2027. The requirement in §63.147(b)(4) is that for Item 3 of table 12 of this subpart, the owner or operator shall keep records approved by the Administrator. §63.147(e) notes that the Administrator will specify appropriate recordkeeping requirements.

#4 - Notification of Compliance Status Report - §63.152(b)

Dow proposes that the due date for this report be extended to December 12, 2027 to align with #1 above.

#5 – Periodic Report - §63.152(c)

We propose that the due date for this report be extended to December 12, 2027 to align with #1 above.

- Specify any additional conditions that the Administrator (or the State) deems necessary to assure installation of the necessary controls and protection of the health of persons during the extension period.

No additional information is being provided with this response.