Construction Permit

R13-3555

This permit is issued in accordance with the West Virginia Air Pollution Control Act (West Virginia Code §§22-5-1 et seq.) and 45 C.S.R. 13 – Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits, Permission to Commence Construction, and Procedures for Evaluation. The permittee identified at the above-referenced facility is authorized to construct the stationary sources of air pollutants identified herein in accordance with all terms and conditions of this permit.

Issued to:
Empire Green Generation, LLC
Follansbee Operation
009-00141

Laura M. Crowder
Director, Division of Air Quality

Issued: March 2, 2023
Facility Location: 801 Koppers Rd.
Follansbee, Brooke County, West Virginia
Mailing Address: 1400 Main Street
Follansbee, WV 26037
Facility Description: Medical Waste Storage and Treatment using a Pyrolysis Unit
NAICS Codes: 562219
UTM Coordinates: 533.51 km Easting • 4,465.42 km Northing • Zone 17
Permit Type: Construction
Description of Change: This action is for the construction and operation of a pyrolysis unit that will utilize non-hazardous medical waste as feedstock. The facility will also include four spark-ignition engines which will be used to generate electricity for the facility.

Any person whose interest may be affected, including, but not necessarily limited to, the applicant and any person who participated in the public comment process, by a permit issued, modified, or denied by the Secretary may appeal such action of the Secretary to the Air Quality Board pursuant to article one [§§22B-1-1 et seq.], Chapter 22B of the Code of West Virginia. West Virginia Code §§22-5-14.

The source is not subject to 45CSR30.
Table of Contents

1.0. Emission Units 5

2.0. General Conditions 6
   2.1. Definitions 6
   2.2. Acronyms 6
   2.3. Authority 7
   2.4. Term and Renewal 7
   2.5. Duty to Comply 7
   2.6. Duty to Provide Information 7
   2.7. Duty to Supplement and Correct Information 8
   2.8. Administrative Update 8
   2.9. Permit Modification 8
   2.10 Major Permit Modification 8
   2.11. Inspection and Entry 8
   2.12. Emergency 8
   2.13. Need to Halt or Reduce Activity Not a Defense 9
   2.14. Suspension of Activities 9
   2.15. Property Rights 9
   2.16. Severability 10
   2.17. Transferability 10
   2.18. Notification Requirements 10
   2.19. Credible Evidence 10

3.0. Facility-Wide Requirements 11
   3.1. Limitations and Standards 11
   3.2. Monitoring Requirements 11
   3.3. Testing Requirements 11
   3.4. Recordkeeping Requirements 12
   3.5. Reporting Requirements 13

4.0. Source-Specific Requirements for Processing Medical Waste 15
   4.1. Limitations and Standards 15
   4.2. Monitoring Requirements 20
   4.3. Testing Requirements 26
   4.4. Recordkeeping Requirements 28
   4.5. Reporting Requirements 29

5.0. Specific Requirements for Engines GE-1, GE-2, GE-3, and GE-4 31
   5.1. Limitations and Standards 31
   5.2. Monitoring Requirements 31
   5.3. Testing Requirements 32
   5.4. Recordkeeping Requirements 32
   5.5. Reporting Requirements 33

APPENDIX A Visible Emissions Observation (example form) 34
## 1.0. Emission Units

<table>
<thead>
<tr>
<th>Emission Unit ID</th>
<th>Emission Point ID</th>
<th>Emission Unit Description</th>
<th>Year Installed</th>
<th>Design Capacity</th>
<th>Control Device</th>
</tr>
</thead>
<tbody>
<tr>
<td>200</td>
<td></td>
<td>Macerator/Shredder</td>
<td>2022</td>
<td>2,543 ft³/hr</td>
<td>FE &amp; C2</td>
</tr>
<tr>
<td>220</td>
<td></td>
<td>Dryer</td>
<td>2022</td>
<td>7,700 lb/hr</td>
<td>Cyclones &amp; 1C or 2C</td>
</tr>
<tr>
<td>300A</td>
<td>1000 or 1000E</td>
<td>Reactor A Train w/settling chamber</td>
<td>2022</td>
<td>70 Tons per Day</td>
<td></td>
</tr>
<tr>
<td>300B</td>
<td></td>
<td>Reactor B Train w/settling chamber</td>
<td>2022</td>
<td></td>
<td></td>
</tr>
<tr>
<td>400A</td>
<td></td>
<td>Gas Cleanup Train A</td>
<td>2022</td>
<td>5,833 lb/hr</td>
<td>N/A</td>
</tr>
<tr>
<td>400B</td>
<td></td>
<td>Gas Cleanup Train B</td>
<td>2022</td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>400C</td>
<td></td>
<td>Gas Cleanup Train C</td>
<td>2022</td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>500</td>
<td></td>
<td>Gas Bladder (Gasometer) Synthetic gas storage vessel</td>
<td>2022</td>
<td></td>
<td></td>
</tr>
<tr>
<td>800</td>
<td></td>
<td>Vitrifier (pyrolysis heating furnace)</td>
<td>2022</td>
<td></td>
<td>Cyclones &amp; 1C or 2C</td>
</tr>
<tr>
<td>GE-1</td>
<td>1000 or 1000E</td>
<td>Generator Set 1 4 Stroke, Spark-ignition, Lean Burn Engine Engine/Generator Set</td>
<td>2022</td>
<td>429 bhp</td>
<td>Cyclones &amp; 1C or 2C</td>
</tr>
<tr>
<td>GE-2</td>
<td></td>
<td>Generator Set 2 4 Stroke, Spark-ignition, Lean Burn Engine Engine/Generator Set</td>
<td>2022</td>
<td>429 bhp</td>
<td>Cyclones &amp; 1C or 2C</td>
</tr>
<tr>
<td>GE-3</td>
<td></td>
<td>Generator Set 3 4 Stroke, Spark-ignition, Lean Burn Engine Engine/Generator Set</td>
<td>2022</td>
<td>429 bhp</td>
<td>Cyclones &amp; 1C or 2C</td>
</tr>
<tr>
<td>GE-4</td>
<td></td>
<td>Generator Set 4 4 Stroke, Spark-ignition, Lean Burn Engine Engine/Generator Set</td>
<td>2022</td>
<td>429 bhp</td>
<td>Cyclones &amp; 1C or 2C</td>
</tr>
<tr>
<td>900</td>
<td>1000</td>
<td>Regenerative Thermal Oxidizer (Re-Ox) This unit is also identified as Control Device 1C</td>
<td>2022</td>
<td>3.7 MMBtu/hr</td>
<td>N/A</td>
</tr>
<tr>
<td>1000</td>
<td>1000E</td>
<td>Emergency Flare Elevate Flare This unit is also identified as Control Device 2C</td>
<td>2022</td>
<td>12.2 MMBtu/hr</td>
<td>N/A</td>
</tr>
</tbody>
</table>
2.0. General Conditions

2.1. Definitions

2.1.1. All references to the “West Virginia Air Pollution Control Act” or the “Air Pollution Control Act” mean those provisions contained in W.Va. Code §§ 22-5-1 to 22-5-18.

2.1.2. The “Clean Air Act” means those provisions contained in 42 U.S.C. §§ 7401 to 7671q, and regulations promulgated thereunder.

2.1.3. “Secretary” means the Secretary of the Department of Environmental Protection or such other person to whom the Secretary has delegated authority or duties pursuant to W.Va. Code §§ 22-1-6 or 22-1-8 (45 CSR §30-2.12.). The Director of the Division of Air Quality is the Secretary’s designated representative for the purposes of this permit.

2.2. Acronyms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAAA</td>
<td>Clean Air Act Amendments</td>
</tr>
<tr>
<td>CBI</td>
<td>Confidential Business Information</td>
</tr>
<tr>
<td>CEM</td>
<td>Continuous Emission</td>
</tr>
<tr>
<td>CES</td>
<td>Monitor</td>
</tr>
<tr>
<td>C.F.R. or CFR</td>
<td>Certified Emission Statement</td>
</tr>
<tr>
<td>CO</td>
<td>Code of Federal Regulations</td>
</tr>
<tr>
<td>C.S.R. or CSR</td>
<td>Codes of State Rules</td>
</tr>
<tr>
<td>DAQ</td>
<td>Division of Air Quality</td>
</tr>
<tr>
<td>DEP</td>
<td>Department of Environmental Protection</td>
</tr>
<tr>
<td>dscm</td>
<td>Dry Standard Cubic Meter</td>
</tr>
<tr>
<td>FOIA</td>
<td>Freedom of Information Act</td>
</tr>
<tr>
<td>HAP</td>
<td>Hazardous Air Pollutant</td>
</tr>
<tr>
<td>HON</td>
<td>Hazardous Organic</td>
</tr>
<tr>
<td>lbs/hr</td>
<td>Horsepower</td>
</tr>
<tr>
<td>LDAR</td>
<td>Leak Detection and Repair</td>
</tr>
<tr>
<td>M</td>
<td>Pounds per Batch</td>
</tr>
<tr>
<td>MACT</td>
<td>Thousand</td>
</tr>
<tr>
<td>MDHI</td>
<td>Maximum Achievable</td>
</tr>
<tr>
<td>MM</td>
<td>Control Technology</td>
</tr>
<tr>
<td>MMBtu/hr or mmbtu/hr</td>
<td>Maximum Design Heat Input</td>
</tr>
<tr>
<td>MMCF/hr or mmcf/hr</td>
<td>Million British Thermal</td>
</tr>
<tr>
<td>NA</td>
<td>Million Cubic Feet per Hour</td>
</tr>
<tr>
<td>NAAQS</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>NESHAPS</td>
<td>National Ambient Air Quality Standards</td>
</tr>
<tr>
<td></td>
<td>National Emissions</td>
</tr>
<tr>
<td></td>
<td>Standards for Hazardous Air Pollutants</td>
</tr>
<tr>
<td>NO\textsubscript{X}</td>
<td>Nitrogen Oxides</td>
</tr>
<tr>
<td>NSPS</td>
<td>New Source Performance Standards</td>
</tr>
<tr>
<td>PM</td>
<td>Particulate Matter</td>
</tr>
<tr>
<td>PM\textsubscript{2.5}</td>
<td>Particulate Matter less than 2.5 \mu m in diameter</td>
</tr>
<tr>
<td>PM\textsubscript{10}</td>
<td>Particulate Matter less than 10\mu m in diameter</td>
</tr>
<tr>
<td>Ppb</td>
<td>Pounds per Batch</td>
</tr>
<tr>
<td>Pph</td>
<td>Pounds per Hour</td>
</tr>
<tr>
<td>Ppm</td>
<td>Parts per Million</td>
</tr>
<tr>
<td>Ppm\textsubscript{v} or ppmw</td>
<td>Parts per Million by Volume</td>
</tr>
<tr>
<td>PSD</td>
<td>Prevention of Significant Deterioration</td>
</tr>
<tr>
<td>Psi</td>
<td>Pounds per Square Inch</td>
</tr>
<tr>
<td>SIC</td>
<td>Standard Industrial Classification</td>
</tr>
<tr>
<td>SIP</td>
<td>State Implementation Plan</td>
</tr>
<tr>
<td>SO\textsubscript{2}</td>
<td>Sulfur Dioxide</td>
</tr>
<tr>
<td>TAP</td>
<td>Toxic Air Pollutant</td>
</tr>
<tr>
<td>TPY</td>
<td>Tons per Year</td>
</tr>
<tr>
<td>TRS</td>
<td>Total Reduced Sulfur</td>
</tr>
<tr>
<td>TSP</td>
<td>Total Suspended Particulate</td>
</tr>
<tr>
<td>USEPA</td>
<td>United States Environmental Protection Agency</td>
</tr>
<tr>
<td>UTM</td>
<td>Universal Transverse Mercator</td>
</tr>
<tr>
<td>VEE</td>
<td>Visual Emissions Evaluation</td>
</tr>
<tr>
<td>VOC</td>
<td>Volatile Organic Compounds</td>
</tr>
<tr>
<td>VOL</td>
<td>Volatile Organic Liquids</td>
</tr>
</tbody>
</table>
2.3. Authority

This permit is issued in accordance with West Virginia Air Pollution Control Act W.Va. Code §§ 22-5-1. et seq. and the following Legislative Rules promulgated thereunder:

2.3.1. 45CSR13 – Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits and Procedures for Evaluation.

2.4. Term and Renewal

2.4.1. This Permit shall remain valid, continuous and in effect unless it is revised, suspended, revoked, or otherwise changed under an applicable provision of 45CSR13 or any other applicable legislative rule.

2.5. Duty to Comply

2.5.1. The permitted facility shall be constructed and operated in accordance with the plans and specifications filed in Permit Application R13-3555, and any modifications, administrative updates, or amendments thereto. The Secretary may suspend or revoke a permit if the plans and specifications upon which the approval was based are not adhered to. [45CSR§§13-5.10 and 10.3.]

2.5.2. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the West Virginia Code and the Clean Air Act and is grounds for enforcement action by the Secretary or USEPA.

2.5.3. Violations of any of the conditions contained in this permit, or incorporated herein by reference, may subject the permittee to civil and/or criminal penalties for each violation and further action or remedies as provided by West Virginia Code 22-5-6 and 22-5-7.

2.5.4. Approval of this permit does not relieve the permittee herein of the responsibility to apply for and obtain all other permits, licenses, and/or approvals from other agencies, i.e., local, state, and federal, which may have jurisdiction over the construction and/or operation of the source(s) and/or facility herein permitted.

2.6. Duty to Provide Information

The permittee shall furnish to the Secretary within a reasonable time any information the Secretary may request in writing to determine whether cause exists for administratively updating, modifying, revoking, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Secretary copies of records to be kept by the permittee. For information claimed to be confidential, the permittee shall furnish such records to the Secretary along with a claim of confidentiality in accordance with 45CSR31. If confidential information is to be sent to USEPA, the permittee shall directly provide such information to USEPA along with a claim of confidentiality in accordance with 40 C.F.R. Part 2.
2.7. **Duty to Supplement and Correct Information**

Upon becoming aware of a failure to submit any relevant facts or a submittal of incorrect information in any permit application, the permittee shall promptly submit to the Secretary such supplemental facts or corrected information.

2.8. **Administrative Update**

The permittee may request an administrative update to this permit as defined in and according to the procedures specified in 45CSR13.

[45CSR§13-4.]

2.9. **Permit Modification**

The permittee may request a minor modification to this permit as defined in and according to the procedures specified in 45CSR13.

[45CSR§13-5.4.]

2.10 **Major Permit Modification**

The permittee may request a major modification as defined in and according to the procedures specified in 45CSR14 or 45CSR19, as appropriate.

[45CSR§13-5.1]

2.11. **Inspection and Entry**

The permittee shall allow any authorized representative of the Secretary, upon the presentation of credentials and other documents as may be required by law, to perform the following:

a. At all reasonable times (including all times in which the facility is in operation) enter upon the permittee’s premises where a source is located or emissions related activity is conducted, or where records must be kept under the conditions of this permit.

b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit.

c. Inspect at reasonable times (including all times in which the facility is in operation) any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and

d. Sample or monitor at reasonable times substances or parameters to determine compliance with the permit or applicable requirements or ascertain the amounts and types of air pollutants discharged.

2.12. **Emergency**

2.12.1. An “emergency” means any situation arising from sudden and reasonable unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused
by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

2.12.2. Effect of any emergency. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions of Section 2.12.3 are met.

2.12.3. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

a. An emergency occurred and that the permittee can identify the cause(s) of the emergency.

b. The permitted facility was at the time being properly operated.

c. During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and

d. The permittee submitted notice of the emergency to the Secretary within one (1) working day of the time when emission limitations were exceeded due to the emergency and made a request for variance, and as applicable rules provide. This notice must contain a detailed description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

2.12.4. In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof.

2.12.5 The provisions of this section are in addition to any emergency or upset provision contained in any applicable requirement.

2.13. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a permittee in an enforcement action that it should have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. However, nothing in this paragraph shall be construed as precluding consideration of a need to halt or reduce activity as a mitigating factor in determining penalties for noncompliance if the health, safety, or environmental impacts of halting or reducing operations would be more serious than the impacts of continued operations.

2.14. Suspension of Activities

In the event the permittee should deem it necessary to suspend, for a period in excess of sixty (60) consecutive calendar days, the operations authorized by this permit, the permittee shall notify the Secretary, in writing, within two (2) calendar weeks of the passing of the sixtieth (60) day of the suspension period.

2.15. Property Rights

This permit does not convey any property rights of any sort or any exclusive privilege.
2.16. **Severability**

The provisions of this permit are severable and should any provision(s) be declared by a court of competent jurisdiction to be invalid or unenforceable, all other provisions shall remain in full force and effect.

2.17. **Transferability**

This permit is transferable in accordance with the requirements outlined in Section 10.1 of 45CSR13. [45CSR§13-10.1.]

2.18. **Notification Requirements**

The permittee shall notify the Secretary, in writing, no later than thirty (30) calendar days after the actual startup of the operations authorized under this permit.

2.19. **Credible Evidence**

Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defense otherwise available to the permittee including, but not limited to, any challenge to the credible evidence rule in the context of any future proceeding.
3.0. Facility-Wide Requirements

3.1. Limitations and Standards

3.1.1. Open burning. The open burning of refuse by any person, firm, corporation, association, or public agency is prohibited except as noted in 45CSR§6-3.1.

3.1.2. Open burning exemptions. The exemptions listed in 45CSR§6-3.1 are subject to the following stipulation: Upon notification by the Secretary, no person shall cause, suffer, allow, or permit any form of open burning during existing or predicted periods of atmospheric stagnation. Notification shall be made by such means as the Secretary may deem necessary and feasible.

3.1.3. Asbestos. The permittee is responsible for thoroughly inspecting the facility, or part of the facility, prior to commencement of demolition or renovation for the presence of asbestos and complying with 40 C.F.R. § 61.145, 40 C.F.R. § 61.148, and 40 C.F.R. § 61.150. The permittee, owner, or operator must notify the Secretary at least ten (10) working days prior to the commencement of any asbestos removal on the forms prescribed by the Secretary if the permittee is subject to the notification requirements of 40 C.F.R. § 61.145(b)(3)(i). The USEPA, the Division of Waste Management, and the Bureau for Public Health - Environmental Health require a copy of this notice to be sent to them.

3.1.4. Odor. No person shall cause, suffer, allow, or permit the discharge of air pollutants which cause or contribute to an objectionable odor at any location occupied by the public.

3.1.5. Permanent shutdown. A source which has not operated at least 500 hours in one 12-month period within the previous five (5) year time period may be considered permanently shutdown, unless such source can provide to the Secretary, with reasonable specificity, information to the contrary. All permits may be modified or revoked and/or reapplication or application for new permits may be required for any source determined to be permanently shutdown.

3.1.6. Standby plan for reducing emissions. When requested by the Secretary, the permittee shall prepare standby plans for reducing the emissions of air pollutants in accordance with the objectives set forth in Tables I, II, and III of 45CSR11.

3.2. Monitoring Requirements

3.3. Testing Requirements

3.3.1. Stack testing. As per provisions set forth in this permit or as otherwise required by the Secretary, in accordance with the West Virginia Code, underlying regulations, permits and orders, the permittee shall conduct test(s) to determine compliance with the emission limitations set forth in this permit and/or established or set forth in underlying documents. The Secretary, or his duly authorized representative, may at his option witness or conduct such test(s). Should the Secretary
exercise his option to conduct such test(s), the operator shall provide all necessary sampling connections and sampling ports to be located in such manner as the Secretary may require, power for test equipment and the required safety equipment, such as scaffolding, railings and ladders, to comply with generally accepted good safety practices. Such tests shall be conducted in accordance with the methods and procedures set forth in this permit or as otherwise approved or specified by the Secretary in accordance with the following:

a. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with 40 C.F.R. Parts 60, 61, and 63 in accordance with the Secretary’s delegated authority and any established equivalency determination methods which are applicable. If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit may be revised in accordance with 45CSR§13-4. or 45CSR§13-5.4 as applicable.

b. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with applicable requirements which do not involve federal delegation. In specifying or approving such alternative testing to the test methods, the Secretary, to the extent possible, shall utilize the same equivalency criteria as would be used in approving such changes under Section 3.3.1.a. of this permit. If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit may be revised in accordance with 45CSR§13-4. or 45CSR§13-5.4 as applicable.

c. All periodic tests to determine mass emission limits from or air pollutant concentrations in discharge stacks and such other tests as specified in this permit shall be conducted in accordance with an approved test protocol. Unless previously approved, such protocols shall be submitted to the Secretary in writing at least thirty (30) days prior to any testing and shall contain the information set forth by the Secretary. In addition, the permittee shall notify the Secretary at least fifteen (15) days prior to any testing so the Secretary may have the opportunity to observe such tests. This notification shall include the actual date and time during which the test will be conducted and, if appropriate, verification that the tests will fully conform to a referenced protocol previously approved by the Secretary.

d. The permittee shall submit a report of the results of the stack test within sixty (60) days of completion of the test. The test report shall provide the information necessary to document the objectives of the test and to determine whether proper procedures were used to accomplish these objectives. The report shall include the following: the certification described in paragraph 3.5.1.; a statement of compliance status, also signed by a responsible official; and a summary of conditions which form the basis for the compliance status evaluation. The summary of conditions shall include the following:

1. The permit or rule evaluated, with the citation number and language.
2. The result of the test for each permit or rule condition; and,
3. A statement of compliance or noncompliance with each permit or rule condition.

[WV Code § 22-5-4(a)(14-15) and 45CSR13]

3.4. Recordkeeping Requirements

3.4.1. Retention of records. The permittee shall maintain records of all information (including monitoring data, support information, reports, and notifications) required by this permit recorded in a form suitable and readily available for expeditious inspection and review. Support
information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation. The files shall be maintained for at least five (5) years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent two (2) years of data shall be maintained on site. The remaining three (3) years of data may be maintained off site, but must remain accessible within a reasonable time. Where appropriate, the permittee may maintain records electronically (on a computer, on computer floppy disks, CDs, DVDs, or magnetic tape disks), on microfilm, or on microfiche.

3.4.2. Odors. For the purposes of 45CSR4, the permittee shall maintain a record of all odor complaints received, any investigation performed in response to such a complaint, and any responsive action(s) taken.

[45CSR§4. State Enforceable Only:]

3.5. Reporting Requirements

3.5.1. Responsible official. Any application form, report, or compliance certification required by this permit to be submitted to the DAQ and/or USEPA shall contain a certification by the responsible official that states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

3.5.2. Confidential information. A permittee may request confidential treatment for the submission of reporting required by this permit pursuant to the limitations and procedures of W.Va. Code § 22-5-10 and 45CSR31.

3.5.3. Correspondence. All notices, requests, demands, submissions and other communications required or permitted to be made to the Secretary of DEP and/or USEPA shall be made in writing and shall be deemed to have been duly given when delivered by hand, or mailed first class or by private carrier with postage prepaid to the address(es), or submitted in electronic format by email as set forth below or to such other person or address as the Secretary of the Department of Environmental Protection may designate:

<table>
<thead>
<tr>
<th>DAQ:</th>
<th>US EPA:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Director</td>
<td>Section Chief</td>
</tr>
<tr>
<td>WVDEP</td>
<td>U.S. Environmental Protection Agency, Region III</td>
</tr>
<tr>
<td>Division of Air Quality</td>
<td>Enforcement and Compliance Assurance</td>
</tr>
<tr>
<td>601 57th Street</td>
<td>Division Air Section (3ED21)</td>
</tr>
<tr>
<td>Charleston, WV 25304-2345</td>
<td>Four Penn Center</td>
</tr>
<tr>
<td></td>
<td>1600 John F. Kennedy Boulevard</td>
</tr>
<tr>
<td>DAQ Compliance and Enforcement¹:</td>
<td>Philadelphia, PA 19103-2852</td>
</tr>
<tr>
<td><a href="mailto:DEPAirQualityReports@wv.gov">DEPAirQualityReports@wv.gov</a></td>
<td></td>
</tr>
</tbody>
</table>

¹For all self-monitoring reports (MACT, GACT, NSPS, etc.), stack tests and protocols, Notice of Compliance Status Reports, Initial Notifications, etc.

3.5.4. Operating Fee

3.5.4.1. In accordance with 45CSR22 – Air Quality Management Fee Program, the permittee shall not operate nor cause to operate the permitted facility or other associated facilities on the same or contiguous sites comprising the plant without first obtaining and having in current effect a Certificate to Operate (CTO). Such Certificate to Operate (CTO) shall be renewed annually, shall be maintained on the premises for which the certificate has been issued, and shall be
made immediately available for inspection by the Secretary or his/her duly authorized representative.

3.5.4.2. In accordance with 45CSR22 – Air Quality Management Fee Program, enclosed with this permit is an Application for a Certificate to Operate (CTO). The CTO will cover the time period beginning with the date of initial startup through the following June 30. Said application and the appropriate fee shall be submitted to this office prior to the date of initial startup. For any startup date other than July 1, the permittee shall pay a fee or prorated fee in accordance with Section 4.5 of 45CSR22. A copy of this schedule may be found on the reverse side of the CTO application.

3.5.5. **Emission inventory.** At such time(s) as the Secretary may designate, the permittee herein shall prepare and submit an emission inventory for the previous year, addressing the emissions from the facility and/or process(es) authorized herein, in accordance with the emission inventory submittal requirements of the Division of Air Quality. After the initial submittal, the Secretary may, based upon the type and quantity of the pollutants emitted, establish a frequency other than on an annual basis.
4.0. Source-Specific Requirements for Processing Medical Waste

4.1. Limitations and Standards

4.1.1. The facility shall only accept and/or process medical waste that is not classified as hazardous waste in 40 CFR §261.3.

a. The following specific waste shall not be accepted:
   i. Trace Chemotherapy Waste.
   ii. Bulk Chemotherapy Waste.
   iii. Radioactive Waste.
   iv. Pharmaceutical Hazardous Waste as defined in 40 CFR 266.500.
   v. Prions or OD infected waste or by-products.

b. The following specific waste may be accepted:
   i. Animal waste.
   ii. Cultures and stocks.
   iii. Anthological/anatomical waste.
   iv. Human waste.
   vi. Sharps.
   vii. Animal waste.
   viii. Spill/cleanup material mixtures.
   ix. Legend drug waste/non-RCRA pharmaceutical waste

c. The permittee shall only store medical waste in either sealed containers or fully enclosed structures at the facility.

4.1.2. The following requirements apply to the pyrolysis unit and associated equipment, which includes the synthetic gas cleaning trains.

a. The permittee shall take all necessary precautions to restrict the spreading of biological and infectious diseases by ensuring the equipment used to process the medical waste prior to the pyrolysis units is a closed system maintained under negative pressure at all times.

b. The permittee shall not operate either pyrolysis train unless the primary synthetic gas cleaning and back-up cleaning train and air pollution control trains are operational.

c. The permittee shall not charge more than 2,942 lb/hr of waste for each pyrolysis train that is in operation into the dryer on a daily average basis.
d. The air pollution control train shall consist of a gas cleaning system, cyclones, regenerative thermal oxidizer, and stack with emergency flare. The gas clean-up system shall include one tar condenser, one oil condensing scrubber and one dosing scrubber. Three (3) parallel trains shall be installed with the 3rd gas cleaning train being a standby train.

e. All synthetic gas generated by each pyrolysis train shall be captured, contained, and routed to the gas clean-up system using a closed vent system.

f. All of the cleaned synthetic gas shall be routed to the combustion unit through a closed vent system.

g. The condensed heavy liquids (tars) from the gas cleaning trains shall be routed to either of the process heaters through a closed piping system.

h. The condensed light liquids (oils) from the gas cleaning trains shall be routed back to the pyrolysis train through a closed piping system.

i. The cleaned synthetic gas generated by the pyrolysis units shall not contain a hydrogen sulfide concentration greater than 50 grains per 100 cubic feet of synthetic gas on a 3-hour averaging basis.

[45 CSR §10-5.1. and §10-5.4.]

j. The permittee shall develop and implement a leak detection and repair program to detect leaking components and/or equipment, and repair leaks or defects in a timely fashion in accordance with the following:

i. Equipment and components in liquid service: A leak is defined as any visual indication a leak is occurring or a defective piece of equipment.

ii. Equipment and components in gas service: The equipment and closed vent system, to include connectors, shall be free of defects including, but are not limited to, visible cracks, holes, or gaps in piping; loose connections; liquid leaks; or broken or missing caps or other closure devices. If using Method 21, an instrument reading of 500 ppm or greater is classified as a leak.

iii. The permittee shall develop a monitoring plan using appropriate process parameters to indicate whether a potential leak is occurring or there is a potential defect in each pyrolysis train. The permittee shall develop a written monitoring plan that outlines the locations of sensors; selection of the parameter(s) and value setpoints that would indicate a potential leak; procedures for how the system will work; to include sensors or instruments used; how the system will be maintained and calibrated; and an action plan for a potential leak which must describe how the system will notify the operators of a potential leak and how the event will be recorded. A copy of the monitoring plan shall be maintained on site at all times and made available upon request to the Director and his/her designee. The requirement for maintaining records of the monitoring plan shall apply to all revisions to the plan.

iv. When a defect or leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after it is detected unless the leak resulted in a train or process shutdown then the leak or defect shall be repaired prior to restarting the train and/or process.
k. The gas cleaning train shall be operated in a manner to remove all detectable levels of chlorine or chlorinated compounds. The permittee shall develop operating levels for the circulation rate and either the pH level or conductivity of the scrubbing liquor used to remove chlorine or chlorinated compounds to non-detectable levels in the cleaned synthetic gas.

l. Exhaust from the process heaters shall be routed to the dryer and then to the regenerative thermal oxidizer at all times.

m. The permittee shall operate the regenerative thermal oxidizer in accordance with Condition 4.1.3.

n. The permittee shall operate the flare in accordance with Condition 4.1.4.

o. For start-up operations of the pyrolysis units, the permittee shall use only propane, natural gas or cleaned synthetic gas for startup operations. This applies to the dryer and process heater (vitrifier) for both pyrolysis trains.

p. Prior to the initial startup of the pyrolysis trains, the permittee shall make a non-waste/waste determination or submit a petition to the Administrator of all streams exiting the pyrolysis train (e.g., synthetic gas, tars) that are being routed to a combustion device as fuel for the combustion unit. Such determination or petition shall be conducted or submitted in accordance with 40 CFR 241.3 and Condition 3.5.1. A record of this determination or petition shall be maintained on site for the life of the pyrolysis trains.

i. The permittee could petition EPA for a non-categorical non-waste determination or categorical non-waste determination, as outlined in 40 CFR 241.3(c) and 40 CFR 241.4(b); or

ii. Should the permittee instead make a site specific “self-determination” as allowed under RCRA Part 241 that the NSHM (i.e., the synthetic gas, tars, and carbon residue) are not a solid waste when burned as a fuel under 40 CFR 241.3(b); The self-determination must document how the operations that produced the fuel satisfy the definition of processing in 40 CFR 241.2, and show how the secondary material, after processing, meets each of the legitimacy criteria under 40 CFR 241.3(d)(1).

q. The total heat input of any of the permitted fuels in item l. of this condition shall not exceed 20.0 MMBtu/hr and not exceed a total 114.7 MMBtu per startup cycle.

r. The permittee shall develop and implement a written startup operating procedure(s) which must identify which parameters with corresponding values must be satisfied before medical waste is introduced into the dryer and each pyrolysis train. The purpose of the startup procedure(s) is to limit the duration of startup while minimizing the amount of raw synthetic gas being vented through the emergency flare. A review of the procedure(s) shall be conducted by the permittee once every two years. The permittee may revise the procedure(s) at any time with just cause.

s. Each pyrolysis unit shall be operated in an oxygen free/limited atmosphere which shall not contain an oxygen concentration greater than 3% except during startup and shutdown events.

t. All pressure relief devices shall be hard piped to the emergency flare (2C).
4.1.3. The regenerative thermal oxidizer (RTO, Emission Unit ID 1000, and Control Device 1C) shall be operated and maintained in accordance with the following requirements.

a. The emissions from the regenerative thermal oxidizer shall not exceed the respective limits in the following.

i. Oxides of nitrogen (NOx) emissions no greater than 5.70 lb/hr on a 3-hour average basis except during startup operations. During startup, oxides of nitrogen shall not exceed 84.24 pounds over each entire startup event.

ii. Carbon monoxide (CO) emissions no greater than 22.6 lb/hr on a 3-hour average basis.

iii. Sulfur dioxide (SO2) emissions no greater than 8.90 lb/hr on a 3-hour average hour basis.

iv. Particulate matter emissions no greater than 3.20 lb/hr on a 3-hour average basis.

v. Particulate matter less than 10 micron emissions no greater than 3.20 lb/hr on a 6-hour average basis.

vi. Particulate matter less than 2.5 micron emissions no greater than 2.05 lb/hr on a 6-hour average basis.

vii. Volatile organic compounds emissions no greater than 5.48 lb/hr on a 3-hour average basis.

viii. Total HAP emissions shall not exceed 0.46 pounds per hour on a 3-hour average.

ix. Visible Emissions (opacity) from emission point 1000 shall not equal or exceed 20% opacity on a six (6) minute average basis.

b. When the Continuous Emission Monitoring systems (CEMs) are employed per Condition 4.2.8., the permittee shall determine compliance with the applicable limits in item a. of this condition based on a 24-hour block average calculated, as specified in Section 12.4.1 of EPA Reference Method 19 of appendix A-7 of 40 CFR 60. Startup emissions except for NOx emissions shall be included in the 24-hour block average. For NOx emissions during startup, the permittee shall determine the NOx emissions for each startup event and exclude those emissions from the 24-hour block average.

c. The permittee shall install, operate, and maintain the regenerative thermal oxidizer with a minimum destruction efficiency of no less than 95% for VOCs or a VOC concentration of no greater than 20 ppmvd at 12 % O2 on a propane basis.

d. The permittee shall establish a minimum combustion operating temperature for the thermal oxidizer based on satisfying the respective minimum VOC Destruction Efficiency or VOC concentration requirements of Condition 4.1.3.c. through a compliance demonstration as required in Condition 4.3.1. This combustion operating temperature shall be established by taking the average of 3 test runs using the hourly average of each recorded combustion temperature readings during the required compliance demonstration. The new VOC destruction efficiency for the respective thermal oxidizer will be utilized for determining actual emissions in the following month after a test report demonstrating compliance with the efficiency requirements of item c of Condition 4.1.2. has been submitted to the Director in accordance with Condition 3.3.1.
e. The permittee shall not operate the regenerative thermal oxidizer more than 10 degrees Fahrenheit below the most recently established minimum combustion operating temperature at all times when any amount of synthetic gas is being generated from the pyrolysis process, except during startup.

f. When a new minimum combustion operation temperature is established, the permittee shall begin operating the regenerative thermal oxidizer at the newly established minimum combustion operating temperature the following month after submission of the compliance report to the Director as required in Conditions 3.3.1. and 4.3.1. of this permit.

g. Natural gas and propane are the only permitted supplemental fuel sources for the thermal oxidizer. The permittee shall not introduce more than 2.20 MMBtu/hr of supplemental fuel into the regenerative thermal oxidizer during normal operations.

h. During startup operations of the pyrolysis units the following requirements shall apply for the regenerative thermal oxidizer:

   i. The total heat input of supplemental fuel to the regenerative thermal oxidizer shall not exceed 3.8 MMBtu/hr for six hours or a total of 22.7 MMBtu per startup event.

4.1.4. The flare (Emission ID 1000E and Control Device 2C) shall be installed, operated, and maintained in accordance with the following requirements.

   a. The emissions from the flare (Emission Point 1000E) shall not exceed the respective limits in the following table.

<table>
<thead>
<tr>
<th>Table 4.1.2.a. Emission Limits for the Flare</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOx (lb/hr)</td>
</tr>
<tr>
<td>Flare</td>
</tr>
</tbody>
</table>

   b. The permittee shall install, operate, and maintain the flare with a minimum destruction efficiency of no less than 98% for VOCs while complying with the following requirements:

      i. Exit velocity of effluent from the flare tip shall not exceed 10 m/s (33 ft/s).

      ii. Effluent to the flare shall have a gross heating value of not less than 11.2 MJ/scm (300 Btu/scf).

      iii. The permittee shall not operate the flare with visible emissions of 20% opacity or greater from the emission point 1000E.

      [45 CSR §6-4.3.]

      iv. The permittee shall maintain the flare in an operational status with the pilot light lit at all times when either pyrolysis train is operating, which includes startup and shutdown operations.

   c. The permittee is permitted to use either natural gas or propane as the fuel supply for the pilot light with a maximum heat input no greater than 0.1 MMBtu/hr.

4.1.5. The annual combined emissions from the emission points 1000 and 1000E shall not exceed the following limits on a 12-month rolling basis.

   a. NOx emission rate shall not exceed 24.0 tons per year.
b. CO emissions rate shall not exceed 99.0 tons per year.

c. SO\textsubscript{2} emission rate shall not exceed 39.0 tons per year.

d. VOC emission rate shall not exceed 24.0 tons per year.

e. PM\textsubscript{10} emission rate shall not exceed 14.0 tons per year.

f. PM2.5 emission rate shall not exceed 9.0 tons per year.

g. Total HAP emission rate shall not exceed 2.0 tons per year.

4.1.6. The permittee shall maintain all paved and unpaved roadways at the facility in a fashion that minimizes fugitive PM from such sources. Specifically, the permittee shall apply control measures to all active unpaved roadways that prevent fugitive PM from being discharged beyond the boundary lines of the facility. Such control measures can be the application of water or chemical treatments, or other measures that reduce the silt concentration of the roadway. Records of such efforts shall be maintained in accordance with Condition 3.4.1. of this permit.

4.1.7. **Operation and Maintenance of Air Pollution Control Equipment.** The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Section 1.0 and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.

4.2. **Monitoring Requirements**

4.2.1. The permittee shall monitor the following parameters of the process (each pyrolysis train), gas cleaning trains, and associated control devices (cyclones and RTO/Flare).

**Pyrolysis Unit:**

- Feed Rate into the shredder in terms of lb/hr for each operating hour.
- Dryer temperature on a continuous basis.
- Pressure within each pyrolysis train on a continuous basis.
- Number of pyrolysis trains operating for each operating hour.
- Clean synthetic gas produced in terms of scfh on an hourly basis.
- Operating Temperature of each pyrolysis train on a continuous basis.
- Oxygen Content of each pyrolysis train on a continuous basis.

**Gas Cleaning Trains:**

- Temperature of the synthetic gas or tar exiting the tar separator on a continuous basis.
Temperature of the synthetic gas or oils exiting the oil separator on a continuous basis.

Temperature of the scrubbing liquor at or near each oil skimmer on a continuous basis.

Liquid level in each separator on a continuous basis.

Ph or conductivity of the scrubbing liquor at or near each oil skimmer.

Dryer Cyclones:

The pressure drop across each cyclone in terms of inches of water column on a daily basis.

Regenerative thermal oxidizer (Control Device 1C):

Combustion chamber temperature in degrees Fahrenheit on an hourly basis.

Amount of propane consumed on a daily basis.

Flare (Control Device 2C):

Presence of flame for the pilot light on a continuous basis.

The total and peak volumetric flow rate of effluent being routed to the device during each event that effluent is being routed.

Date/time and duration of venting to the flare.

The reason for routing effluent to the device.

Such records shall identify the method and/or procedures used in the analysis, date sample taken, date of the analysis, and the results maintained in accordance with the Condition 3.4.1. of this permit.

4.2.2. The permittee shall determine the heat content and sulfur content of the synthetic gas generated by the pyrolysis units in accordance with the following schedule.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>First 6 Months After Initial Startup</th>
<th>Months 7 through 12 after Initial Startup</th>
<th>Thereafter from 12 months after initial startup</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen Sulfide and Sulfur Content</td>
<td>One sample every 2 months</td>
<td>One sample every 3 months</td>
<td>Once every 12 months</td>
</tr>
<tr>
<td>Heat Content</td>
<td>One sample every month</td>
<td>One sample every 2 months</td>
<td>One sample every 3 months</td>
</tr>
</tbody>
</table>

The permittee shall select a sampling location for the synthetic gas sample that is representative of the combined cleaned synthetic gas from both pyrolysis trains. The permittee shall take a representative gas sample and analyze to determine the gross calorific value (GCV), hydrogen sulfide concentration and total sulfur content in accordance with the following method(s) and procedure(s).
The permittee shall use one of the following methods when using manual sampling (as applicable to the type of gas combusted) to determine the sulfur content of the fuel: ASTM D1072-06, Standard Test Method for Total Sulfur in Fuel Gases by Combustion and Barium Chloride Titration, ASTM D4468-85 (Reapproved 2006), Standard Test Method for Total Sulfur in Gaseous Fuels by Hydrogenolysis and Rateometric Colorimetry, ASTM D5504-01, Standard Test Method for Determination of Sulfur Compounds in Natural Gas and Gaseous Fuels by Gas Chromatography and Chemiluminescence, ASTM D6667-04, Standard Test Method for Determination of Total Volatile Sulfur in Gaseous Hydrocarbons and Liquefied Petroleum Gases by Ultraviolet Fluorescence, or ASTM D3246-96, Standard Test Method for Sulfur in Petroleum Gas by Oxidative Microcoulometry, (all incorporated by reference under 40 CFR §75.6). Alternatively, the gas samples may be analyzed for percent sulfur by any consensus standard method prescribed for the affected unit under 40 CFR 60 or an alternative method approved by the Director.

The permittee shall determine the GCV and composition of the gaseous fuel (synthetic gas) at the frequency specified in this condition, using the following methods: ASTM D1945-96(2001), ASTM D3588-98, ASTM D4891-89 (Reapproved 2006), GPA Standard 2172-96, Calculation of Gross Heating Value, Relative Density and Compressibility Factor for Natural Gas Mixtures from Compositional Analysis, or GPA Standard 2261-00, Analysis for Natural Gas and Similar Gaseous Mixtures by Gas Chromatography (all incorporated by reference under 40 CFR §75.6). Alternatively, the gas samples may be analyzed for heat content by any consensus standard method prescribed for the affected unit under 40 CFR 60 or an alternative method approved by the Director.

Such records shall identify the method and/or procedures used in the analysis, date sample taken, date of the analysis, sample location and the results maintained in accordance with the Condition 3.41. of this permit.

4.2.3. The permittee shall conduct periodic monitoring of the regenerative thermal oxidizer (Control Device 1C) to measure the NOx, CO and O2 concentrations in the exhaust of the regenerative thermal oxidizer using a portable electro-chemical gas analyzer in accordance with the following schedule.

<table>
<thead>
<tr>
<th>Monitoring Frequency</th>
<th>First 6 Months After Initial Startup</th>
<th>Months 7 through 12 after Initial Startup</th>
<th>From 12 months after Initial Startup</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Monthly</td>
<td>Quarterly</td>
<td>Once every 6 months</td>
</tr>
</tbody>
</table>

Such monitoring shall be conducted in accordance with the following:

a. Conduct three monitoring runs of at least 20 minutes duration per run. The duration between runs shall be at least 20 minutes and no more than 60 minutes.

b. Determine NOx and CO emissions and O2 concentrations in the exhaust using an electro-chemical cell portable gas analyzer maintained in accordance with the manufacturer’s specifications and procedures.

c. The measured NOx and CO concentrations shall be corrected to zero percent oxygen and averaged for the three runs.

d. Records of such monitoring shall include the following and be maintained in accordance with Condition 3.41. of this permit:
i. The date, start and end time of each run.

ii. The measured and corrected NOx concentration in ppmv for each run.

iii. The measured and corrected CO concentration in ppmv for each run.

iv. The measured CO concentration in percent for each run.

v. The average corrected NOx concentration in ppmv for the test.

vi. The average corrected CO concentration in ppmv for the test.

vii. Make, model and serial number of the analyzer used during the test.

viii. Name of operator who conducted the test.

When the CEMs required in Condition 4.2.8. have been certified and are operating in accordance with the quality assurance and quality checks as required in Condition 4.2.8., the monitoring specified in this condition is suspended.

4.2.4. To determine compliance with the opacity limits of Condition 4.1.2.a.viii., the permittee shall conduct visible emission checks and/or opacity monitoring and recordkeeping for the regenerative thermal oxidizer (Control Device 1C).

The visible emission check shall determine the presence or absence of visible emissions. At a minimum, the observer must be trained and knowledgeable regarding the effects of background contrast, ambient lighting, observer position relative to lighting, wind, and the presence of uncombined water (condensing water vapor) on the visibility of emissions. This training may be obtained from written materials found in References 1 and 2 from 40 CFR Part 60, Appendix A, Method 22 or from the lecture portion of the 40 CFR Part 60, Appendix A, Method 9 certification course.

The permittee shall verify compliance with Condition 4.1.2.a.viii. by taking visual observations using U.S. EPA Method 22 for one minute once per calendar month with a maximum of forty-five (45) days between consecutive readings. Should the permittee observe visible emissions from emission point 1E during the one-minute observation, then the permittee shall continue the observation for an additional five minutes. If the cumulative time that visible emissions are observed exceeds 55 seconds, the permittee shall conduct corrective action(s) to bring control device 1C back into proper operating conditions of no visible emissions within 48 hours of the initial observation or by re-verifying compliance with Method 22 observations or the permittee shall conduct a Method 9 observation to demonstrate compliance with the opacity standard of Condition 4.1.1.d. within 10 days of the initial observation. Records of these observations and any corrective actions shall be maintained in accordance with Condition 3.4.1. [45 CSR §6-7.1.]

4.2.5. The permittee shall verify compliance with Condition 4.1.3.b.iii. by taking visual observations using U.S. EPA Method 22 for one minute during startup operations of the pyrolysis trains once every 12 months. If the pyrolysis train has not undergone a shutdown and startup cycle within 12-months of the previous observation, then the permittee shall conduct an observation during the next startup of the pyrolysis trains. Should the permittee observe visible emissions from the flare during the one-minute observation, then the permittee shall continue the observation for an additional fourteen minutes. If the cumulative time that visible emissions was observed exceeds sixty seconds, the permittee shall conduct corrective action(s) to bring the control device (flare)
back into proper operating conditions as outlined in Condition 4.1.3.b.iii. within 48 hours of the initial observation and re-verifying compliance with Method 22 observation. Records of these observations and any corrective actions shall be maintained in accordance with Condition 3.4.1.  

[45 CSR §6-7.1.]

4.2.6. After 30 days from initial startup of the pyrolysis trains and prior to conducting the initial compliance demonstration as required in Condition 4.3.2., the permittee shall sample and analyze the liquid streams being fed to each process heater (vitrifier) and solid residue leaving the pyrolysis trains to determine the heat content, composition, and total sulfur content of these stream(s). This sampling and analysis shall be repeated at a frequency of no less than once every 12 months.

The analysis shall determination the composition of the following substances:

<table>
<thead>
<tr>
<th>Substance</th>
<th>Composition</th>
</tr>
</thead>
<tbody>
<tr>
<td>O₂</td>
<td>CaO</td>
</tr>
<tr>
<td>CO₂</td>
<td>Na₂O</td>
</tr>
<tr>
<td>CO</td>
<td>HCl</td>
</tr>
<tr>
<td>CH₄</td>
<td>Cl</td>
</tr>
<tr>
<td>H₂</td>
<td>H₂O</td>
</tr>
<tr>
<td>C₁₈H₃₀</td>
<td>MgO</td>
</tr>
<tr>
<td>C₂₅H₄₂</td>
<td>Fe₂O₃</td>
</tr>
<tr>
<td>N₂</td>
<td>SO₂</td>
</tr>
</tbody>
</table>

Records of the analysis shall include the results; methods used to perform the analytical analysis; name and address of the laboratory that conducted the analysis; date, and time the sample was obtained. Such records shall be maintained in accordance with Condition 3.4.1. of this permit.

4.2.7. Within 12-months after determining an average hydrogen sulfide concentration equal to or greater than 45 grains per 100 scf of synthetic gas, the permittee shall install and certify a continuous emission monitoring system for H₂S in accordance with the approved monitoring plan.  

[45 CSR §10A-6.3.b.2.]

4.2.8. Continuous Emission Monitors (CEMS): The permittee shall install, calibrate, operate, and maintain CEMS to measure and record the emissions from the Emission Point 1000 in terms of the applicable limitations in this permit. The monitoring system shall be installed and functioning within the required performance specifications no later than 12-months after initial start of the regenerative thermal oxidizer.

a. This system shall utilize FTIR technology in measuring multiple different pollutants concurrently, which shall include the following list (Table 4.2.8.) and all volatile organic HAPs measured with an hourly average rate of greater than 0.004 lb/hr during the initial compliance testing as required in Condition 4.3.1.:

<table>
<thead>
<tr>
<th>Criteria Pollutants</th>
<th>Hazardous Air Pollutants</th>
<th>Other Pollutants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrogen Monoxide (NO)</td>
<td>Acetaldehyde – VOC</td>
<td>Carbon Dioxide (CO₂)</td>
</tr>
<tr>
<td>Nitrogen Dioxide (NO₂)</td>
<td>Acrolein – VOC</td>
<td>Methane (CH₄)</td>
</tr>
<tr>
<td>Carbon Monoxide (CO)</td>
<td>Benzene – VOC</td>
<td>Ethane (C₂H₆)</td>
</tr>
<tr>
<td>Sulfur Dioxide (SO₂)</td>
<td>1,3-butadiene – VOC</td>
<td>Oxygen (O₂)</td>
</tr>
<tr>
<td>Chlorine</td>
<td></td>
<td>Sulfuric Acid</td>
</tr>
<tr>
<td>Ethylene</td>
<td>Ethylene</td>
<td>Hydrogen sulfide</td>
</tr>
<tr>
<td>Formaldehyde – VOC</td>
<td>Hydrogen</td>
<td></td>
</tr>
<tr>
<td>Hydrogen Fluoride</td>
<td>Propane (C₃H₈)</td>
<td></td>
</tr>
<tr>
<td>Hydrogen Cyanide</td>
<td>Ethylene – VOC</td>
<td></td>
</tr>
</tbody>
</table>
### Table: VOCs and HAPs

<table>
<thead>
<tr>
<th>Hydrogen Chloride</th>
<th>n-Butane – VOC</th>
</tr>
</thead>
<tbody>
<tr>
<td>n-Hexane – VOC</td>
<td>Iso Butane – VOC</td>
</tr>
<tr>
<td>Methylcyclohexane – VOC</td>
<td>n-Pentane – VOC</td>
</tr>
<tr>
<td>Methyl Chloride – VOC</td>
<td></td>
</tr>
<tr>
<td>Naphthalene – VOC</td>
<td></td>
</tr>
<tr>
<td>Toluene – VOC</td>
<td></td>
</tr>
<tr>
<td>n-Xylene – VOC</td>
<td></td>
</tr>
<tr>
<td>p-Xylene – VOC</td>
<td></td>
</tr>
<tr>
<td>o-Xylene – VOC</td>
<td></td>
</tr>
<tr>
<td>Acrolein – VOC</td>
<td></td>
</tr>
</tbody>
</table>

1. NO and NO<sub>2</sub> shall be summed together as NO<sub>x</sub>.
2. HAPs shall be reported individually and summed together as total HAPs.
3. VOCs shall be reported as the sum of identified VOCs.

**a.** The use of any instrument measuring technology other than FTIR shall be approved by the Director prior to the installation of such a system except for oxygen. The oxygen content of the exhaust may be measured with a different instrument that meets the Performance Specification 3 of Appendix B to 40 CFR 60. The samples used for the FTIR CEM and oxygen analyzer must take place at the same stack location.

**b.** The selected CEMs shall have a life expectancy from the manufacturer of no less than 10 years of continuous operation.

**c.** The permittee shall install a flow measuring instrument to continuously measure exhaust flow or alternative flow measuring procedures approved by the Director. The readings from this flow measurement instrument shall be integrated in the data acquisition and handling system of the CEMs.

**d.** The permittee shall develop a written monitoring plan. This plan shall describe how the facility monitors its emissions. Monitoring plan data define relationships between stacks, pipes, and units; specify locations at a facility from which emissions are monitored; and identify monitoring equipment including the individual system components.

**e.** All CEMs shall meet performance specifications in accordance with PS 16 of Appendix B to 40 CFR 60.

**f.** The permittee shall use all valid readings to determine emissions.

**g.** The permittee shall operate the CEMs in accordance with the applicable procedures under appendices B and F of 40 CFR 60.

**h.** The permittee shall maintain all CEMs and all other supporting systems with a system availability of no less than 75% of the operating hours per day for 90 percent of the operating days per calendar quarter that the pyrolysis trains are in operation.

**i.** After 43,800 hours of monitored operation of actual operations of the pyrolysis units, the permittee may petition the Director to discontinue operation of the CEMs. Such a petition shall be submitted in accordance with Condition 4.5.5. and 45 CSR 13.

**j.** The permittee shall determine the emissions of each criteria and hazardous air pollutant in terms of hourly rate for each hour in terms of lb/hr; and 24-hour block average, calculated as specified in Section 12.4.1 of EPA Reference Method 19 of appendix A-7 of 40 CFR 60 in terms of lb/hr and ppmvd.
All records shall be maintained in accordance with Condition 3.4.1., which shall include emission data, calibration, relative accuracy testing audit (RATAs), and maintenance performed on the instrument.

4.2.9. The permittee shall monitor the pyrolysis trains and associated process equipment for equipment leaks in accordance with the following requirements:

a. Conduct an initial visual, olfactory, and auditory inspection for defects that could result in air emissions within 180 days of issuance of this permit.

b. After the completion of the initial inspection, subsequent inspections shall be conducted in accordance with the following:

   i. Conduct visual inspection of all pumps for visual indicators of leaking seals no less than once per month.

   ii. Conduct a visual, olfactory, and auditory inspection of each pyrolysis train for defects that could result in air being entrained into the pyrolysis process within 15 days of planned shutdown event.

   iii. Conduct a visual, olfactory, and auditory inspection of the piping system in gas service no less than once per month.

c. Detected leaks shall be repaired in accordance with the timing stated in Condition 4.1.2.h.iii

d. Records of such inspections and any repairs made shall be maintained in accordance with 3.4.1.

e. To verify repairs, the permittee shall use either the method that detected the leak or the procedures listed as Alternative Methods to Method 21 (i.e., soapy water).

4.2.10. The permittee shall conduct a hazardous determination per 40 CFR 262.11 of the streams leaving the process at least once every 12 months. Should a determination yield that any stream, that is routed to a combustion unit, is hazardous, the permittee shall notify the Director within 10 days of the determination in accordance with Condition 3.5.3. of this permit. The permittee shall cease operations immediately until a compliance plan that addresses the combustion of the hazardous secondary material has been approved by the Director. Records of each determination shall be maintained in accordance with Condition 3.4.1. of this permit.

4.3. Testing Requirements

4.3.1. The permittee shall conduct within 180 days after initial startup of the regenerative thermal oxidizer a performance determination to demonstrate compliance with the hourly VOC limit of Condition 4.1.3.a.vii. and minimum destruction efficiency of Condition 4.1.3.b. for the regenerative thermal oxidizer (1C), and once every 61 months from the previous compliance demonstration thereafter. During such demonstration, the permittee shall determine the minimum operating combustion chamber temperature for the oxidizer. Such demonstration shall be conducted in accordance with Condition 3.3.1. of this permit using U.S. EPA Method 25A and Method 320 to determine methane and ethane emissions unless an alternative method is approved by the Director. Method 320 results of methane and ethane shall be used to subtract these two non-VOC rates from the Method 25A VOC rates. Such testing shall be conducted with the pyrolysis process operating at not less than 90% of the permitted daily charge rate. Records of the demonstration shall be maintained in accordance with Condition 3.4.1. of this permit.

4.3.2. The permittee shall conduct within 180 days of initial startup of the regenerative thermal oxidizer a performance determination to demonstrate compliance with the hourly emission limits of
Condition 4.1.3.a except for VOCs. The permittee shall conduct such a demonstration using U.S. EPA Methods 320 and 29 to measure NO\textsubscript{x}, CO, SO\textsubscript{2}, formaldehyde, hydrogen chloride, n-hexane, fluorides, sulfuric acid, acetaldehyde, benzene, 1,3-butadiene, chlorine, hydrogen fluoride, hydrogen cyanide, naphthalene, methyl chloride, toluene, vinyl chloride, xylene, antimony, arsenic, beryllium, cadmium, chromium III, chromium VI, cobalt, copper, lead, manganese, mercury, nickel, selenium, and zinc, which shall consist of three (3) 1-hour test runs. PM\textsubscript{10} and PM\textsubscript{2.5} emissions shall be measured using U.S. EPA Methods 201A and 202 to determine the filterable and condensable fractions of the particulate matter. Such demonstrations shall be conducted in accordance with Condition 3.3.1. of this permit. Records of the demonstrations shall be maintained in accordance with Condition 3.4.1. of this permit.

4.3.3. The permittee shall conduct testing within 180 days of initial startup of the Emission Point 1000 (RTO Stack) to measure dioxins and furans, which shall include polychlorinated dibenzodioxins (PCDDs), polychlorinated dibenzofurans (PCDFs), polychlorinated biphenyls (PCBs), and polycyclic aromatic hydrocarbons (PAHs) being discharged to the atmosphere. Such testing for dioxins and furans shall be conducted with the pyrolysis process operating at not less than 90% of the permitted daily charge rate of medical waste and in accordance with EPA Method 23 taking the average of three runs, with each run consisting of a minimum of 4 hours. The testing for PCDDs, PCDFs, PCBs, and PAHs shall be performed in accordance with EPA’s “Other Test Method” (OTM) 46. Such testing shall be conducted in accordance with Condition 3.3.1. of this permit. The results of the testing shall be reported in terms of nanograms per dry standard cubic meter, nanogram per dry standard cubic meter toxic equivalency (TEQ), and lb per hour. For determining toxic equivalency, the permittee shall utilize the procedure outlined in 40 CFR 60.56c(b)(11) and Table 2 to Subpart Ec of Part 60 – Toxic Equivalency Factors. Such demonstration shall be conducted in accordance with Condition 3.3.1. of this permit. Records of the testing shall be maintained in accordance with Condition 3.4.1. of this permit.

4.3.4. The permittee shall conduct subsequent compliance demonstrations in accordance with Condition 4.3.2. within 180 days after measuring a concentration in excess of the following table.

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Triggering Concentration (ppmv)</th>
<th>Type of Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO</td>
<td>2,532</td>
<td>Hourly Avg</td>
</tr>
<tr>
<td></td>
<td>3,377</td>
<td>Individual Corrected Measurement Run</td>
</tr>
<tr>
<td>NO\textsubscript{x}</td>
<td>374</td>
<td>Hourly Avg</td>
</tr>
<tr>
<td></td>
<td>498</td>
<td>Individual Corrected Measurement Run</td>
</tr>
</tbody>
</table>

4.3.5. At any instance that the results of the hydrogen sulfide analysis, as required in Condition 4.2.2. yields a concentration equal to or greater than 45 grains per 100 scf of synthetic gas, the permittee shall determine the 3-hour average concentration of hydrogen sulfide concentration of the synthetic gas within 180 days of receiving the results of such testing. Such determination shall be conducted in accordance with U.S. EPA Method 15 and Condition 3.3.1. of this permit.

4.3.6. During all demonstrations required in this section, the permittee shall include all measured parameters and process data as required to be monitored as stated in Condition 4.2.1. with the report of such a determination.

4.3.7. The permittee shall implement the necessary process changes/improvements to reduce dioxins and furans within 30 days of receipt of approval as required in Condition 4.5.8. No later than 60 days after completing these changes/improvements, the permittee shall conduct subsequent test(s) to measure dioxins and furans from Emission Point 1000 as prescribed in the approved testing plan and testing protocol as required in Condition 4.5.8. and Condition 3.3.1. of this permit. Records of such testing shall be maintained in accordance with Condition 3.4.1. of this permit.
4.4. **Recordkeeping Requirements**

4.4.1. **Record of Monitoring.** The permittee shall keep records of monitoring information that include the following:

a. The date, place as defined in this permit, and time of sampling or measurements.

b. The date(s) analyses were performed.

c. The company or entity that performed the analyses.

d. The analytical techniques or methods used.

e. The results of the analyses; and

f. The operating conditions existing at the time of sampling or measurement.

4.4.2. **Record of Maintenance of Air Pollution Control Equipment.** For all pollution control equipment listed in Section 1.0, the permittee shall maintain accurate records of all required pollution control equipment inspection and/or preventative maintenance procedures.

4.4.3. **Record of Malfunctions of Air Pollution Control Equipment.** For all air pollution control equipment listed in Section 1.0, the permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess emissions occur. For each such case, the following information shall be recorded:

a. The equipment involved.

b. Steps taken to minimize emissions during the event.

c. The duration of the event.

d. The estimated increase in emissions during the event.

For each such case associated with an equipment malfunction, the additional information shall also be recorded:

e. The cause of the malfunction.

f. Steps taken to correct the malfunction.

g. Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.

4.4.5. No later than 15 days after the end of each month, the permittee shall determine the actual emissions from emission points 1000 and 1000E that were emitted during the previous month and the 12-month rolling total to demonstrate compliance with the annual emission limits in Condition 4.1.5. The permittee shall utilize the most current operation and emission data available in determining actual emissions. Such records shall be maintained in accordance with Condition 3.4.1. of this permit.
4.4.6. The permittee shall determine whether each stream leaving the pyrolysis process (synthetic gas, synthetic gas, tar, and carbon residue) is a waste or non-waste in accordance with 40 CFR Part 241.3.(d)(1)(iii) no less than once per calendar year. Records of each determination and any analysis performed shall be maintained in accordance with Condition 3.4.1. Should the synthetic gas or tar be determined to be a “waste”, the permittee shall cease operations immediately and develop a compliance plan. Upon any determination that the particular stream is a waste, the permittee shall submit a notification to the Director in accordance with Condition 3.5.3. within 15 days of such determination, which shall include a compliance plan.

4.5. Reporting Requirements

4.5.1. Any deviations(s) of the allowable visible emission requirement for any emission source discovered during observations using 40 CFR Part 60, Appendix A, Method 9 must be reported in writing to the Director of the Division of Air Quality as soon as practicable, but within ten (10) calendar days, of the occurrence and shall include, at a minimum, the following information: the results of the visible determination of opacity of emissions, the cause or suspected cause of the violation(s), and any corrective measures taken or planned. Such notification shall be submitted in accordance with Section 3.5. of this permit. A record of such report shall be maintained in accordance with Condition 3.4.1.

4.5.2. Any deviation(s) from the regenerative thermal oxidizer (Control Device 1C) design and operation criteria in Condition 4.1.3. shall be reported in writing to the Director as soon as practicable, but in any case, within ten (10) calendar days of discovery of such deviation. Such notification shall be submitted in accordance with Section 3.5. of this permit. A record of such report shall be maintained in accordance with Condition 3.4.1.

4.5.3. For any instance where the results of the hydrogen sulfide monitoring as required in Condition 4.2.2. yields a concentration of equal to or greater than 45 grains per 100 scf of synthetic gas, the permittee shall notify the Director within 10 days of receiving the results of the sampling analysis. Such notification shall include the laboratory results/report, chain of custody of the sample, location that the sample was taken from, and date/time the sample was taken. This notification shall be submitted in accordance with Condition 3.5.1. and records of the notification maintained in accordance with Condition 3.4.1.

4.5.4. At any instance where the results of the hydrogen sulfide testing as required in Condition 4.3.4. yields an average concentration equal to or greater than 45 grains per 100 scf of synthetic gas, the permittee shall develop and submit a monitoring plan to monitor the concentration of hydrogen sulfide in the synthetic gas within 60 days of receiving the results of such testing for the Director approval. This submittal shall be submitted in accordance with Condition 3.5.1. of this permit. Such monitoring plan shall comply with the requirements of 45 CSR §10A-6.4. 

4.5.5. After initial startup, the permittee shall submit monthly reports to the Director by the 15th of the following month. These reports shall contain the following for each reporting period:

a. Total and daily average of medical waste processed.

b. Hours of operation of each pyrolysis train.

c. Date and times of all shut down and startup events.

d. Any exceedances of any of the permit conditions in Sections 4. of this permit.

e. Explanation and/or actions taken of the exceedances.
f. Monthly and 12-month rolling total emissions from Emission Points 1000 and 1000E.

Such submittals shall be in accordance with Condition 3.5.3. and maintained in accordance with Condition 3.4.1 of this permit.

4.5.6. After certifying the CEMs to the applicable performance specification(s) as required in Condition 4.2.8., the permittee shall submit quarterly reports to the Director by the 60th day after the end of each calendar quarter. These reports shall contain the following for each reporting period:

a. A summary of the recorded reading which includes highest and average recorded mass and concentration rates of each pollutant identified in Table 4.2.8. except for oxygen (O₂) during the reporting period. The time and date of the highest recorded rates by pollutant shall be identified.

b. Identify any exceedances of the permitted emission limits, which shall include time and date of the exceedance(s).

c. Identify any pollutant that was below the minimum detection threshold of the instrumentation during the entire reporting period.

d. The information identified in the example form of Attachment B of this permit that is applicable.

e. Copy of the hourly emission and flow data in a format that is acceptable to the Director.

4.5.7. After 43,800 hours of monitoring emissions from the operations of the pyrolysis process, the permittee may petition the Director to discontinue use of CEMs per Condition 4.2.8.i. This petition must demonstrate that emissions of nitrogen oxides, carbon monoxide, hydrogen chloride, and sulfur dioxide can be determined using process data. If the CEMs data was used to develop emission factors which are proposed to be used to determine actual emissions in this petition, the demonstration shall include all calculations and statistical analysis used to determine and justify these emission factors. This petition shall be submitted in accordance with an appropriate permit application in accordance with 45 CSR 13.

4.5.8. No later than six months after reporting dioxins and furans emissions from Emission Point 1000 are greater than 0.47 nanograms of total dioxins and furans per dry standard cubic meter or greater than 0.014 nanograms per dry standard cubic meter toxic equivalency, the permittee shall prepare and submit a plan for the review and approval of the Director to reduce the dioxin and furan emissions below the limit of this condition through process changes/improvements. This plan shall evaluate process changes/improvements and waste sorting (if feasible) to reduce dioxins and furans below these trigger levels. A schedule to implement these changes/improvements shall be enclosed with the plan. Included with this plan, the permittee shall include a testing plan with protocol in accordance with Condition 4.3.3. The protocol needs to provide what parameters will be monitored and used as operating limitations to ensure the dioxins and furans emission do not exceed the trigger levels in this condition. These submissions shall be submitted in accordance with Condition 3.5.3. with records of such submissions in accordance with Condition 3.4.1.
5.0. Specific Requirements for Engines GE-1, GE-2, GE-3, and GE-4

5.1. Limitations and Standards

5.1.1. The following conditions and requirements are specific to each of the internal combustion engines identified as GE-1, GE-2, GE-3, and GE-4:

a. Prior to start-up of any of the engines, the permittee shall submit an applicability determination to the Administrator to determine which emission standards under 40 CFR 60, Subpart JJJJ applies to these engines. Such determination shall be submitted in accordance with Condition 3.5.1. of this permit.

b. Each engine shall be equipped with an air to fuel (AFR) controller. The AFR controller must be maintained and operated appropriately to ensure proper operation of the engine and control device to minimize emissions at all times.

   
   [40 CFR §60.4243(g)]

   
c. The permittee shall install and maintain a non-resettable hour meter for the purpose of recording the operating hours of each engine.

d. The crankcases of each engine shall be vented back to the engine or to a control device (e.g., regenerative thermal oxidizer).

e. The permittee shall install sample ports for each engine exhaust at a location that satisfies the duct disturbance requirements as specified in Method 1A of Appendix A of 40 CFR 60.

5.1.2. The permittee shall only operate Engines GE-1, GE-2, GE-3, and GE-4 using synthetic gas that has an annual average gross calorific value of no less than 738 Btu/scf with no individual samples of less than 425 Btu/scf. The analysis required to be conducted in Condition 4.2.2. shall be used to demonstrate compliance with the synthetic gas specifications in this condition.

5.1.3. The permittee shall cease operation of the engines using a fuel determined to be a waste in accordance with 40 CFR 241.

5.2. Monitoring Requirements

5.2.1. The permittee shall measure and record the following parameters for each permitted engine:

   ● Monthly total of synthetic gas in terms of heat input (MMBtu/month).
   
   ● Monthly total number of operating hours.
   
   ● Total power output either from the engine or generator.
   
   ● Each hour that the engine operated outside of the manufacturer’s prescribed air to fuel ratio range.
   
   ● Date and time of each startup event
   
   ● Date and time of each shutdown event.

   These records shall be maintained in accordance with the Condition 3.4.1. of this permit.
5.3. Testing Requirements

5.3.1. The permittee must conduct initial performance testing for each engine GN1, GN2, GN3 and GN4) within 180 days after initial start-up of the respective engine and to demonstrate compliance with the emission standards as determined by the Administrator. This testing must be conducted at a representative location of the individual engine emissions unless the Administrator approves an alternative location and/or testing plan. During such testing, the engine shall be operated within 10% of 100% peak (or highest achievable load), measure and record the engine load or power output of the generator for each test run. Such testing shall be conducted in accordance with the applicable procedures in 40 CFR §60.4244 and Condition 3.3.1. Records of such testing shall be maintained in accordance with Condition 3.4.1.

[40 CFR §§60.4243(b)(2)(i) and §§60.4244]

The permittee is required to conduct initial performance testing as indicated in the above requirement, but the permittee is not required to conduct subsequent performance testing unless the stationary engine undergoes rebuild, major repair or maintenance. Engine rebuilding means to overhaul an engine or to otherwise perform extensive service on the engine (or on a portion of the engine or engine system). For this paragraph, perform extensive service means to disassemble the engine (or portion of the engine or engine system), inspect and/or replace many of the parts, and reassemble the engine (or portion of the engine or engine system) in such a manner that significantly increases the service life of the resultant engine.

[40 CFR §§60.4243(f)]

Performance test reports using EPA Method 18, EPA Method 320, or ASTM D6348-03 (incorporated by reference - see 40 CFR 60.17) to measure VOC require reporting of all QA/QC data. For Method 18, report results from sections 8.4 and 11.1.1.4; for Method 320, report results from sections 8.6.2, 9.0, and 13.0; and for ASTM D6348-03 report results of all QA/QC procedures in Annexes 1-7.

[40 CFR §60.4245(d)]

5.4. Recordkeeping Requirements

5.4.1. Record of Monitoring. The permittee shall keep records of monitoring information that include the following:

a. The date, place as defined in this permit, and time of sampling or measurements.

b. The date(s) analyses were performed.

c. The company or entity that performed the analyses.

d. The analytical techniques or methods used.

e. The results of the analyses; and

f. The operating conditions, as specified in Condition 5.2.2., existing at the time of sampling or measurement.

5.4.2. Record of Maintenance of Air Pollution Control Equipment. For all pollution control equipment listed in Section 1.0, the permittee shall maintain accurate records of all required pollution control equipment inspection and/or preventative maintenance procedures.

5.4.3. Record of Malfunctions of Air Pollution Control Equipment. For all air pollution control equipment listed in Section 1.0, the permittee shall maintain records of the occurrence and
duration of any malfunction or operational shutdown of the air pollution control equipment during
which excess emissions occur. For each such case, the following information shall be recorded:

a. The equipment involved.
b. Steps taken to minimize emissions during the event.
c. The duration of the event.
d. The estimated increase in emissions during the event.

For each such case associated with an equipment malfunction, the additional information shall also be recorded:

e. The cause of the malfunction.
f. Steps taken to correct the malfunction.
g. Any changes or modifications to equipment or procedures that would help prevent future
   recurrences of the malfunction.

5.4.5. The permittee shall keep a maintenance plan and records of maintenance performed on each
engine (GE-1, GE-2, GE-3, and GE-4).

[40 CFR §60.4243(b)(2)(ii)]

5.5. Reporting Requirements

5.5.1. The permittee shall submit an initial notification to the Director and Administrator within 15 days
after initial start-up of each engine (GE-1, GE-2, GE-3, and GE-4) in accordance with Condition
3.5.3. and 40 CFR 60.7(c). Such notification shall contain the following information:

a. Name and address of the owner or operator.
b. The address of the affected source.
c. Engine information including make, model, engine family, serial number, model year,
maximum engine power, and engine displacement.
d. Emission control equipment; and
e. Fuel used.

[40 CFR 60.4245(c)]
APPENDIX A Visible Emissions Observation (example form)

Date of Observation: __________________________

Data Entered by: ______________________________

Reviewed by: _________________________________

Date Reviewed: ______________________________

Describe the General Weather Conditions:

<table>
<thead>
<tr>
<th>Emission Point ID</th>
<th>Emission Point Description</th>
<th>Time of Observation</th>
<th>Visible Emissions? Yes/No</th>
<th>Consecutive Months of Visual Emissions</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>
Appendix B – Summary Report - Gaseous and Opacity Excess Emission and Monitoring System Performance

Pollutant (Circle One—SO2/NOX/TRS/H2S/CO/Opacity)

Reporting period dates: From ____________________ to ____________________

Company:

Emission Limitation
Address:

Monitor Manufacturer and Model No.
Date of Latest CMS Certification or Audit
Process Unit(s) Description:
Total source operating time in reporting period

<table>
<thead>
<tr>
<th>Emission data summary</th>
<th>CMS performance summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Duration of excess emissions in reporting period due to:</td>
<td>1. CMS downtime in reporting period due to:</td>
</tr>
<tr>
<td>a. Startup/shutdown</td>
<td>a. Monitor equipment malfunctions</td>
</tr>
<tr>
<td>b. Control equipment problems</td>
<td>b. Non-Monitor equipment malfunctions</td>
</tr>
<tr>
<td>c. Process problems</td>
<td>c. Quality assurance calibration</td>
</tr>
<tr>
<td>d. Other known causes</td>
<td>d. Other known causes</td>
</tr>
<tr>
<td>e. Unknown causes</td>
<td>e. Unknown causes</td>
</tr>
<tr>
<td>2. Total duration of excess emission</td>
<td>2. Total CMS Downtime</td>
</tr>
<tr>
<td>3. Total duration of excess emissions × (100) [Total source operating time]</td>
<td>3. [Total CMS Downtime] × (100) [Total source operating time]</td>
</tr>
</tbody>
</table>

1For gases, record all times in hours.
2For the reporting period: If the total duration of excess emissions 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report described in 40 CFR 60.7(c) shall be submitted.

On a separate page, describe any changes since last quarter in CMS, process or controls. I certify that the information contained in this report is true, accurate, and complete.

Name

Signature

Title

Date
CERTIFICATION OF DATA ACCURACY

I, the undersigned, hereby certify that, based on information and belief formed after reasonable inquiry, all information contained in the attached __________________________, representing the period beginning _________________ and ending ___________________, and any supporting documents appended hereto, is true, accurate, and complete.

Signature¹
(Please use blue ink) ________________________
Responsible Official or Authorized Representative

Date

Name & Title ________________________________
(Please print or type) Name
Title

Telephone No. _____________________________ Fax No. _____________________________

¹ This form shall be signed by a “Responsible Official.” “Responsible Official” means one of the following:

a. For a corporation: The president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either:

   (i) the facilities employ more than 250 persons or have a gross annual sales or expenditures exceeding $25 million (in second quarter 1980 dollars), or

   (ii) the delegation of authority to such representative is approved in advance by the Director.

b. For a partnership or sole proprietorship: a general partner or the proprietor, respectively.

c. For a municipality, State, Federal, or other public entity: either a principal executive officer or ranking elected official. For the purposes of this part, a principal executive officer of a federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a Regional Administrator of U.S. EPA); or

d. The designated representative delegated with such authority and approved in advance by the Director.