FINAL DETERMINATION

BACKGROUND INFORMATION

Application No.: R13-3555
Plant ID No.: 009-00141
Applicant: Empire Green Generation, LLC
Facility Name: Follansbee Operation
Location: Follansbee
NAICS Code: 562211
Application Type: Construction
Received Date: April 11, 2022
Engineer Assigned: Edward Andrews, P.E.
Fee Amount: $2,000
Date Received: April 20, 2022
Complete Date: October 21, 2022
Due Date: January 19, 2023
Applicant Ad Date: April 13, 2022
Newspaper: The Weirton Daily Times
DAQ Ad Date: December 3, 2022
DAQ Newspaper: Brooke County Review

NOTICES AND PUBLICATION

Pursuant to 45 CSR 13-8.4 the West Virginia Department of Environmental Protection (DEP), Division of Air Quality (DAQ) sent a copy of the advertisement, preliminary determination, and draft permit to representatives of the applicant, and US EPA Region 3 on November 30, 2022 via email. On December 3, 2022, the DAQ went to public notice in the

Promoting a healthy environment.
Brooke County Review and Weirton Daily Times with a “Notice of Intent to Approve” to issue the permit to Empire Green Generation LLC for the proposed construction of the Follansbee Facility in Follansbee, Brooke County, West Virginia. The Application, Draft Permit, and supporting documents generated or reviewed by the DAQ were made available in the DEP ApplicationXtender portal.

In addition to the requirements of the public notice procedures, the DAQ sent a copy of all notices of “Intent to Approve” to the DEP’s Public Information Office to be released to all subscribers of the DEP Enhanced Mailing List. Copies of the draft permit, evaluation, public notice, and application were made available on the agency’s website under DAQ’s :NSR Permit Applications link under “Popular Searches”.

Initially, comments on the Draft Permit were accepted until 5:00 PM on January 3, 2023. Due to requests for an extension received early in the public comment period, the Director elected to extend the public comment period to January 9, 2023. An in-person public meeting was held at the Follansbee Community House on Wednesday, December 14, 2022. Prior to scheduling the December 14, 2022 Public Meeting, the Follansbee City Manager and representatives of Empire were solicited for their input of which type of meeting would be preferred (in-person or virtual). Both parties felt the preferred option was for the agency to hold an in-person meeting. Requests for a virtual meeting came after the in-person meeting was already scheduled. The location and internet access for the public meeting would not allow for a hybrid meeting (in person and virtual).

A second request for an extension of the public comment period was received by the DAQ on January 6, 2023. The requester asked for the extension to allow for further comment after a scheduled City of Follansbee Council Meeting. While the Council meeting would be about the proposed facility, any decisions made by the council would not be related to air quality rules and regulations or affect any decision to issue or deny the permit. Therefore, the public comment period closed at 5pm on January 9, 2023.

COMMENTS ON THE DRAFT PERMIT

During the public comment period, many comments were received from the public via email and in person at a public meeting. A separate Response to Comments document has been written. All original comments and any associated DAQ response are in the public file.
CHANGES TO THE DRAFT PERMIT

The following changes to the draft permit were incorporated into the final permit based on comments received during the public comment period.

In Condition 4.1.2.j.iii., the term “may” was replaced with “shall” as suggested.

Condition 4.1.2.p was revised as suggested.

In Condition 4.2.1., oxygen content and temperature monitoring of each pyrolysis train was added as suggested. One of the commenters referred to a paper that noted formation of dioxins and furans occurs at temperatures below 1,200°C. For the formation of dioxins and furans to occur, certain conditions need to be present, which are chlorine, oxygen, and temperature. The DAQ believes that monitoring these parameters will be key in monitoring dioxin and furan emissions.

Condition 4.2.6. was rephrased to make it clear which streams are to be sampled and required subsequent sampling once every 12 months.

Condition 4.2.8. was established to require CEMs on the RTO stack for no less than 5 years, which is beyond what was suggested by the commenter. As a result of this condition, Condition 4.5.7. was established to outline how the permittee can petition for removal of the CEMs. The condition outlined that the permittee must demonstrate that process parameter monitoring can provide sufficient information that the emissions of NO\textsubscript{x}, CO, SO\textsubscript{2}, and HCl can be determined.

Condition 4.2.10. was added to require a hazardous determination of the streams exiting the pyrolysis process in accordance with 40 CFR 262.11 at least once per calendar year.

Condition 4.3.2. was revised to include testing for other pollutants, which include metals and other HAPs. Comments also suggested testing for dioxins, furans, polychlorinated biphenyls, and polycyclic aromatic hydrocarbons. A separate condition was added for the testing of these other compounds as Condition 4.3.3.
Several commenters believe that the DAQ should have required a risk assessment be conducted. As a response to these comments, Condition 4.5.8. was established to require the permittee to develop a plan to reduce dioxins and furans emissions if the initial testing determined that the dioxins and furans emissions were above the dioxins and furans standard set for medium sized HMIWI units in the HMIWI Rule. The standard for medium sized units has the most stringent dioxin and furans of the three different size units in the HMIWI Rule.

The permittee is required to evaluate process changes/improvements and waste sort activities (if feasible) to reduce dioxins and furans below the dioxins and furans standard for medium size units. The condition also required a testing plan and protocol to be developed and submitted to identify the process parameter(s) that will be using an indicator of dioxins and furans emissions are at or below these levels before conducting a subsequent test. Condition 4.3.7. was established to require the permittee to implement the changes and conduct a follow-up testing.

Condition 4.4.5. was established to require a monthly determination of compliance with the annual emission limits set forth in Condition 4.1.5.

Condition 4.4.6. was established to annually determine if the streams exiting the pyrolysis are waste or non-waste in accordance with 40 CFR 241.

Several commenters suggested emission and compliance related reports should be submitted. Therefore, Condition 4.5.5. will require the reporting of medical waste processed; hours of operation; date/time of startup and shutdown; any exceedances; explanation and/or action taken of the exceedance; and emissions on a monthly basis.

**Other Changes**

There were other changes that the DAQ made that were not directly related to comments. These are as follows:

The term “syngas” was used throughout the permit. The DAQ determined that the appropriate term should be “synthetic gas” instead of “syngas”. Thus, the term “syngas” was replaced by “synthetic gas” throughout the whole permit.

Condition 4.1.3.a. did not contain a short-term limit for Total HAPs even though Condition 4.1.4. had an annual limit of two tons per year of Total HAPs. There were several comments made that the permit lacks sufficient demonstration for compliance with the Total HAP limit. The DAQ noticed that the permit did not contain a short-term limit for Total HAPs for emission point 1000 (RTO stack). Reducing the annual limit of 2.0 tons per year into lb/hr based on the maximum operating hours possible in a year, a short-term limit of 0.46 pounds of total HAPs per hour was established in Condition 4.1.3.a.viii.
A new condition was inserted as Condition 4.1.3.b. to define the average period and procedure for demonstrating compliance with the use of continuous emission monitoring systems. The short-term emissions limits include averaging times based on testing periods. The HMIWI Rule establishes different averaging periods based on using CEMs to demonstrate compliance with the standards. The DAQ adopted this language from the HMIWI Rule in the permit as Condition 4.1.3.b.

Condition 4.2.9. was established to set a frequency for leak surveys to be conducted. This omission was noticed by the DAQ when reviewing comments that pertained to leaks.

Under Condition 4.2.1., the DAQ believes that temperature at which the tar and oils are separated would be an indicator that the separation process is or is not changing.

Other typographical or grammatical errors were corrected.

FINAL RECOMMENDATION

After consideration of all comments received, all available information indicates Empire Green Generation LLC’s proposed construction of the Follansbee Facility in Follansbee, Brooke County, WV, should meet the emission limitations and conditions set forth in the permit and should comply with all currently applicable state and federal air quality management rules and standards. It is the recommendation of the undersigned that the WVDEP-DAQ issue Permit R13-3533.

Edward S. Andrews, P.E.
Engineer
Date: March 2, 2023