

Drury, Andrew (EGLE)

From: Drury, Andrew (EGLE)
Sent: Thursday, May 6, 2021 11:01 AM
To: Rhiana Dornbos
Cc: Carlson, Nicholas (EGLE); Smith, Cindy (EGLE); Nixon, Shane (EGLE); Owens, Caryn (EGLE); Eric Marko; Theodore Pagano; Jeff Kummer; Mary Mello
Subject: Michigan Potash Update and question

Rhiana,

The AQD has verified the dispersion modeling. We are continuing our review and should begin drafting conditions shortly.

I do have two questions.

1. There is a proposed allowance of 120 hours of operation per year when processing sour brine with the thermal oxidizer bypassed. Does the H₂S emission estimate reflect this bypass? The emission estimate assumes a 99.5% H₂S destruction efficiency for the thermal oxidizer, which is used to calculate the hourly emission rate, but does not appear to provide a scrubber control efficiency. According to the vendor, would the scrubber control efficiency also be 99.5% when processing sour brine? If not, what would the scrubber H₂S emission rate be when processing sour brine during bypass of the thermal oxidizer?

Since this bypass is proposed for more than 24 hours, compliance with the 24 hour H₂S ITSL has to be based on the emissions during thermal oxidizer bypass. In addition, the annual average hourly emission rate used for the annual H₂S ITSL cannot be less than 10% of the peak one hour H₂S emission rate per Rule 227(2). The peak hourly rate may be the emissions during thermal oxidizer bypass when processing sour brine.

2. How will H₂S be monitored in the sweetening process to ensure the thermal oxidizer is used when the brine is sour and to ensure compliance with any sulfur related emission limits?

Please provide a response by May 13 so we can continue our review of the H₂S emissions.

Please let me know if you have any questions.

Thank you,

Andrew Drury, Senior Engineer Specialist
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