

West Virginia Department of Environmental Protection

*Harold D. Ward
Cabinet Secretary*

Construction Permit



R13-3713

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 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:

**Fundamental Data LLC
Ridgeline Facility
093-00034**

*Laura M. Crowder
Director, Division of Air Quality*

Issued: Draft

Facility Location: Off of US-48, Thomas, Tucker County, West Virginia
Mailing Address: 125 Hirst Rd. Suite 1A, Purcellville, VA 20132
Facility Description: Turbine Power Facility
NAICS Codes: 221112 – Fossil Fuel Electric Power Generation
UTM Coordinates: 632.512 km Easting • 4,334.946 km Northing • Zone 17
Latitude/Longitude: 39.15364 / -79.46641
Permit Type: Construction
Description of Change: Construction and operation of a turbine power 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.

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1.0. Emission Units

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
CT	CT	Combustion Turbines	2025	Natural Gas 5,649.6 MMBtu/hr (aggregate) Diesel 4,503.4 MMBtu/hr (aggregate)	NO _x – SCR ¹ CO -CO Catalyst
TK1	TK1-E	Diesel Storage Tank	2025	10,000,000 gal (nominal ²)	None
TK2	TK2-E	Diesel Storage Tank	2025	10,000,000 gal (nominal ²)	None
TK3	TK3-E	Diesel Storage Tank	2025	10,000,000 gal (nominal ²)	None
UNLOAD	UNLOAD-E	Diesel Truck Unloading	2025	15,000,000 gal/yr	None

¹ Selective Catalytic Reduction

² Nominal capacity is “working volume” which considers design liquid levels

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 (45CSR§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

CAAA	Clean Air Act Amendments	NO_x	Nitrogen Oxides
CBI	Confidential Business Information	NSPS	New Source Performance Standards
CEM	Continuous Emission Monitor	PM	Particulate Matter
CES	Certified Emission Statement	PM_{2.5}	Particulate Matter less than 2.5 µm in diameter
C.F.R. or CFR	Code of Federal Regulations	PM₁₀	Particulate Matter less than 10µm in diameter
CO	Carbon Monoxide	Ppb	Pounds per Batch
C.S.R. or CSR	Codes of State Rules	Pph	Pounds per Hour
DAQ	Division of Air Quality	Ppm	Parts per Million
DEP	Department of Environmental Protection	Ppmv or ppmv	Parts per Million by Volume
dscm	Dry Standard Cubic Meter	PSD	Prevention of Significant Deterioration
FOIA	Freedom of Information Act	Psi	Pounds per Square Inch
HAP	Hazardous Air Pollutant	SIC	Standard Industrial Classification
HON	Hazardous Organic NESHAP	SIP	State Implementation Plan
HP	Horsepower	SO₂	Sulfur Dioxide
lbs/hr	Pounds per Hour	TAP	Toxic Air Pollutant
LDAR	Leak Detection and Repair	TPY	Tons per Year
M	Thousand	TRS	Total Reduced Sulfur
MACT	Maximum Achievable Control Technology	TSP	Total Suspended Particulate
MDHI	Maximum Design Heat Input	USEPA	United States Environmental Protection Agency
MM	Million	UTM	Universal Transverse Mercator
MMBtu/hr or mmbtu/hr	Million British Thermal Units per Hour	VEE	Visual Emissions Evaluation
MMCF/hr or mmcf/hr	Million Cubic Feet per Hour	VOC	Volatile Organic Compounds
NA	Not Applicable	VOL	Volatile Organic Liquids
NAAQS	National Ambient Air Quality Standards		
NESHAPS	National Emissions Standards for Hazardous Air Pollutants		

2.3. Authority

This permit is issued in accordance with West Virginia air pollution control law 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 R13-3713 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;
- 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. [Reserved]

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.
[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.
[45CSR§6-3.2.]
- 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.
[40CFR§61.145(b) and 45CSR§34]
- 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.
[45CSR§4-3.1] *[State Enforceable Only]*
- 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.
[45CSR§13-10.5.]
- 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.
[45CSR§11-5.2.]

3.2. Monitoring Requirements

- 3.2.1. **Emission Limit Averaging Time.** Unless otherwise specified, compliance with all annual limits shall be based on a rolling twelve month total. A rolling twelve month total shall be the sum of the measured parameter of the previous twelve calendar months. Compliance with all hourly emission limits shall be based on the applicable NAAQS averaging times or, where applicable, as given in any approved performance test method.

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:

DAQ:
Director
WVDEP
Division of Air Quality
601 57th Street
Charleston, WV 25304-2345

US EPA:
Section Chief, USEPA, Region III
Enforcement and Compliance Assurance Division
Air Section (3ED21)
Four Penn Center
1600 John F Kennedy Blvd
Philadelphia, PA 19103-2852

DAQ Compliance and Enforcement¹:
DEPAirQualityReports@wv.gov

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

4.1. Limitations and Standards

4.1.1. The Ridgeline Facility shall consist of only the pollutant-emitting equipment and processes identified under Section 1.0 of this permit. In accordance with the information filed under Permit Application R13-3713, the equipment shall be installed, maintained and operated so as to minimize any fugitive escape of pollutants and the equipment/processes shall use the specified air pollution control devices.

4.1.2. **Maximum Design Heat Input.** The aggregate maximum design heat input (MDHI) of the combustion turbines/heat recovery steam generating units (HRSG) shall not be exceeded when firing the following fuels:

Fuel Type	MDHI (MMBtu/hr)
Natural Gas	5,649.6
Diesel Fuel	4,503.4

4.1.3. The maximum aggregate hourly emissions during steady state operations (excluding startups and shutdowns) from the combustion turbines/HRSG shall not exceed the following when firing the following fuels:

a. Natural Gas

Pollutant	Maximum Hourly Emissions (lb/hr) ²
Nitrogen Oxides	30.80
Carbon Monoxide	6.30
Volatile Organic Compounds	14.30
Particulate Matter-10/2.5 ¹	23.30
Sulfur Dioxide	19.21
Total Hazardous Air Pollutants	3.04

¹ Includes both filterable and condensable particulate matter.

² CT shall have zero duct burner firing emissions. All emissions are attributed to CT only.

b. Diesel

Pollutant	Maximum Hourly Emissions (lb/hr) ²
Nitrogen Oxides	74.50
Carbon Monoxide	5.40
Volatile Organic Compounds	30.90
Particulate Matter-10/2.5 ¹	22.10
Sulfur Dioxide	6.82
Total Hazardous Air Pollutants	5.64

¹ Includes both filterable and condensable particulate matter.

² CT shall have zero duct burner firing emissions. All emissions are attributed to CT only.

- 4.1.4. The maximum aggregate annual emissions during startups and shutdowns from the combustion turbines/HRSG shall not exceed the following when firing the following fuels:

a. *Natural Gas*

Pollutant ¹	Maximum Annual Emissions (tons/year)
Nitrogen Oxides	4.54
Carbon Monoxide	37.05

¹ Pollutants not listed in this table are limited to the rates in permit conditions 4.1.3 and 4.1.5 at all times including startups and shutdowns.

b. *Diesel*

Pollutant ¹	Maximum Annual Emissions (tons/year)
Nitrogen Oxides	6.22
Carbon Monoxide	46.10

¹ Pollutants not listed in this table are limited to the rates in permit conditions 4.1.3 and 4.1.5 at all times including startups and shutdowns.

- 4.1.5. The maximum aggregate total annual emissions¹ from the combustion turbines/HRSG shall not exceed the following emission limits when firing either fuel (natural gas or diesel exclusively) or any combination of natural gas or diesel:

Pollutant	Maximum Annual Emissions (tons/year) ³
Nitrogen Oxides	99.35
Carbon Monoxide	56.36
Volatile Organic Compounds	43.84
Particulate Matter-10/2.5 ²	71.44
Sulfur Dioxide	58.89
Total Hazardous Air Pollutants	9.33

¹ Includes annual startup and shutdown emissions in permit condition 4.1.4.

² Includes both filterable and condensable particulate matter.

³ CT has no duct burner firing emissions. All emissions are attributed to CT only.

- 4.1.6. The permittee shall meet the air pollution control technology requirements for the combustion turbines/HRSG:

Pollutant	Control Technology
Nitrogen Oxides	SCR
Carbon Monoxide	CO Catalyst

- 4.1.7. During startup and shutdown operations, the permittee shall minimize emissions by:

- a. Operating and maintaining the combustion turbines/HRSG and associated air pollution control devices in accordance with good combustion and air pollution control practices, safe operating practices, and protection of the facility. Good combustion and air pollution control practices shall mean proper operation and maintenance of combustion control systems and air pollution control equipment in accordance with manufacturer specifications. Additionally, it shall mean such practices that promote sufficient residence time of fuel in the combustion zone, thorough mixing of air and fuel, and proper combustion temperatures.

- b. Implementing operations and maintenance practices comprised of maintaining a high level of steady state operation time and minimizing (as much as practicable) the frequency of startup and shutdown events.

4.1.8. **Fuel Operating Parameters.** The combustion turbines/HRSG at the facility are capable of firing either natural gas or diesel fuel. The following fuel operating parameters apply to the permittee to address the various fuel firing scenarios:

Fuel Type	Operating Condition	Operating Parameter
Natural Gas	Maximum Hourly Fuel Consumption	5.35 MMscfh (all units)
Diesel	Maximum Hourly Fuel Consumption	32,872 gal/hr (all units)
	Sulfur Content	15 ppm (ULSD)

4.1.9. **Annual Operational Limitation.**

- a. The operating hours of each combustion turbine/HRSG, the throughput of each type of fuel (natural gas/diesel), and operation type (steady state or startup/shutdown) will be continuously monitored and recorded. The permittee will keep records of the fuel consumption (natural gas/diesel), and operating hours (natural gas/diesel) for each combustion turbine/HRSG. The 12-month rolling sum of emissions will be calculated monthly in accordance with permit condition 4.4.1.
- b. Natural gas and diesel fuel meters shall be installed on each combustion turbine/HRSG.
- c. Operational hour meters shall be installed on each combustion turbine/HRSG.

4.1.10. In order to minimize NO_x emissions, within 180 days of startup, the permittee shall determine the optimal injection rate of aqueous ammonia into each SCR. The permittee shall then operate the SCR at the determined optimal injection rate.

4.1.11. Emissions of NO_x from each of the combustion turbines/HRSG shall not exceed one of the following when firing natural gas:

- a. 25 ppm at 15% O₂; or
- b. 1.2 lb/MW-hr gross energy output.
[40 CFR §60.4320]

4.1.12. Emissions of NO_x from each of the combustion turbines/HRSG shall not exceed one of the following when firing diesel fuel:

- a. 74 ppm at 15% O₂; or
- b. 3.6 lb/MW-hr gross energy output.
[40 CFR §60.4320]

4.1.13. Each combustion turbine/HRSG shall meet one of the following requirements:

- a. The permittee shall not cause to be discharged into the atmosphere from the subject stationary combustion turbine any gases which contain SO₂ in excess of 110 nanograms per Joule (ng/J) (0.90 pounds per megawatt-hour (lb/MWh) gross output; or

- b. The permittee must not burn in the subject stationary combustion turbine any fuel which contains total potential sulfur emissions in excess of 26 ng SO₂/J (0.060 lb SO₂/MMBtu) heat input.

[40 CFR §60.4330(a)]

4.1.14. The combustion turbines/HRSG shall use the air pollution control devices specified in Section 1.0 and permit condition 4.1.6 and identified in Permit Application R13-3713 at all times when in operation except during periods of startup and shutdown when operating temperatures do not allow for proper use of the air pollution control devices.

4.1.15. The maximum annual throughput of diesel fuel to the storage tanks shall not exceed the following:

Storage Tank ID	Nominal Capacity (gal)	Product Stored	Maximum Annual Throughput (gal/yr)
TK1, TK2, TK3	10,000,000 (each)	Diesel Fuel	15,000,000 (all tanks)

4.1.16. The storage tanks (TK1, TK2, TK3) shall be designed and operated as specified in the paragraphs (a) through (c).

- a. The cover and all openings on the cover (e.g., access hatches, sampling ports, pressure relief valves and gauge wells) shall form a continuous impermeable barrier over the entire surface area of the liquid in the storage vessel.
- b. Each cover opening shall be secured in a closed, sealed position (e.g., covered by a gasketed lid or cap) whenever material is in the unit on which the cover is installed except during those times when it is necessary to use an opening as follows:
 - (i) To add material to, or remove material from the unit (this includes openings necessary to equalize or balance the internal pressure of the unit following changes in the level of the material in the unit);
 - (ii) To inspect or sample the material in the unit; or
 - (iii) To inspect, maintain, repair, or replace equipment located inside the unit.
- c. The storage tanks (TK1, TK2, TK3) thief hatch shall be weighted and properly seated. **[45CSR§13-5.10]**

4.1.17. The permittee shall comply with all applicable provisions of 45 CSR 17 to minimize fugitive particulate matter emissions on the plant roads.

4.1.18. The permittee shall comply with the alternative applicable provisions of 45 CSR 40 Section 6.6.

- a. The permittee shall conduct initial performance testing as required by 40 CFR 60 Subpart KKKK, as prescribed in permit condition 4.3.2.
- b. The permittee shall continuously monitor the parameters of the SCR systems to verify proper operation as required in permit conditions 4.2.4 and 4.4.3.
- c. The permittee shall continuously monitor and record the amount of each type of fuel to determine the heat input of each combustion turbine. The total monthly heat input will be determined using the monitored fuel data.

d. The permittee will calculate the total monthly NO_x emissions for each month during the ozone season. The total NO_x mass emissions will be calculated for the ozone season each year. Ozone season is defined as May 1 through September 30 in the same calendar year.

4.1.19. The permittee shall comply with all applicable provisions of 45 CSR 33 (Acid Rain Provisions and Permits), 40 CFR 60 Subpart TTTT_a (Standards of Performance for Greenhouse Gas Emissions for Modified Coal-Fired Steam Electric Generating Units and New Construction and Reconstruction Stationary Combustion Turbine Electric Generating Units), 40 CFR 72 (Permits Regulation – Acid Rain Program), and 40 CFR 97 Subpart DDDDD (Federal NO_x Budget Trading Program, CAIR NO_x and SO₂ Trading Programs, CSAPR NO_x and SO₂ Trading Programs, and Texas SO₂ Trading Program).

If it is determined that 45 CSR 33 and 40 CFR 72 applies, the permittee is required to submit applications for an Acid Rain permit and a 45 CSR 30 permit. These permit types are independent of the 45 CSR 13 permitting process.

4.1.20. **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.
[45CSR§13-5.10]

4.1.21. The permittee shall install, maintain, and operate all above-ground piping, valves, pumps, etc. that service lines in the transport of potential sources of regulated air pollutants to minimize any fugitive escape of regulated air pollutants (leak). Any above-ground piping, valves, pumps, etc. that shows signs of excess wear that have a reasonable potential for fugitive emissions of regulated air pollutants shall be repaired or replaced.
[45CSR§13-5.10]

4.2. Monitoring Requirements

4.2.1. To determine compliance with permit conditions 4.1.2, 4.1.3, 4.1.4, 4.1.5, 4.1.6, and 4.1.9, the permittee shall monitor the operation type (steady state or startup/shutdown), number of startup/shutdown events, and hours of operation in each operating mode (natural gas/diesel) on a daily basis.

4.2.2. To demonstrate compliance with permit condition 4.1.8, the permittee shall monitor aggregate fuel consumption (natural gas/diesel) on a daily basis.

4.2.3. To demonstrate compliance with permit conditions 4.1.10 and 4.1.14, the permittee shall monitor the operating times for the SCR on at least an hourly basis.

4.2.4. The permittee will install SCR systems on each turbine to control NO_x emissions. The parameters of the SCR systems must be continuously monitored to verify proper operation. The permittee shall monitor each catalyst bed inlet temperature and pressure differential across each catalyst bed to indicate proper operation. **[40CFR§60.4340(b)(iii)]**

4.2.5. The permittee will install a CO catalyst on each turbine to control CO emissions. The CO catalyst shall be continuously monitored to verify proper operation. The permittee shall operate the CO catalyst in accordance with manufacturer specifications. **[45CSR§13-5.10]**

4.2.6. To demonstrate compliance with permit condition 4.1.15, the permittee shall monitor diesel fuel unloading throughput on a daily basis.

- 4.2.7. To demonstrate compliance with permit condition 4.1.17, the permittee shall conduct a visible inspection of the paved roads once each operating day to ensure no fugitive particulate matter emissions from diesel truck and employee traffic are generated. If necessary, roads will be swept and/or watered to minimize fugitive particulate matter.
- 4.2.8. The permittee shall, at the time of initial startup, maintain on-site and have readily available to be made available to the Director or his/her representative upon request, a copy of all current vendor guarantees relevant to the air emissions associated with the facility. This includes information relating to the performance of both emission units and air pollution control devices.
- 4.2.9. The permittee shall meet all applicable requirements, including those not specified above, as given under 45 CSR 4, 45 CSR 13, 45 CSR 16, 45 CSR 17, 45 CSR 22, 45 CSR 40, and 40 CFR 60, Subpart KKKK. Any final revisions made to the above rules will, where applicable, supersede those specifically cited in this permit.
- 4.2.10. **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.

4.3. Testing Requirements

- 4.3.1. See Facility-Wide Testing Requirements Section 3.3.
- 4.3.2. The permittee shall perform an initial performance test for NO_x emissions as required under §60.8 and §60.4400, and to demonstrate compliance with permit condition 4.1.3 (compliance demonstration is on a per combustion turbine basis). The initial performance test will be conducted within 60 days after achieving the maximum production rate, but not later than 180 days after initial startup. The performance test must be done at any load condition within plus or minus 25 percent of 100 percent of peak load. Separate performance testing is required for natural gas and diesel fuel.
- 4.3.3. The permittee shall perform an initial performance test for SO₂ emissions as required under §60.8 and §60.4415, and to demonstrate compliance with permit condition 4.1.3 (compliance demonstration is on a per combustion turbine basis). The initial performance test will be conducted within 60 days after achieving the maximum production rate, but not later than 180 days after initial startup. The performance test must be done at any load condition within plus or minus 25 percent of 100 percent of peak load. Separate performance testing is required for natural gas and diesel fuel.
- 4.3.4. The permittee shall perform an initial performance test for CO emissions to demonstrate compliance with permit condition 4.1.3 (compliance demonstration is on a per combustion turbine basis). The initial performance test will be conducted within 60 days after achieving the maximum production rate, but not later than 180 days after initial startup. The performance test must be done at any load condition within plus or minus 25 percent of 100 percent of peak load. Separate performance testing is required for natural gas and diesel fuel. A representative number of combustion turbines will be tested as approved in the stack test protocol as required in permit condition 3.3.1.c.

The permittee shall utilize Method 10 – Determination of Carbon Monoxide Emissions from Stationary Sources (Instrumental Analyzer Procedure) or approved alternative procedure outlined in permit condition 3.3.1 to comply with this permit condition.
[45CSR§13-5.10]

4.4. Recordkeeping Requirements

- 4.4.1. To determine compliance with permit conditions 4.1.5, 4.1.8, and 4.1.9, the permittee shall keep records of the operating hours of each combustion turbine/HRSG, the throughput of each type of fuel (natural gas/diesel), and operation type (steady state or startup/shutdown) on a daily basis. The permittee shall multiply the hourly steady state operation emissions in permit condition 4.1.3 by the number of hours of steady state operations and adding the appropriate startup and shutdown emission from permit condition 4.1.4. The permittee shall calculate the emissions monthly and on a twelve-month rolling total. A twelve-month rolling total shall mean the sum of emissions at any given time during the previous twelve consecutive calendar months.
- 4.4.2. To determine compliance with permit condition 4.1.2, the permittee shall keep a verifiable record of the total MDHI of the combustion turbines.
- 4.4.3. To determine compliance with permit condition 4.2.4, the permittee shall keep records of the SCR continuous monitoring data, and 4-hour rolling unit operating hour averages of the monitored parameters. The permittee will develop an SCR monitoring plan that will outline the procedures used to document proper operation of the SCR systems in accordance with §60.4355. The SCR monitoring plan must include the following:
- a. Include the indicators to be monitored and show there is a significant relationship to emissions and proper operation of the NO_x emission controls;
 - b. Select ranges (or designated conditions) of the indicators, or describe the process by which such range (or designated condition) will be established;
 - c. Explain the process used to make certain that the data that is obtained is representative of the emissions or parameters being monitored (such as detector location, installation specification if applicable);
 - d. Describe quality assurance and control practices that are adequate to ensure the continuing validity of the data;
 - e. Describe the frequency of monitoring and the data collection procedures which are used; and
 - f. Submit justification for the proposed elements of the monitoring. If a proposed performance specification differs from manufacturer recommendation, the differences must be explained.
[40CFR§60.4355]
- 4.4.4. To determine compliance with §60.4365(a), the permittee shall keep records of the fuel characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the fuel, specifying the following parameters:
- a. The maximum total sulfur content of oil is 0.05 weight percent (500 ppmw) or less.
 - b. The total sulfur content for natural gas is 20 grains of sulfur or less per 100 standard cubic feet.
 - c. Potential sulfur emissions are less than 0.060 pounds SO₂/million Btu heat input.

- 4.4.5. To determine compliance with permit condition 4.2.7, the permittee shall keep records of the daily road particulate matter fugitive inspections and any corrective actions taken.
- 4.4.6. To determine compliance with permit conditions 4.1.15 and 4.2.6, the permittee shall keep records of the diesel unloading on a daily basis. Compliance with the throughput limit shall be determined on a 12 month rolling total basis.
- 4.4.7. To demonstrate compliance with permit condition 4.1.21, the permittee shall keep records of the fugitive emissions components repairs and replacements.

4.5. Reporting Requirements

- 4.5.1. See Facility-Wide Reporting Requirements Section 3.5.
- 4.5.2. The permittee shall submit notifications of the date construction commences, the actual date of initial startup as required under §60.7.
- 4.5.3. The permittee shall submit the results of the combustion turbines initial performance test before the close of business on the 60th day following the completion of the performance tests.
- 4.5.4. The permittee shall report excess emissions and monitor downtime semi-annually, in accordance with §60.4375(a) and §60.7(c). Excess emissions will be reported for all periods of unit operation, including startup, shutdown, and malfunction. An excess emission is a 4-hour rolling unit operating hour average in which any monitored parameter does not achieve the target value or is outside the acceptable range defined in the parameter monitoring plan. A period of monitor downtime is a unit operating hour in which any of the required parametric data are either not recorded or are invalid.

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 _____ Date _____
(please use blue ink) Responsible Official or Authorized Representative

Name & Title _____ Title _____
(please print or type) Name

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.