

Message

From: AirAction [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=FA78B98923384078995E04A73D258D83-AIRACTION]
Sent: 4/1/2025 2:04:55 PM
To: Vogel, Robert [robert.vogel@ineos.com]
Subject: RE: Presidential Exemption: HON Rule (89 FR 42932; May 16, 2024): INEOS Americas LLC – Bayport EO Plant (INEOS)

Thank you for emailing the AirAction mailbox to request a Presidential Exemption under section 112(i)(4) of the Clean Air Act and for engaging with EPA in advancing President Trump's Executive Orders and Powering the Great American Comeback. We have received your email and will be in contact soon. If you have Confidential Business Information (CBI) that you'd like to submit, please submit it in electronic version to the CBI@epa.gov inbox or in hardcopy to:

USEPA, OAQPS
CORE CBI Office
4930 Old Page Road
Durham, NC 27703

From: Vogel, Robert <robert.vogel@ineos.com>
Sent: Monday, March 31, 2025 6:22 PM
To: AirAction <AirAction@epa.gov>
Subject: Presidential Exemption: HON Rule (89 FR 42932; May 16, 2024): INEOS Americas LLC – Bayport EO Plant (INEOS)

Caution: This email originated from outside EPA, please exercise additional caution when deciding whether to open attachments or click on provided links.

To Whom It May Concern:

Please find attached the required information to request a Presidential Exemption under section 112(i)(4) of the Clean Air Act for compliance with the HON Rule (89 FR 42932; May 16, 2024) for the emission standards and limitations referenced in this correspondence for the INEOS Americas LLC – Bayport EO Plant (INEOS).

Emissions standards or limitations subject to the request:

The emissions standards or limitations subject to the Presidential Exemption request by INEOS are contained in the National Emission Standards for Hazardous Air Pollutants (NESHAP) for three subparts in 40 CFR 63 (subparts F, G, and H) that apply to the Synthetic Organic Chemical Manufacturing Industry (SOCMI) and for one subpart in 40 CFR 63 (subpart I) that applies to equipment leaks from certain non-SOCMI processes located at chemical plants. These four NESHAP are more commonly referred together as the Hazardous Organic NESHAP (HON) (89 FR 42932; May 16, 2024) (HON rule).

The specific emission standards or limitations subject to this request are as follows:

- Process Vents in both ethylene oxide and non-ethylene oxide HAP service;
- Wastewater Streams in ethylene oxide service;
- Fenceline Monitoring for ethylene oxide and vinyl chloride;

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- Process relief devices (PRD) in both ethylene oxide and non-ethylene oxide HAP service; and
- Leak Detection and Repair (LDAR) requirements in ethylene oxide service.

Facility(ies) and/or affected source(s):

The facility for which the Presidential Exemption request is being made is the INEOS Americas LLC – Bayport EO Plant located at 5761 Underwood Road in Pasadena, Texas 77507.

Length of compliance period being requested:

The length of the compliance period extension request is as follows:

- The length of the extension being requested is for two years from the July 15, 2026 compliance date to July 15, 2028 for the ethylene oxide standards or limitations specified in the preceding section.
- The length of the extension being requested is for two years from the July 15, 2027 compliance date to July 15, 2029 for the non-ethylene oxide standards or limitations specified in the preceding section.

Justification to support the request:

The justification supporting this request for the extension is that the technological and technical issues for each emission standard or limitation is as follows:

Process Vents to Regenerative Thermal Oxidizer (RTO) – There are technological and technical concerns with the site RTO. The site RTO has been overdesigned to allow additional streams to be added in compliance with the HON. However, each stream requires a process hazard review (temperature, pressure, vapor saturation) to determine if the RTO is an appropriate solution. Even with this individual stream evaluation showing a favorable result, further hazard assessments are required to ensure interactions (reaction, process stability, system pressure) between streams converging to the current RTO can be done safely. This detailed process hazard review is a required step to ensure the site not only meets the requirements of the legislation but also the process safety hazards associated with the handling of potentially highly reactive chemicals from these various streams. Project construction will take an additional 18 months to complete once engineering has been completed.

Fenceline Monitoring – A root cause analysis must be completed and corrective actions implemented when the annual average delta concentration value for ethylene oxide is greater than 0.2 µg/m³ on an annual average basis. There are technology concerns with being able to detect concentrations of EO at the currently proposed threshold limits. This will make it very difficult to determine the source of the ethylene oxide emissions much less mitigate the emissions. The action levels are so low that the technology may not exist for mitigating the ethylene oxide emissions based on the EPA's IRIS value. The EPA's IRIS value, which was determined based on an uncommon, visual fit two-piece spline model where risk rises quickly at lower exposures and then more slowly at higher exposures resulting in extremely low action levels for ethylene oxide and is currently under review. The technology may not exist to reduce ethylene oxide emissions below 0.2 µg/m³ at the fenceline on an annual average basis. Additionally, the canister method of sample collection for

analysis of samples for ethylene oxide on a GC/MS introduces multiple pathways to affect the sample quality to adversely impact the results.

Wastewater Controls – There are technological and technical issues with managing the new wastewater streams designated to be in EO service. The site is in the process of upgrading and replacing an older wastewater line with that will affect the completion of the remaining work associated with this project. The technological evaluations are ongoing to determine the scope of this project. There may be technological limitations depending on what equipment is needed.

PRD Monitoring – No technology has been found to record and document the beginning and ending durations of the PRD relieving to atmosphere other than recording PRD isolations and changeouts which is not compliant with the requirements of the rule. There are over 100 PRDs with different model types that will require retrofitting with to identify the pressure release, recording the time and duration of each pressure release, and notifying operators immediately that a pressure release is occurring.

LDAR – There will likely be many types of equipment such as valves, pump seals, or instrument connections that will require upgrading as a result of the new LDAR standards. These emission compliant equipment may not be available by the regulatory deadlines. There are technological issues with replacing equipment in EO service such as changing valves to bellows seal valves. There is concern that an EO leak caught by the bellows enclosure would trap a stagnant volume of EO in the bellows enclosure. Stagnant EO can polymerize and expand which could break the seal on the containment or self-heat to auto decomposition temperature resulting in an emergency response type event at the site. Finally, there are valves and other pieces of equipment that currently fall between the 500 ppm limit and the future 100 ppm limit that will become “leaks” on Day 1 unless resolved before the regulation comes into effect. This will require significant resources and potentially outages to address which will disrupt the supply of EO to the market.

The compliance deadlines begin on July 15, 2026 for sources in ethylene oxide service which is not enough time to complete the technical and technological evaluations as well as completing the design and installation of the necessary capital projects. An additional two years is required to fully perform the evaluations to identify all technologies not available to implement the standard. There are expected to be technology issues identified due to compatibility issues between ethylene oxide and the metallurgy as well as the gasketing, packing, and other material that come into contact with ethylene oxide. Companies must make irrevocable business decisions related to compliance with these rules in the coming months without being able to complete the required technical and technological evaluations.

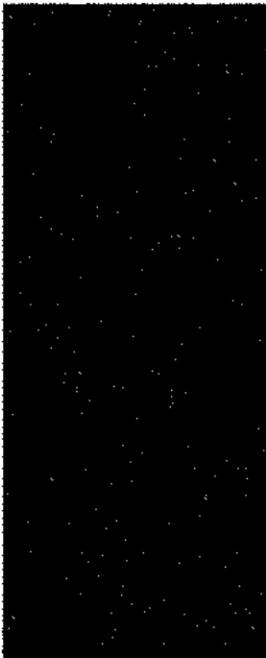
Why an extension is in the national security interests of the United States:

Ethylene oxide and its derivatives are a critical building block chemical that is used in several domestic economic applications that are critical to the national security interests of the United States. The final HON Rule threatens the continued operational production and economic capacity of ethylene oxide and its associated derivatives at the INEOS ethylene oxide manufacturing facility due to not being able to comply with certain emission standards and limitations published in 89 FR 42932 dated May 16, 2024 by the published compliance dates. The INEOS ethylene oxide manufacturing facility is a large supplier of ethylene oxide to the market that will be forced to shut down until the projects being installed to address the emissions standards or limitations are completed. This scenario will affect most if not all ethylene oxide and ethylene oxide derivative manufacturers limiting the supply of ethylene oxide on the market which can adversely impact the national security interests of the United States.

Ethylene oxide plays a major role in the production of a wide variety of solvents, amines, and surfactants used in semiconductor chip manufacturing processes like wafer cutting, chemical mechanical planarization, photoresist, and photoresist residue cleaner. The semiconductor industry is one of many crucial technologies and industries that have been identified as crucial to the national security interests of the United States for which ethylene oxide and its derivatives are used. Other uses of ethylene oxide and its derivatives that are crucial to the national security interests of the United States include uses in automotive (brake fluid, antifreeze, etc.) cloud computing, medical devices, telecommunications, energy production, agriculture, and used as an additive for military jet fuel.

Please contact me if there are any questions or concerns regarding this matter. Thank you for your consideration of this matter.

Thank you,
Robert Vogel



INEOS Oxide

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Environmental Engineer

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