

CRODA

Public Information Session

March 3, 2021



Summary/Timeline



- September 2020 – Issues discovered during stack test
- November 2020 – Notice of violation issued
- January 2021 – Additional testing of ethylene oxide plant
- February 2021 – Agreement signed to establish path forward

Current Status (1)



- Hotwell –
 - The September test showed unpermitted emissions at this unit. It is shutdown.
- Ethylene Oxide Scrubber –
 - The January test showed the unit is in compliance with the permit limits.
 - All operation of this unit will comply with additional limitations including operational requirements, increased removal efficiency, and a short-term emission limit.
 - The reflux drum connection to the scrubber is closed and locked.

Current Status (2)



- Ethanol Dehydration Furnace (EDF) –
 - The January testing showed that the unit is not in compliance with nitrogen oxide (NO_x) limit. A permit revision is necessary.
- Catalytic Combustion Unit (CCU) –
 - The January testing showed that the unit was not in compliance with carbon monoxide (CO), volatile organic compounds (VOC) and particulate matter (PM).
 - To address these issue the catalyst has been replaced.

Future Actions (1)



- Hotwell –
 - Croda has submitted a permit application to construct new piping to re-route the emissions to a control device.
- Ethylene Oxide Scrubber –
 - Croda has submitted a permit application to construct new piping to re-route the emissions back into the process.
 - Croda will test this and report back to DNREC regarding the long-term viability.
 - If the scrubber will have emissions more than 10% of the time, Croda will install continuous emissions monitoring (CEMS).
 - DNREC will incorporate the additional requirements (which Croda is complying with at present) into the permit.
 - Reflux drum will be addressed with a permanent solution when the path forward for the scrubber is known.



Future Actions (2)

- Ethanol Dehydration Furnace (EDF) –
 - Croda has applied for a permit revision to increase the NOx limit from 1.4 ton per year to 3.2 ton per year.
 - Croda will offset this emission increase at a rate of 1.3 to 1.
- Catalytic Combustion Unit (CCU) –
 - Croda will stack test the unit within 60 days of re-start.
 - Croda will also install a flue gas analyzer and use this to ensure continuous compliance following the stack test.
- Ethylene Oxide Plant –
 - All units will be testing again in 11 to 13 months of re-start.
- Permit Applications –
 - The construction permit applications will be advertised and open for public comment.

Penalty and Project

- Croda will pay a penalty of \$300,000
- Croda will construct an alarm on the north side of Interstate-295 to increase the alarm radius



Contact Information

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Thank you

