Extension 8/29/2025

Friday, August 29, 2025 8:04 AM

Andrews, Edward S <edward.s.andrews@wv.gov>

Re: Incomplete App Email for Permit Application R13-3724

1 message

Andrews, Edward S <edward.s.andrews@wv.gov> Fri, Aug 29, 2025 at 8:04 AM
To: Michael Dearing <Michael.Dearing@erm.com>

Hi Michael,

Thank you for reaching out.

Given the comprehensive nature of the questions and the level of detail required, I understand that additional time would be beneficial for you to provide a thorough response. Therefore, I can agree to extend the deadline to September 18, 2025.

Please ensure that all the requested information is submitted by this revised date so we can proceed with the review of the application.

Should you have any further questions, please do not hesitate to contact me.

Thanks,
Ed

--

Edward Andrews, P.E.

Engineer

WVDEP/Division of Air Quality

304-414-1244

601 57th Street, SE

Charleston, WV 25304

On Thu, Aug 28, 2025 at 4:47 PM Michael Dearing <Michael.Dearing@erm.com> wrote:

> Ed,
>
> Due to the number the questions and amount of detail requested would the DEP be able to grant us additional two weeks to respond to these comments?
>
> Thanks

ERM
Sustainability is our business

Michael Dearing

Principal Consultant, Scientist

Charleston (WV) **erm.com**

O +1-(612)-347-7144

C +1-(304)-654-2227

From: Andrews, Edward S <edward.s.andrews@wv.gov>
Sent: Monday, August 18, 2025 1:57 PM
To: Anand Rathinasamy <anand.rathinasamy@erm.com>; William Calhoun <jack.calhoun@fidelisinfra.com>; Michael Dearing <Michael.Dearing@erm.com>
Cc: Joseph R Kessler <joseph.r.kessler@wv.gov>
Subject: Incomplete App Email for Permit Application R13-3724

EXTERNAL MESSAGE

RE: Application Status: Incomplete

MSG H2 1, LLC

Permit Application No. R13-3724

Plant ID No. 053-00135

Mr. Calhoun:

Your application for a Construction Permit for a hydrogen plant was received by this Division on August 7, 2025, and assigned to the writer for review. Upon initial review of said application, it has been determined that the application as submitted is incomplete based on the following items:

1. Copy of the Class I legal advertisement affidavit.

2. Application Fee of $2,000.00

- Credit card payments may be made by contacting the Accounts Receivable section at 304-926-0499 x41195. DEP accepts Visa and MasterCard only. Please have Facility ID and Application Number available when calling.

3. Please explain why, in detail, that the emissions proposed in this application and for Permit Application R13-3708 the BCEES facility should not be aggregated together under major source applicability under rules 45CSR14 and 45CSR30.

- Nameplate capacity of each generator needs to be identified for both facilities.
- The actual role each facility will have with each other or relationship if any.
- If electricity is transmitted between the two facilities, how will the other facility be compensated?
- What energy streams/equipement/resources will be shared between the two facilities?
- Will there be common equipment shared?
- If certain resources are going to be shared on a limited basis, please explain those limitations (e.g., startup operations, etc.).

4. Please provide additional details on the "feed preparation and purification" process.

- What media/chemical will be used in the sulfide scavenging?
- Will odors be potentially generated when the media is replaced?
- Will the replacement of the scavenging media require the vessel to be purged before putting the vessel back into service?
- Will the replacement of the scavenging media require the entire hydrogen plant to be down?
- Projected number of times that the scavenging media will need to be replaced in a year?
- How will break through in the second absorber be detected?
- Will other components of the natural gas feedstock need to be removed or treated during the "feed preparation and purification" process (e.g., water, nitrogen, other hydrocarbons beside methane, etc.).
- Explain why the sulfide scavenging process required heat energy?

5. The following items are regarding the Process Heater for the hydrogen plant:

- Please provide exact details how the process heater for the pre-reformer will be configured. Include the reaction that the heat energy from the heater will be used to initial or promote and heat transfer fluid to be used to transfer the heat energy.
- Please explain why the SO2 emission from the process heater decreases when SCR maintenance is being performed veres normal operations (see calculation basis) and where is the source of the sulfur during the normal operation burning hydrogen gas? Also, explain why only the NOx emission factor only increased by 10% when the SCR maintenance is being performed.
- Please justify the using 0.62% of AP-42 emission factor for total HAPs emissions when the process heater is firing hydrogen gas? Where is the source of the HAP metal or organic HAPs emissions in the hydrogen gas?
- Please explain why the NOx emissions for the process heater on hydrogen gas were based on 8,760 hours of operation and the rest of the pollutants were based on 8,676 hours of operations.

6. Please explain why there are no HAP emissions from the regenerator of the Carbon Capture Unit?

7. Please include the storictmetic formulas of the chemical reactions that will take place in the reforming section.

8. How will the required oxygen for the reformer be generated or is it going to be supplied?

9. Please identify the electric capacity of each generator at the facility with the respective emission unit and the amount of electricity will be sold.

10. Please identify the required electric load of the hydrogen plan at startup and during normal operations.

11. Please provide the determination(s) where EPA noted an affected Acid Rain Unit must connect a grid system to be classified as an "affected unit" under the Acid Rain Program.

12. Please explain how the initial startup and follow-up startup event for the facility will take place.

- Please identify which emission unit will be used, duration of the use for startup and sequence of the emission units being startup during the startup event.
- Estimate the emissions from each emission unit and total startup emissions for the facility.
- Is there going to be a by-pass vent or a purge process step for the hydrogen plant startup?

13. Additional information required for the combustion turbines:

- Is water or steam injection going to be used to control NOx emissions from either combustion turbine?
- Why did the application explain why the combustion turbines were not subject to Subpart TTTT instead of Subpart TTTTa? This discussion in the application implies that the combustion turbines had already been constructed (manufactured) prior to May 23, 2023. Has these combustion turbines already been manufactured?
- Will the natural gas used by the combustion turbines be preheated if so please identify how?
- Please explain startup emissions or provide a realistic estimate from the combustion turbines.
- Please provide shut down emissions from the combustion turbine.
- Please describe the routine maintained activity that could be performed on the SCR control device without shutting down the combustion turbine.
- Will each combustion turbine be tuned for short after each startup event?

14. Please separate the PM and only account for the filterable PM portion from the PM/PM10/PM2.5 from the combustion sources?

12. Please provide an estimate of haul road emissions for deliveries of materials (e.g., ammonia n shipping spent materials (spent amine) and necessary to support normal operations.

13. Will there be any hydrogen stored on site?

14. Is the applicant proposing to take a 10% annual capacity limitation for the Aux Boiler as allowed under Subpart Db to 40CFR60 (See 40CFR60.44b(j) and (k)?

Please address the above deficiencies in writing by September 3, 2025 of the receipt of this email. Application review will not commence until the application has been deemed to be technically complete. Failure to respond to this request in a timely manner may result in the denial of the application.

Should you have any questions, please contact Ed Andrews at (304) 926-0499 ext. 41244 or reply to this email.

Thanks

Ed

--

Edward Andrews, P.E.

Engineer

WVDEP/Division of Air Quality

304-926-0499 Ext 41244

601 57th Street, SE

Charleston, WV 20304
