Overview

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Permitting Process

• Company applies for an air permit and publishes a legal ad, beginning a 30-day public comment period.

• Application is reviewed for completeness and company is notified of any deficiencies.

• Application undergoes a technical review to determine which air quality rules apply, and if the proposal meets those rules.
Permitting Process (cont’d.)

- If the proposed project meets all applicable air quality rules, DAQ publishes a legal ad, beginning a second 30-day public comment period. At this time, a copy of the evaluation and draft permit is made available for public review.

- After the close of the comment period, all comments received are reviewed and addressed by the DAQ and a final decision is made.

- All documents can be found under “Popular Searches” at: https://dep.wv.gov/daq/permitting/Pages/NSR-Permit-Applications.asp
What is being permitted?

Pyrolysis Process to convert 70 tons/day of Medical Waste into Fuel

- One Shredder
- One Dryer
- Two Pyrolysis trains with two process heaters
- 3 Gas Cleaning trains
- 4 Generator sets/4 spark-ignition, 429 hp engines
- Regenerative Thermal Oxidizer (RTO)
- Emergency Flare
What is pyrolysis?

40 CFR 60.51c defines Pyrolysis as the endothermic gasification of hospital waste and/or medical/infectious waste using external energy.
What types of Waste will be processed?

Medical Waste

• Pathological
• Cultures and stocks
• Anatomical waste
• Blood and blood products
• Sharps
• Spill/cleanup material mixtures
• Non-RCRA pharmaceutical waste
What types of waste are prohibited?

- Trace Chemotherapy Waste
- Bulk Chemotherapy Waste
- Radioactive Waste
- Pharmaceutical Hazardous
- Certain infected waste or by-products (e.g., infectious agents that cause Chronic Waste Disease)
EMPIRE’S PROCESS DIAGRAM
Is Pyrolysis incineration?

• The short answer is NO.
• The Hospital Medical Infectious Waste Incinerator Rule clearly states that any pyrolysis unit is not subject to the rule. (40 CFR 60.50c(f)).
• EPA is working to address regulation of pyrolysis units.
• Advance Notice of Proposed Rulemaking (ANPRM) for Pyrolysis and Gasification Units was proposed on September 8, 2021.
• EPA has not taken further action of the ANPRM.
Permit Requirements
## Proposed Emission Limits

<table>
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<tr>
<th>Pollutant</th>
<th>Hourly Rate (lb/hr)</th>
<th>Annual Rate (tons/year)</th>
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<td>Total HAPs</td>
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</table>
Monitoring Parameters

- Feed rate of waste (lb/hr)
- Flow rate of synthetic gas (scfh)
- Temperature of the scrubbing liquor
- Liquid level in each separator
- pH or conductivity of scrubbing liquor
- Pressure drop across each cyclone
- Operating Temperature of the RTO
- CO and NOx concentrations at the outlet of the RTO
- Pilot Light for the Emergency Flare
- Any venting of synthetic gas through the Emergency Flare
Testing

- VOC Destruction Efficiency Demonstration for the Oxidizer
- Initial compliance Demonstration for NO$_x$, CO, SO$_2$, formaldehyde, hydrogen chloride, n-hexane and all other hydrocarbons detected in the synthetic gas and liquid fuel sampling analysis.
- Initial PM$_{10}$ and PM$_{2.5}$ Demonstrations
- Subsequent testing based on readings of either NO$_x$ or CO monitoring using the portable analyzer
Other Potential Required Approvals

**WV Department of Environmental Protection**
- Division of Water and Waste Management
- Solid Waste Permit
- National Pollutant Discharge Elimination System Permit

**WV Department of Health and Human Resources**
- Environmental Health Services
- Alternative Treatment Plan
- Infectious Medical Waste Facility Permit

**WV Public Service Commission**
- Certificate of Need
- Siting Certificate
Summary

• The draft permit allows this facility to be operated with a potential to emit, with controls, below major source threshold levels, making the facility an area source of HAPs.

• DAQ will continue to accept public comments until Monday, January 9, 2023.

• DAQ will evaluate and respond to all timely, air quality related public comments.

• After January 9, DAQ will take final action on this permitting action taking into consideration all air quality-related comments received during the public comment period.
Summary (cont’d.)

45CSR13-5.7 states: The Secretary shall issue such permit or registration unless he or she determines that the proposed construction, modification, registration or relocation will violate applicable emission standards, will interfere with attainment or maintenance of an applicable ambient air quality standard, cause or contribute to a violation of an applicable air quality increment, or be inconsistent with the intent and purpose of this rule or W. Va. Code § 22-5-1, et seq., in which case the Secretary shall issue an order denying such construction, modification, relocation and operation. The Secretary shall, to the extent possible, give priority to the issuance of any such permit so as to avoid undue delay and hardship.
Questions Received

*How can the DAQ issue a permit if a DHHR rule states: “A commercial infectious medical waste management facility may not utilize incineration technology in any form, including the manufacture or burning of refuse-derived fuel in any form?”*

- The DHHR rule (64 CSR 56-11.2) is not promulgated pursuant to WV Code Article 22-5. The DHHR rule at 64 CSR 56-2.3 states “this rule is enforced by the Secretary of the Department of Health and Human Resources.”
- Thus, the DEP has no authority to enforce any requirement under 64 CSR 56.
Furthermore, the DAQ permitting rule at 45 CSR13-5.7 states:

- The Secretary *shall issue* such permit or registration unless he or she determines that the proposed construction, modification, registration or relocation will violate applicable emission standards, will interfere with attainment or maintenance of an applicable ambient air quality standard, cause or contribute to a violation of an applicable air quality increment, or be *inconsistent with the intent and purpose of this rule or W. Va. Code § 22-5-1, et seq.*, in which case the Secretary shall issue an order denying such construction, modification, relocation and operation. The Secretary shall, to the extent possible, give priority to the issuance of any such permit so as to avoid undue delay and hardship. (emphasis added)
Has Empire filed an air permit application for a Hazardous Waste Permit under 45 CSR 25?

- Empire has not filed an application for Hazardous Waste Permit under 45 CSR 25.
- The specific types of medical waste that Empire has requested to process are not classified as Hazardous Waste, therefore, a permit under 45 CSR 25 is not required.
Questions Received (cont’d.)

Did Rhode Island deny an air permit to the facility?
  • No. Rhode Island Department of Environmental Management, Office of Air Resources issued a minor source permit Approval Nos. 2454-2457 on 5/7/2020.

Did Rhode Island deny a waste permit to the facility?
  • Yes. Rhode Island denied the facility a permit under their Solid and Medical Waste Regulations on 7/13/2021.
Questions?
DEP Email Notice Service

Sign up on DEP's email notification service at https://dep.wv.gov/insidedep/Pages/DEPMailingLists.aspx or write to:

DEP Public Information Office
Public Notice List
601 57th Street, S.E.
Charleston, WV 25304

You have the option to receive notices of activities by county or statewide.
Contact Information

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edward.s.andrews@wv.gov

WVDEP – DAQ
601 57th Street, SE
Charleston, WV 25304
Public Comments
Public comment period has been extended until 5:00 p.m. on Monday, January 09, 2023