West Virginia Department of Environmental Protection

Harold D. Ward
Cabinet Secretary

Construction Permit

R13-3714

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:

TransGas Development Systems, LLC
Adams Fork Harless Data Center Energy Campus
059-00133

Laura M. Crowder
Director, Division of Air Quality

Issued: Draft

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Facility Location:	Off of 22 Mine Road, Holden, Mingo County, West Virginia
Mailing Address:	630 First Avenue, Suite 30C, New York, NY 10016-3799
Facility Description:	Off-grid Power Generation Facility
NAICS Codes:	221112 – Fossil Fuel Electric Power Generation
UTM Coordinates:	401.420 km Easting • 4,179.002 km Northing • Zone 17
Latitude/Longitude:	37.75302 / -82.11905
Permit Type:	Construction
Description of Change:	Construction and operation of an off-grid power generation 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.

As a result of the granting of this permit, the source is subject to 45CSR30. The Title V (45CSR30) application will be due within twelve (12) months after the date of the commencement of the operation or activity (activities) authorized by this permit, unless granted a deferral or exemption by the Director from such filing deadline pursuant to a request from the permittee.

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1.0. Emission Units

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
1S – 117S	1E – 117E	Engine 1 – Engine 117	2026	28,194 HP (each)	1C – 117C
118S – 157S	118E – 157E	ULSD Tanks (TK1 – TK40)	2026	170,000 gal (each)	None
DM	DM	Hydrous Ammonia Tanks 1-39	2026	4,600 gal (each)	None
DM	DM	Caustic Soda Tanks 1-39	2026	4,600 gal (each)	None
DM	DM	Sulfuric Acid Tanks 1-39	2026	4,600 gal (each)	None
DM	DM	Sodium Chlorite Tanks 1-39	2026	4,600 gal (each)	None
DM	DM	Sodium Hydrosulfide Tanks 1-39	2026	4,600 gal (each)	None
UNLOAD	UNLOAD-E	Diesel Truck Unloading	2026	3,907,000 gal (normal operation)	None

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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
CBI	Confidential Business Information
CEM	Continuous Emission Monitor
CES	Certified Emission Statement
C.F.R. *or* CFR	Code of Federal Regulations
CO	Carbon Monoxide
C.S.R. *or* CSR	Codes of State Rules
DAQ	Division of Air Quality
DEP	Department of Environmental Protection
dscm	Dry Standard Cubic Meter
FOIA	Freedom of Information Act
HAP	Hazardous Air Pollutant
HON	Hazardous Organic NESHAP
HP	Horsepower
lbs/hr	Pounds per Hour
LDAR	Leak Detection and Repair
M	Thousand
MACT	Maximum Achievable Control Technology
MDHI	Maximum Design Heat Input
MM	Million
MMBtu/hr *or* mmbtu/hr	Million British Thermal Units per Hour
MMCF/hr *or* mmcf/hr	Million Cubic Feet per Hour
NA	Not Applicable
NAAQS	National Ambient Air Quality Standards
NESHAPS	National Emissions Standards for Hazardous Air Pollutants
NO_X	Nitrogen Oxides
NSPS	New Source Performance Standards
PM	Particulate Matter
$PM_{2.5}$	Particulate Matter less than 2.5 µm in diameter
PM_{10}	Particulate Matter less than 10µm in diameter
Ppb	Pounds per Batch
Pph	Pounds per Hour
Ppm	Parts per Million
Ppm_V or ppmv	Parts per Million by Volume
PSD	Prevention of Significant Deterioration
Psi	Pounds per Square Inch
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SO_2	Sulfur Dioxide
TAP	Toxic Air Pollutant
TPY	Tons per Year
TRS	Total Reduced Sulfur
TSP	Total Suspended Particulate
USEPA	United States Environmental Protection Agency
UTM	Universal Transverse Mercator
VEE	Visual Emissions Evaluation
VOC	Volatile Organic Compounds
VOL	Volatile Organic Liquids

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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 R13-3714 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.

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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,

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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.

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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.

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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:

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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:

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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 Enforcement[1]:
DEPAirQualityReports@wv.gov

[1]For 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 45CSR30 – Operating Permit Program, the permittee shall submit a certified emissions statement and pay fees on an annual basis in accordance with the submittal requirements of the Division of Air Quality. A receipt for the appropriate fee shall be maintained on the premises for which the receipt 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 45CSR30 – Operating Permit Program, enclosed with this permit is a Certified Emissions Statement (CES) Invoice, from the date of initial startup through the following June 30. Said invoice and the appropriate fee shall be submitted to this office no later than 30 days 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 attached to the Certified Emissions Statement (CES) Invoice.

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.

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4.0. Source-Specific Requirements

4.1. Limitations and Standards

4.1.1. The 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 R13-3714, 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 Horsepower.** The maximum horsepower of each engine (1S – 117S) shall be 28,194 hp.

4.1.3. **Operation Modes.** The engines (1S – 117S) have the ability to operate in the following operational modes. Each operation mode shall abide by the descriptions included in Permit Application R13-3714.

Operation Mode
Normal
Compensation
Emergency
Startup (Speed Up, Fuel Switch, Generator Switched On, Load Up Cold Control)
Shutdown (Ramp Down, Min Load, Spin Out)

4.1.4. The maximum hourly emissions during each operating mode shall not exceed the following for each engine (1S – 117S):

a. Normal

Pollutant	Maximum Hourly Emissions (lb/hr)
Nitrogen Oxides	0.14
Carbon Monoxide	0.34
Volatile Organic Compounds	0.23
Particulate Matter-10/2.5[1]	0.34
Sulfur Dioxide	0.01
Total Hazardous Air Pollutants	0.004

[1] Includes both filterable and condensable particulate matter.

b. Compensation

Pollutant	Maximum Hourly Emissions (lb/hr)
Nitrogen Oxides	0.46
Carbon Monoxide	1.41
Volatile Organic Compounds	0.27
Particulate Matter-10/2.5[1]	0.53
Sulfur Dioxide	0.01
Total Hazardous Air Pollutants	0.005

[1] Includes both filterable and condensable particulate matter.

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c. Emergency

Pollutant	Maximum Hourly Emissions (lb/hr)
Nitrogen Oxides	10.35
Carbon Monoxide	0.58
Volatile Organic Compounds	0.29
Particulate Matter-10/2.5[1]	1.29
Sulfur Dioxide	0.11
Total Hazardous Air Pollutants	0.005

[1] Includes both filterable and condensable particulate matter.

d. Startup – Speed Up

Pollutant	Maximum Hourly Emissions (lb/hr)
Nitrogen Oxides	89.54
Carbon Monoxide	2.50
Volatile Organic Compounds	19.49
Particulate Matter-10/2.5[1]	0.34
Sulfur Dioxide	0.10
Total Hazardous Air Pollutants	0.32

[1] Includes both filterable and condensable particulate matter.

e. Startup – Fuel Switch

Pollutant	Maximum Hourly Emissions (lb/hr)
Nitrogen Oxides	4.81
Carbon Monoxide	8.65
Volatile Organic Compounds	13.07
Particulate Matter-10/2.5[1]	0.53
Sulfur Dioxide	0.01
Total Hazardous Air Pollutants	0.22

[1] Includes both filterable and condensable particulate matter.

g. Startup – Generator Switched On

Pollutant	Maximum Hourly Emissions (lb/hr)
Nitrogen Oxides	8.15
Carbon Monoxide	9.25
Volatile Organic Compounds	12.48
Particulate Matter-10/2.5[1]	0.46
Sulfur Dioxide	0.01
Total Hazardous Air Pollutants	0.21

[1] Includes both filterable and condensable particulate matter.

h. Startup – Load Up Cold Control

Pollutant	Maximum Hourly Emissions (lb/hr)
Nitrogen Oxides	6.94
Carbon Monoxide	7.16
Volatile Organic Compounds	9.14
Particulate Matter-10/2.5[1]	0.43
Sulfur Dioxide	0.01
Total Hazardous Air Pollutants	0.15

[1] Includes both filterable and condensable particulate matter.

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i. Shutdown – Ramp Down

Pollutant	Maximum Hourly Emissions (lb/hr)
Nitrogen Oxides	0.10
Carbon Monoxide	0.83
Volatile Organic Compounds	0.15
Particulate Matter-10/2.5[1]	0.32
Sulfur Dioxide	0.01
Total Hazardous Air Pollutants	0.003

[1] Includes both filterable and condensable particulate matter.

j. Shutdown – Min Load

Pollutant	Maximum Hourly Emissions (lb/hr)
Nitrogen Oxides	2.44
Carbon Monoxide	4.62
Volatile Organic Compounds	3.75
Particulate Matter-10/2.5[1]	0.46
Sulfur Dioxide	0.07
Total Hazardous Air Pollutants	0.06

[1] Includes both filterable and condensable particulate matter.

k. Shutdown – Spin Out

Pollutant	Maximum Hourly Emissions (lb/hr)
Nitrogen Oxides	2.89
Carbon Monoxide	5.62
Volatile Organic Compounds	7.84
Particulate Matter-10/2.5[1]	0.53
Sulfur Dioxide	0.07
Total Hazardous Air Pollutants	0.13

[1] Includes both filterable and condensable particulate matter.

4.1.5. The maximum aggregate total annual emissions[1] from the engines (1S – 117S) shall not exceed the following:

Pollutant	Maximum Annual Emissions (tons/year)[1]
Nitrogen Oxides	194.30
Carbon Monoxide	205.62
Volatile Organic Compounds	116.59
Particulate Matter-10/2.5[2]	186.53
Sulfur Dioxide	9.93
Total Hazardous Air Pollutants	0.86

[1] Includes all operation modes in permit condition 4.1.4.
[2] Includes both filterable and condensable particulate matter.

Compliance with the annual emission limits shall be determined by multiplying each operational mode hourly emissions in permit condition 4.1.4 by the hours operated in each operation mode.

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4.1.6. The permittee shall meet the air pollution control technology requirements for each engine (1S – 117S). The emission control systems for the engines consist of two main systems. The dry system on the high pressure side of the engine (before the turbocharger) and the wet system on the low pressure side, which is downstream of the turbocharger. The dry systems consist of an oxidation catalyst and an SCR catalyst. The catalytic reduction of CO has a reduction efficiency of over 99%. The same system oxidizes VOC emissions with a reduction efficiency of 99%. The de-NOx unit is a urea based SCR technology, and the reduction efficiency exceeds 90%. The wet system consists of four (4) stages, which reduce NOx further with 90.9% reduction efficiency and SO2 with 70% reduction efficiency. The emission abatement system (dry and wet) that will be employed on each engine shall meet the following emissions reductions when operating in the following modes:

Mode	**NOx (%)**	**CO (%)**	**VOC (%)**	**PM (%)**	**SO_2 (%)**
Speed Up	0	0	0	0	95.0
Fuel Changeover	0	0	0	0	99.0
Generator Switched On	0	0	0	0	99.0
Load Up Cold Control	25.0	25.0	25.0	0	99.0
Normal Operation	99.0	99.0	99.0	25.0	99.0
Compensation Mode	99.0	95.0	99.0	25.0	99.0
Ramp Down	99.0	94.0	99.0	25.0	99.0
Min Load	70.0	50.0	70.0	0	70.0
Spin Out	40.0	35.0	40.0	0	40.0
Emergency	98.0	91.0	99.0	25.0	99.0

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

a. Operating and maintaining the engines (1S – 117S) and associated air pollution control devices (1C – 117C) 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 the engine 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 Throughput Parameters.** The engines (1S – 117S) are capable of firing natural gas with co-firing diesel or diesel fuel only. The following maximum hourly fuel consumptions apply to the engines:

Mode	**Maximum NG Hourly Throughput (scf/hr per engine)**	**Maximum Diesel Hourly Throughput (gal/hr per engine)[1]**
Speed Up	0	143.46
Fuel Changeover	13,994	1.43
Generator Switched On	27,459	2.35
Load Up Cold Control	33,993	2.61
Normal Operation	98,924	3.91
Compensation Mode	138,112	3.91
Ramp Down	52,882	3.13
Min Load	27,459	2.35
Spin Out	13,994	1.43
Emergency	0	798.13

[1] Sulfur content of ultra-low sulfur diesel (ULSD) fuel shall be less than 15 ppm.

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4.1.9. **Annual Operational Limitation.**

a. The operating hours of each engine (1S – 117S), the throughput of each type of fuel (natural gas/diesel), and operation mode (permit condition 4.1.3) 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 engine. The 12-month rolling sum of emissions will be calculated monthly.

b. Natural gas and diesel fuel meters shall be installed on each engine (1S – 117S).

c. Operational hour meters shall be installed on each engine (1S – 117S).

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

4.1.11. The permittee shall meet the following emission standards:

a. For engines (1S – 117S) installed on or after January 1, 2016, limit the emissions of NOX in the stationary CI internal combustion engine exhaust to the following:

i. 3.4 g/KW-hr (2.5 g/HP-hr) when maximum engine speed is less than 130 rpm;
ii. Reduce particulate matter (PM) emissions by 60 percent or more, or limit the emissions of PM in the stationary CI internal combustion engine exhaust to 0.15 g/KW-hr (0.11 g/HP-hr).

[40CFR§60.4204(c)]

4.1.12. The permittee must operate and maintain stationary CI ICE that achieve the emission standards as required in §§ 60.4204 and 60.4205 over the entire life of the engines (1S – 117S).
[40CFR§60.4206]

4.1.13. The permittee shall meet the following fuel requirements:

a. Beginning June 1, 2012, owners and operators of stationary CI ICE subject to this subpart with a displacement of greater than or equal to 30 liters per cylinder must use diesel fuel that meets a maximum per-gallon sulfur content of 1,000 parts per million (ppm).
[40CFR§60.4207(d)]

4.1.14. The engines (1S – 117S) shall use the air pollution control devices (1C – 117C) specified in Section 1.0 and permit condition 4.1.6 and identified in Permit Application R13-3714 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 – TK40	170,000 (each)	Diesel Fuel	3,907,000 (all tanks) Normal Operation

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4.1.16. The storage tanks (TK1 – TK40) 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 – TK40) 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 haul roads.

4.1.18. **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]

4.1.19. 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 (listed in permit condition 4.1.4), 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 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 air pollution control devices on at least an hourly basis.

4.2.4. The permittee will install air pollution control devices on the engines (1S – 117S) to show compliance with permit condition 4.1.6.b. The air pollution control devices shall be continuously

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monitored to verify proper operation. The permittee shall operate the air pollution control devices in accordance with manufacturer specifications. **[45CSR§13-5.10]**

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

4.2.6. 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.

4.2.7. 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 the 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 control devices.

4.2.8. 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 30, 45 CSR 34, 40 CFR 60, Subpart IIII, and 40 CFR 63 Subpart ZZZZ. Any final revisions made to the above rules will, where applicable, supercede those specifically cited in this permit.

4.2.9. **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 meet the following testing requirements for the engines (1S – 117S):

a. Conduct an initial performance test to demonstrate initial compliance with the emission standards as specified in § 60.4213.

b. Establish operating parameters to be monitored continuously to ensure the stationary internal combustion engine continues to meet the emission standards. The owner or operator must petition the Administrator for approval of operating parameters to be monitored continuously. The petition must include the information described in paragraphs (d)(2)(i) through (v) of this section.

i. Identification of the specific parameters you propose to monitor continuously;

ii. A discussion of the relationship between these parameters and NOX and PM emissions, identifying how the emissions of these pollutants change with changes in these parameters, and how limitations on these parameters will serve to limit NOX and PM emissions;

iii. A discussion of how you will establish the upper and/or lower values for these parameters which will establish the limits on these parameters in the operating limitations;

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iv. A discussion identifying the methods and the instruments you will use to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments; and

v. A discussion identifying the frequency and methods for recalibrating the instruments you will use for monitoring these parameters.

c. For non-emergency engines with a displacement of greater than or equal to 30 liters per cylinder, conduct annual performance tests to demonstrate continuous compliance with the emission standards as specified in § 60.4213.

[40CFR§4211(d)]

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 engine, the throughput of each type of fuel (natural gas/diesel), and operation type (as outlined in permit condition 4.1.4) on a daily basis. The permittee shall multiply the hourly operation type emissions in permit condition 4.1.4 by the number of hours operated in that operational mode. The permittee shall calculate the emissions monthly and on a twelve-month rolling total. A twelve-month rolling total shall mean the sum of operating hours at any given time during the previous twelve consecutive calendar months.

4.4.2. 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.

4.4.3. 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.

4.4.4. To demonstrate compliance with permit condition 4.1.19, the permittee shall keep records of the fugitive emissions components repairs and replacements.

4.4.5. The permittee shall keep the following engine (1S – 117S) records:

a. All notifications submitted to comply with this subpart and all documentation supporting any notification.

b. Maintenance conducted on the engine.

c. If the stationary CI internal combustion is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards.

d. If the stationary CI internal combustion is not a certified engine, documentation that the engine meets the emission standards.

[40CFR§4214(a)(2)]

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. The notification must include the information below. Beginning on February 26, 2025, submit the notification electronically according to paragraph (g) of this section.

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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.
[40CFR§4214(a)(1)]

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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.

Signature[1] _____ _____
(please use blue ink) Responsible Official or Authorized Representative Date

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

Telephone No. _____ Fax No. _____

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[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.

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