

**Public Meeting
on
Thunder Mountain
Environmental Services LLC
TMES West Virginia Plant
Permit R13-3565**

West Virginia Division of Air Quality

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July 20, 2022

Overview

- Permitting process
- What is being permitted?
- Permit Requirements
 - Limits
 - Monitoring
 - Testing
- Other Potential Required Approvals
- Summary

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?

Gasifier Process is to convert 20 tons/day of Medical Waste into Fuel then Electricity

- One Shredder with conveyors
- One Gasifier
- Fire Tube w/a waste heat boiler
- Steam-driven turbine with generator
- Associated add-on Control Devices
- One Emergency Generator - Natural Gas Fired Engine

Add-on Controls

- Cyclone - Initial PM control device
- Dry scrubber - Acid gases control device
- Activated Carbon Injection –
Dioxins/furans and mercury control device
- Fabric Filter Baghouse - PM control device

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 (non-hazardous pharmaceuticals)

What Types of Waste are Prohibited?

- Trace Chemotherapy Waste
- Bulk Chemotherapy Waste
- Radioactive Waste
- Pharmaceutical Listed Hazardous Waste
- Certain infected waste or by-products (e.g., infectious agents that cause Chronic Waste Disease)

A stylized sun with three curved rays and a solid black circle, set against a blue background with a white semi-circle.

Permit Requirements

Proposed Emissions

Pollutant	Facility Total (tons/year)
NO _x	0.35
CO	1.30
SO ₂	0.02
PM	3.50
PM ₁₀	2.13
PM _{2.5}	1.83
VOCs	3.86
Total HAPs	3.26

Applicable Requirements

- 45CSR18 – Set emission standards for existing and new Medical Waste Incinerators. Thunder Mountain is new unit.
- 45CSR18 refers to Subpart Ec of 40CFR Part 60 for new units.
- Subpart Ec establishes concentration-based limits for 9 pollutants, which includes dioxins/furans and PM.
- Dioxins/furans limit is 9.3 nanograms/cubic meter or 0.0000000093 grams/cubic meter.
- Operator training and qualification requirements
- Waste management plan
- Annual inspections control devices

Monitoring Parameters

- Feed rate of waste into the gasifier (lb/hr)
- Operating temperature, pressure, oxygen content of the oxidation zone of the gasifier
- Temperature of exhaust leaving the boiler
- Feed Rate of the dry adsorbent and activated carbon (lb/hr)
- Exhaust temperature leaving the cyclone
- Pressure Drop Across the Cyclone
- Temperature of the fabric filter baghouse
- Dust leaks from the fabric filters (e.g., busted bags)
- Any venting through the bypass vent
- Natural Gas Usage for startup operations

Testing

- Initial Compliance Demonstrations for PM, PM₁₀, PM_{2.5}, Dioxins and Furans (includes polycyclic organic matter), individual metals (Pb, Hg etc.)
- Other Pollutants listed in the permit will be demonstrated through Continuous Emission Monitoring System (CEMS)
- Annual PM testing for the first 3 years of operation.
- After the 3rd yr, the PM testing goes to once every three years (conditionally).
- Initial and annual visible emissions observation from the ash handling systems, which includes building that the ash handling equipment is located within.

Other Potential Required Approvals

- **WV Department of Environmental Protection**
 - Division of Water and Waste Management
 - Solid Waste Permit
 - National Pollutant Discharge Elimination System Permit
 - Division of Air Quality
 - Title V Operating Permit – Application due within 12 months after initial startup of the gasifier
- **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 5:00 PM, Thursday, July 27, 2023.
- DAQ will evaluate and respond to all timely, air quality related public comments.
- After July 27, 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.

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.

**Public comment period
has been extended until**

**5:00 p.m. on
Thursday, July 27, 2023**

Contact Information

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WVDEP – DAQ

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Additional Comments can be emailed to edward.s.andrews@wv.gov with “Thunder Mountain Environmental Services Comments” in the subject line.