West Virginia Department of Environmental Protection
Division of Air Quality

Fact Sheet

For Draft/Proposed Renewal Permitting Action Under 45CSR30 and Title V of the Clean Air Act

Permit Number: **R30-05100142-2025**
Application Received: **August 19, 2024**
Plant Identification Number: **03-54-051-00142**
Permittee: **Blue Racer Midstream, LLC**
Facility Name: **Natrium Extraction and Fractionation Processing Plant (NEFPP) and Natrium Power Plant (NPP)**
Mailing Address: **14786 Energy Road, Proctor, WV 26055**

Physical Location:	Proctor, Marshall County, West Virginia
UTM Coordinates:	512.1 km Easting • 4,400.8 km Northing • Zone 17
Directions:	The facility is located North of New Martinsville, WV off of State Route 2 at 14786 Energy Road, Proctor, WV 26055

Facility Description

The Natrium Extraction and Fractionation Processing Plant (NEFPP) is a natural gas processing plant with natural gas liquids (NGL) processing capability (utilizing seven permitted cryogenic plants) located approximately four miles northwest of Proctor, Marshall County, WV along the east bank of the Ohio River. The facility has the capability to both process large amounts of raw natural gas (by separating out the liquids, drying it, and removing impurities) and to fractionate NGLs into usable components. NGLs are generally defined to be the lighter liquid components entrained in the gas stream as opposed to "condensate" which is the heavier, pentane plus (C5+) fraction of higher boiling point components that are separated at the well-head under standard conditions. NGLs – both after separation from gas pipelined to the site as well as NGLs sent to the site via pipeline, truck, railcar, or barge – are separated (or "fractionated") into their constituent organic compounds. The compounds ethane, propane, butane, i-butane, and natural gasoline are produced by the fractionation process.

The requirements of the NSR permit R13-3493 (issued: December 15, 2020) have been incorporated into this Title V renewal permit. Under this permit, a nominal 230 MW_e gas-fired combined heat and power plant was permitted to be co-located at the site of the existing NEFPP to provide heat duty and electrical power to the plant. The Natrium Power Plant (NPP) and the NEFPP are considered one source for permitting purposes.

SIC: 1321, 4911; NAICS: 211130, 221112

Emissions Summary

Plantwide Emissions Summary [Tons per Year]

Regulated Pollutants	Potential Emissions	2024 Actual Emissions
Carbon Monoxide (CO)	293.86	71.68
Nitrogen Oxides (NO_X)	310.63	57.64
Particulate Matter ($PM_{2.5}$)	110.59	2.85
Particulate Matter (PM_{10})	121.11	4.06
Total Particulate Matter (TSP)	153.28	7.74
Sulfur Dioxide (SO_2)	33.47	0.19
Volatile Organic Compounds (VOC)	309.11	74.18

PM_{10} is a component of TSP.

Hazardous Air Pollutants	Potential Emissions	2024 Actual Emissions
Benzene	0.63	0.05
Ethylbenzene	0.28	None Reported
Formaldehyde	6.36	0.08
Hexane	1.44	0.85
Methanol	8.39	4.32
Toluene	2.01	0.08
Xylene	0.93	0.03
Other HAPs	0.70	None Reported
Total HAPs	20.74	5.41

Some of the above HAPs may be counted as PM or VOCs.

Title V Program Applicability Basis

This facility has the potential to emit 293.86 tpy of Carbon Monoxide, 310.63 tpy of Nitrogen Oxides, 110.59 tpy of Particulate Matter – 2.5 microns, 121.11 tpy of Particulate Matter – 10 microns, and 309.11 tpy of Volatile Organic Compounds. Due to this facility's potential to emit over 100 tons per year of criteria pollutant, Blue Racer Midstream, LLC is required to have an operating permit pursuant to Title V of the Federal Clean Air Act as amended and 45CSR30.

Legal and Factual Basis for Permit Conditions

The State and Federally-enforceable conditions of the Title V Operating Permits are based upon the requirements of the State of West Virginia Operating Permit Rule 45CSR30 for the purposes of Title V of the Federal Clean Air Act and the underlying applicable requirements in other state and federal rules.

This facility has been found to be subject to the following applicable rules:

Federal and State:	45CSR2	Control of Particulate Matter Air Pollution from the Combustion of Fuel in Indirect Heat Exchangers.
	45CSR2A	Testing, Monitoring, Recordkeeping, and Reporting Requirements Under 45CSR2.
	45CSR6	Control of Air Pollution from Combustion of Refuse.
	45CSR10	Control of Air Pollution from the Emission of Sulfur Oxides.
	45CSR11	Standby plans for emergency episodes.
	45CSR13	NSR Permit Requirements.
	45CSR16	Standards of Performance for New Stationary Sources.
	WV Code § 22-5-4 (a) (15)	The Secretary can request any pertinent information such as annual emission inventory reporting.
	45CSR30	Operating Permit Requirements.
	45CSR34	Emission Standards for Hazardous Air Pollutants.
	45CSR40	Control of Ozone Season Nitrogen Oxides Emissions.
	40 C.F.R. Part 60 Subpart Db	Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units.
	40 C.F.R. Part 60 Subpart Dc	Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units.
	40 C.F.R. Part 60 Subpart Kb	Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for which Construction, Reconstruction, or Modification Commenced After July 23, 1984, and On or Before October 4, 2023.
	40 C.F.R. Part 60 Subpart Kc	Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for which Construction, Reconstruction, or Modification Commenced After October 4, 2023.
	40 C.F.R. Part 60 Subpart IIII	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines.
	40 C.F.R. Part 60 Subpart KKKK	Standards of Performance for Stationary Combustion Turbines.
	40 C.F.R. Part 60 Subpart OOOO	Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification, or Reconstruction Commenced After August 23, 2011, and On or Before September 18, 2015.
	40 C.F.R. Part 60 Subpart OOOOa	Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification, or Reconstruction Commenced After September 18, 2015, and On or Before December 6, 2022.

	40 C.F.R. Part 60 Subpart OOOOb	Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification, or Reconstruction Commenced After December 6, 2022.
	40 C.F.R. Part 61	Asbestos inspection and removal.
	40 C.F.R. Part 63 Subpart HH	National Emission Standards for Hazardous Air Pollutants from Oil and Natural Gas Production Facilities.
	40 C.F.R. Part 63 Subpart ZZZZ	National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.
	40 C.F.R. Part 64	Compliance Assurance Monitoring.
	40 C.F.R. Part 82 Subpart F	Ozone depleting substances.
State Only:	45CSR4	No objectionable odors.
	45CSR17	To Prevent and Control Particulate Matter Air Pollution from Materials Handling, Preparation, Storage, and other Sources of Fugitive Particulate Matter.

Each State and Federally-enforceable condition of the Title V Operating Permit references the specific relevant requirements of 45CSR30 or the applicable requirement upon which it is based. Any condition of the Title V permit that is enforceable by the State but is not Federally-enforceable is identified in the Title V permit as such.

The Secretary's authority to require standards under 40 C.F.R. Part 60 (NSPS), 40 C.F.R. Part 61 (NESHAPs), and 40 C.F.R. Part 63 (NESHAPs MACT) is provided in West Virginia Code §§ 22-5-1 *et seq.,* 45CSR16, 45CSR34 and 45CSR30.

Active Permits/Consent Orders

Permit or Consent Order Number	Date of Issuance
R13-2896K	August 17, 2023
R13-3493	December 15, 2020

Conditions from this facility's Rule 13 permit(s) governing construction-related specifications and timing requirements will not be included in the Title V Operating Permit but will remain independently enforceable under the applicable Rule 13 permit(s). All other conditions from this facility's Rule 13 permit(s) governing the source's operation and compliance have been incorporated into this Title V permit in accordance with the "General Requirement Comparison Table," which may be downloaded from DAQ's website.

Determinations and Justifications

On December 15, 2020, Blue Racer Midstream, LLC was issued the NSR permit R13-3493 for the construction of a nominal 230 MW_e gas-fired combined heat and power plant to be co-located on the site of the existing Natrium Extraction and Fractionation Processing Plant (NEFPP). The Natrium Power Plant (NPP) is considered “one-source” with the NEFPP for permitting purposes. The NPP will provide electrical power and heat duty to the NEFPP.

R13-3493 permits the construction and operation of four combustion turbines (either 482.6-mmBTU/hr or 496.2-mmBTU/hr, depending on the operating scenario selected) each equipped with a 475.1-mmBTU/hr duct burner. The NPP is also permitted to construct and operate two 9.9-mmBTU/hr fuel gas heaters, one 1,676-HP emergency

generator, one 700-HP emergency fire pump engine, four 5,000-gallon lubricating oil tanks, four 250-gallon waste oil tanks, one 60,000-gallon ammonia/urea storage tank, four 250-gallon washout sumps, four 1,000-gallon glycol tanks, and two 25-gallon fuel tanks. The requirements applicable to the NPP have been incorporated into the operating permit under Sections 3.0. and 15.0. through 19.0.

The following changes have been made to the Title V operating permit:

1. The permittee mailing address has been updated to 14786 Energy Road, Proctor, WV 26055.

2. Section 1.0. – Emission Units and Active R13, R14, and R19 Permits

   a. The table containing the emission units permitted under R13-2896K was titled "Natrium Extraction and Fractionation Processing Plant".

   b. A vapor recovery unit (VRU) is used to gather vapors from the natural gasoline storage tanks (TK-802 through TK-6802). The VRU was added to the Emission Unit Table as one of the control devices for these tanks, and a reference to the VRU was added to footnote (3) of the table.

   c. As of the writing of this operating permit, construction of the emission units in Cryogenic Processing Trains 5 to 7 of the NEFPP has not begun. Emission units which have not been constructed include the following:

      i. Regeneration Gas Heaters: S040, S044, S048

      ii. Cryogenic HMO Heaters: S041, S045, S049

      iii. Hot Oil Heaters: S052, S053

      iv. Stabilizer Heater: S056

      v. Natural Gasoline Storage Tanks: TK-3802 through TK-6802

      vi. Refrigerated Propane Storage Tank: TK-7802

      vii. Spherical NGL Storage Tanks: US-2800, US-2801, US-2804, US-2805

      viii. Pressurized NGL Bullet Tanks: V-2905, V-2915, V-2925, V-2935

      ix. Slop Tank: TK-2906

      x. Produced Water Tank: TK-2907

      xi. Ethane Amine Regenerator: S054

      xii. Fugitive Areas: FUG AREA 5 through FUG AREA 7

      The installation year of these units was removed from the operating permit and replaced with "Not Yet Constructed".

   d. Under R13-2896I, the construction and operation of one or more fire pump engines/generators was permitted under the emission unit ID S058. The engine(s) are not to exceed an aggregate mechanical boilerplate rating of 3,000 HP. On September 26, 2023, an initial notification of startup for two 800-HP fire pump engines was submitted. A footnote was added to the emission units table for the NEFPP to note that, as of the writing of this operating permit, emission unit S058 is comprised of these two engines.

   e. The emission units associated with R13-3493 were added under the emission units table titled "Natrium Power Plant". These include four turbines (currently two different sets of turbines are permitted, but only

one will be operated at the facility) each equipped with a duct burner, two fuel gas heaters, one emergency generator, one emergency fire pump engine, and a variety of storage tanks. As of the writing of this operating permit, construction of these emission units has not commenced, and the installation year of these units was listed as "Not Yet Constructed".

3. Section 3.0. – Facility-Wide Requirements

a. The following boilerplate changes have been made to the permit. These changes to the boilerplate became effective September 23, 2024.

i. The citation of Condition 3.1.6. was revised to refer to the current version of the WV Code.

ii. The citation of Condition 3.3.1. was revised to refer to the current version of the WV Code.

iii. The following has been added to Condition 3.3.1.b.: "If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit shall be revised in accordance with 45CSR§30-6.4. or 45CSR§30-6.5., as applicable."

b. The following requirements were added to Section 3.0. of the operating permit:

Title V Permit Condition	Summary of Condition	Regulatory Citation	R13-2896K Condition	R13-3493 Condition
3.1.14.	Only the emission unit/sources identified in the table titled "Natrium Power Plant" in Section 1.1. and sources classified as de minimis sources under Table 45-13B of 45CSR13 are authorized at the NPP by R13-3493.	45CSR13	N/A	4.1.1.
3.1.15.	As of the writing of this operating permit, construction of the equipment in the Cryogenic Plants 5 to 7 of the NEFPP and all of the equipment at the NPP has not begun. To ensure that the applicable requirements included in this operating permit are up-to-date, this condition requires the permittee to submit a notification of initial startup for each emission unit within 30 days and to submit, as necessary, a significant Title V permit modification within 180 days of the actual date of initial startup of the emission units.	45CSR§30-6.5.b. 45CSR13	2.18.	2.18.
3.2.1.	Unless otherwise specified, compliance with the annual emission limits must be based on a rolling twelve-month total.	45CSR13	3.2.1.	3.2.1.
3.2.2.	The maximum design capacity limitations of the emission units under Sections 15.1. to 19.1. of this operating permit (Section 4.1. of R13-3493) must be based on a boilerplate rating or on product literature, manufacturer's data, or equivalent documentation that shows that the emission units are limited by design to a throughput/production rate that does not exceed the value specified in Sections 15.1. to 19.1.	45CSR13	N/A	4.2.1.

Title V Permit Condition	Summary of Condition	Regulatory Citation	R13-2896K Condition	R13-3493 Condition
3.2.3.	The maximum design heat input (MDHI) limitations under Sections 15.1. to 19.1. of this operating permit (Section 4.1. of R13-3493) must be based on a boilerplate rating or on product literature, manufacturer's data, or equivalent documentation that shows that the emission units are limited by design to a MDHI that does not exceed the value specified in Sections 15.1. to 19.1.	45CSR13	N/A	4.2.2.

c. The permit shield in Condition 3.7.2. was updated as follows:

i. The non-applicability determination for 45CSR19 has been updated. 45CSR19 establishes a preconstruction permit program for any area designated nonattainment for any national ambient air quality standard (NAAQS) and applies to any new major stationary source or major modification that is major for the pollutant for which the area is designated nonattainment. Marshall County, WV (where the NEFPP is located) was previously designated as a nonattainment area for sulfur dioxide (2010), but, as the facility-wide potential emissions of SO_2 were below 100 tpy, it was determined that the NEFPP was not classified as a "major stationary source" under 45CSR19.

With 85 FR 67661 (effective November 25, 2020), the EPA approved the request submitted by the State of West Virginia to redesignate Marshall County from nonattainment to attainment of the 2010 SO_2 NAAQS. Therefore, 45CSR19 is currently inapplicable to the facility because Marshall County is not classified as a nonattainment area for any of the NAAQS.

ii. The New Source Performance Standards for electric generating units under 40 C.F.R. Part 60 Subparts TTTT and TTTTa and the Cross State Air Pollution Rule under 40 C.F.R. Part 97 Subparts AAAAA, CCCCC, and EEEEE are not applicable to the facility (as described in Items 6. and 13. of the Non-Applicability Determinations section of this fact sheet). At the request of the permittee, these regulations were added to the permit shield.

4. 45CSR2 and 45CSR10 Requirements in Section 4.0. – Hot Oil Heaters and Section 5.0. – Cryogenic HMO/Stabilizer Heaters

a. 45CSR2 has been revised since the issuance of the previous operating permit. The following changes were made to Sections 4.0. and 5.0. of this operating permit due to these revisions.

i. In the footnotes to the tables in Conditions 4.1.2. and 5.1.2. and in the authorities of Conditions 4.1.2., 4.1.4.b., 5.1.2., and 5.1.4.b., the references to 45CSR§2-4.1.b. were revised to 45CSR§2-4.1.2.

ii. Conditions 4.1.4.c. and 5.1.4.c. both previously contained the startup, shutdown, and malfunction provisions of 45CSR§2-9.1. This requirement was removed from 45CSR2 and, therefore, Conditions 4.1.4.c. and 5.1.4.c. were removed from the permit.

iii. In Conditions 4.3.1. and 5.3.2., the citations were revised from 45CSR§§2-8.1.b. and -8.1.c. to 45CSR§§2-8.1.2. and -8.1.3.

iv. In Conditions 4.4.1.b. and 5.4.1.b., the citations were revised from 45CSR§2-8.3.c. to 45CSR§2-8.3.3.

b. 45CSR10 has been revised since the issuance of the previous operating permit. In the footnotes to the tables in Conditions 4.1.2. and 5.1.2. and in the authorities of Conditions 4.1.2. and 5.1.2., the references to 45CSR§10-3.1.e. were revised to 45CSR§10-3.1.5.

5. Section 4.0. – Hot Oil Heaters

a. 40 C.F.R. §60.44b(h) requires that the NO_X emission standards under §60.44b apply at all times including periods of startup, shutdown, or malfunction, and §60.44b(i) requires that compliance with the NO_X emission standards under §60.44b is determined on a 30-day rolling average basis. These requirements are applicable to the hot oil heater S001 and were added as paragraphs a. and b. of Condition 4.2.2. The subsequent paragraphs were relabeled accordingly.

b. 40 C.F.R. §60.48b(e)(1) is applicable to affected facilities which combust coal, wood, or municipal-type solid waste. As the hot oil heater S001 combusts natural gas, this requirement was removed from Condition 4.2.2. of the operating permit. The authority of this condition was updated, and the subsequent paragraphs were relabeled accordingly.

c. Under 40 C.F.R. §§60.48b(g) and (g)(1), the owner/operator of an affected facility that has a heat input of 250 mmBTU/hr or less and an annual capacity factor for natural gas greater than 10 percent must comply with the provisions of §§60.48b(b), (c), (d), (e)(2), (e)(3), and (f). According to the notification of initial startup received May 30, 2013, the hot oil heater has a heat input of 216.7 mmBTU/hr and is estimated to have an annual capacity factor of 50 percent. Therefore, §§60.48b(g) and (g)(1) were added to the operating permit as Condition 4.2.2.g. The provisions of §§60.48b(b) through (f) are included in the operating permit under Conditions 4.1.5.c. and 4.2.2.c. to 4.2.2.f.

d. The requirements of 40 C.F.R. Part 60 Subpart Db used to demonstrate compliance with the NO_X emission standards applicable to the hot oil heater S001 were added to the operating permit under Condition 4.3.2. In accordance with §§60.46b(c) and (e)(4), the owner or operator of an affected facility under Subpart Db that has a heat input capacity of 250 mmBTU/hr or less that combusts natural gas shall, upon request, determine compliance with the NO_X emission standards of §60.44b through a 30-day performance test. Additionally, during periods when performance tests are not requested, the NO_X emissions data collected pursuant to §60.48b(g) must be used to calculate a 30-day rolling average emission rate on a daily basis and to prepare excess emission reports. The initial compliance testing requirements of §60.46b(e)(1) were met and, therefore, were not added to the operating permit.

e. Under 40 C.F.R. §60.45b(k), the owner/operator of an affected facility seeking to demonstrate compliance with the SO_2 emission standards of §60.42b(k)(2) is required to follow the applicable procedures in §60.49b(r); and, under 40 C.F.R. §60.47b(f), the owner/operator of an affected facility that demonstrates compliance under §60.45b(k) is not subject to the emission monitoring requirements under §60.47b(a) if the owner/operator maintains fuel records in accordance with §60.49b(r).

The hot oil heater S001 is subject to the SO_2 emission standards of §60.42b(k)(2) and to the recordkeeping requirements of §60.49b(r). Therefore, citations to §60.45b(k) and §60.47b(f) were added to the authority of Condition 4.4.2.c. which contains the requirements of §60.49b(r).

f. Under 40 C.F.R. §60.49b(o), the permittee is required to maintain the records required under §60.49b for a period of two years. This requirement was added to the operating permit as Condition 4.4.2.d.

g. Condition 4.5.2.a. of R30-05100142-2020 (MM03) contained the reporting requirements of 40 C.F.R. §60.49b(b) which required the permittee to submit the performance test data from the initial performance test and the performance evaluation of the CEMS used to comply with the NO_X emission standards of §60.44b. The WV DAQ received the results of the initial 30-day performance test using the CEMS for the hot oil heater S001 on July 17, 2014 and the results of the relative accuracy test audit (RATA) for the CEMS on

June 24, 2014. Therefore, this reporting requirement has been met, and the provisions of §60.49b(b) were removed from the operating permit.

h. In Condition 4.5.2., the authority of the reporting requirement to submit excess emission reports was corrected from §60.48b(h) to §60.49b(h).

i. The following 40 C.F.R. Part 60 Subpart Db requirements are applicable to the hot oil heater S001 and were added to Condition 4.5.2. of the operating permit:

i. For the purposes of §60.48b(g)(1), excess emissions are defined in §60.49b(h)(4) as any calculated 30-day rolling average NO_X emission rate, as determined under §60.46b(e), that exceeds the applicable emission limits in §60.44b. This definition was added as paragraph b.

ii. §60.49b(i) requires the owner/operator of any affected facility subject to the continuous monitoring requirements for NO_X under §60.48b(b) to submit reports containing the information recorded under §60.49b(g) (Condition 4.4.2.b. of the operating permit). §60.49b(i) was added to the operating permit as paragraph c.

iii. Under §60.49b(v), electronic quarterly reports for NO_X may be submitted in lieu of the written reports required by §60.49b(h) or (i). This alternative for submitting reports was added to the operating permit as paragraph d.

iv. Per §60.49b(w), the reporting period for reports required under Subpart Db is each 6 month period. This requirement was added to the operating permit as paragraph e.

6. Section 7.0. – Fire Pumps

a. Condition 7.1.2. contains the hourly and annual emission limits established in Condition 8.1.2. of R13-2896K for the fire pump engines S002 and S003. In the previous operating permit, streamlining language was added as a footnote to specify that the limits for NMHC + NO_X and PM were based on the emission standards of Table 4 to Subpart IIII of Part 60. Therefore, compliance with these emission limits will also demonstrate compliance with the Subpart IIII emission standards for NMHC + NO_X and PM for the 2009+ model year fire pump engines with a maximum engine power between 600 and 750 HP. The CO emission limit was also based on the applicable standards of Table 4 to Subpart IIII. Therefore, a citation for the footnote was added to the limit for CO to reference and streamline the CO emission standard of Table 4 to Subpart IIII.

b. Due to amendments made in 40 C.F.R. Part 60 Subpart IIII, Condition 7.1.6. was updated as follows:

i. In accordance with §60.4211(a), the references to 40 C.F.R. Parts 89 and 94 were removed from paragraph a.3. of the operating permit.

ii. In accordance with §60.4211(f), the references to emergency demand response were removed from Condition 7.1.6.c.

c. In accordance with the amendments to 40 C.F.R. §60.4214(d), Condition 7.5.1. was updated as follows:

i. The applicability of these requirements to engines that are "contractually obligated to be available for more than 15 hours per calendar year" was removed.

ii. Because the provisions of §§60.4211(f)(2)(ii) and (iii) were vacated, references to these requirements were removed from this condition, the corresponding paragraphs a.v. and a.vi. were removed, and the subsequent paragraph was relabeled.

iii. The website address for the EPA's Central Data Exchange (CDX) was updated to *https://cdx.epa.gov/*.

iv. The requirement that annual reports must be submitted electronically in accordance with §60.4214(g) was added to paragraph c. of this condition.

d. The electronic reporting requirements of 40 CFR §60.4214(g) were added to the operating permit as Condition 7.5.2.

7. Section 8.0. was reserved in R30-05100142-2020 (MM01). With this renewal permit, the reserved section was removed from the operating permit, and Sections 9.0. to 15.0. were relabeled Sections 8.0. to 14.0.

8. Section 8.0. – Glycol Dehydration Units

a. The provisions of 40 CFR §63.764(e)(1) contain the criteria for the exemption of an area source subject to 40 C.F.R. Part 63 Subpart HH from the requirements of §63.764(d). These criteria were listed in Condition 9.1.5. of the previous operating permit and Condition 10.1.5. of R13-2896K. The application indicates that the NEFPP has actual average emissions of benzene from the glycol dehydration unit less than 1 tpy and, therefore, meets the exemption criterion of §63.764(e)(1)(ii). For this reason, the criterion of §63.764(e)(1)(i) was removed from Condition 8.1.5. of this operating permit.

b. The following requirements from 40 C.F.R. Part 63 Subpart HH are applicable to the dehydration unit and were added to the operating permit:

Title V Permit Condition	Summary of Condition	Regulatory Citation
8.1.7.	Conditionally requires the permittee to update the major source determination for any source that is determined not to be a major source under Subpart HH but that has actual emissions greater than 5 tpy for a single HAP or 12.5 tpy for aggregate HAPs.	45CSR34 40 C.F.R. §63.760(c)
8.1.8.	Any affected source must be operated and maintained in a manner consistent with safety and good air pollution control practices for minimizing emissions.	45CSR34 40 C.F.R. §63.764(j)
8.5.1.	Area sources that meet the benzene exemption of §63.764(e)(1)(ii) are exempt from the Subpart HH reporting requirements for area sources.	45CSR34 40 C.F.R. §§63.775(c) and (c)(8)

9. Section 9.0. – 40 CFR 60, Subparts Kb and Kc Storage Tanks

a. Under 40 C.F.R. §60.2, construction is defined as the "fabrication, erection, or installation of an affected facility", and commenced means that "the owner or operator has undertaken a continuous program of construction or modification or that an owner or operator has entered into a contractual obligation to undertake and complete, within a reasonable time, a continuous program of construction or modification". Based upon these definitions, construction of the natural gasoline storage tanks TK-3802 through TK-6802 and the refrigerated propane storage tank TK-7802 has not commenced.

When TK-3802 through TK-7802 were initially added to the NSR permit and the operating permit, the requirements of 40 C.F.R. Part 60, Subpart Kb were included as the applicable requirements to these tanks. However, since the issuance of these permits, an amended 40 C.F.R. Part 60 Subpart Kb and a new 40 C.F.R.

Part 60 Subpart Kc were published in the Federal Register and became effective on October 15, 2024. The Subpart Kb amendments establish that the rule is applicable to affected facilities which commenced construction after July 23, 1984 and on or before October 4, 2023. The standards of Subpart Kc are applicable to affected facilities which commenced construction after October 4, 2023.

As construction of TK-3802 through TK-7802 will commence after October 4, 2023, the tanks are subject to Subpart Kc, per §60.110c(a). The reference to TK-3802 through TK-7802 was removed from the Subpart Kb requirements in Condition 9.1.4. of the operating permit. Furthermore, TK-802 and TK-2802 were specified after the authority of Conditions 9.1.4., 9.1.5., 9.4.3., and 9.4.4. which contain the applicable requirements of 40 C.F.R. Part 60 Subpart Kb.

b. The 714,000-gallon storage tanks TK-3802 and TK-5802 and the 1,260,000-gallon storage tanks TK-4802 and TK-6802 will be used to store natural gasoline with a true vapor pressure that is less than 11.1 psia, as stored. A natural gas blanket is used to prevent the loss of natural gasoline vapors to the atmosphere as well as to prevent the potential ingress of atmospheric oxygen to the tank and the potential for a negative internal tank pressure to result in a loss of tank integrity. A vapor recovery unit (VRU) will be installed on the tanks to capture working and breathing losses and displaced vapors from the tanks. The captured gas is routed to the Hot Oil Heater S001 to be used as a supplemental fuel.

The 4,200,000-gallon storage tank TK-7802 will be used to store propane with a true vapor pressure that is less than 11.1 psia, as stored. Propane product that flashes-off from the storage tank will be captured by a VRU, re-condensed, and routed back to the storage tank.

The storage tanks TK-3802 through TK-7802 are affected facilities under 40 C.F.R. §60.110c(a) for which construction commenced after October 4, 2023, have a capacity greater than 40,000 gallons, and contain a volatile organic liquid (VOL) with a maximum true vapor pressure equal to or greater than 0.5 psia. Therefore, in accordance with §§60.110c(c) and (c)(1), TK-3802 through TK-7802 are subject to the standards in §60.112c and the corresponding requirements in §§60.113c through 60.116c as new sources. During normal operations, emissions from the tanks will be routed through a closed vent system to a fuel gas system or process as specified in the table below. During storage vessel degassing operations, emissions from the tanks may be routed through a closed vent system to a control device, fuel gas system, or process as specified in §60.112c(e).

The following Subpart Kc requirements are applicable to TK-3802 through TK-7802 and have been added to Section 9.0. of the operating permit:

Title V Permit Condition	Summary of Condition	Regulatory Citation
9.1.6.	The standards of Subpart Kc apply at all times, including periods of startup, shutdown, and malfunction.	45CSR16 40 C.F.R. §60.110c(g)

Title V Permit Condition	Summary of Condition	Regulatory Citation
	For storage vessels with a capacity greater than or equal to 40,000 gallons containing a VOL that has a maximum true vapor pressure equal to or greater than 0.5 psia but less than 11.1 psia, the permittee may elect to install and operate each storage vessel with either an internal floating roof meeting the requirements of §60.112c(b), an external floating roof meeting the requirements of §60.112c(c), or a closed vent system routed to a control device, fuel gas system, or process as specified in §60.112c(d). **TK-3802 through TK-6802:** The working and breathing losses of natural gas from the natural gasoline storage tanks TK-3802 through TK-6802 will be collected by a VRU and sent via a closed vent system to Hot Oil Heater S001 for use as fuel. Per §60.111c, a "fuel gas system" is the offsite and onsite piping and control system that gathers gaseous streams generated by onsite operations, may blend them with other sources of gas, and transports the gaseous stream for use as fuel gas in combustion devices. Therefore, for TK-3802 through TK-6802, the permittee will install and operate a closed vent system routed to a fuel gas system as specified in 40 CFR §60.112c(d). **TK-7802:** The propane product that flashes-off from the refrigerated propane storage tank TK-7802 will be captured by a VRU, re-condensed, and routed back to the storage tank. Per §60.111c, "routed to a process" means the emissions are conveyed by a closed vent system to any enclosed portion of the process unit where the emissions are recovered. Therefore, for TK-7802, the permittee will install and operate a closed vent system routed to a process as specified in 40 CFR §60.112c(d).	45CSR16 40 C.F.R. §§60.112c(a) and (a)(1)
	Each storage vessel affected facility complying with the closed vent system routed to a control device, fuel gas system, or process provisions in §60.112c(d) or each storage vessel affected facility with a design capacity greater than 1,000,000-gallons containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 1.5 psia must comply with the requirements of §60.112c(e). TK-3802 through TK-7802 are complying with the closed vent system provisions of §60.112c(d). Furthermore, TK-4802, TK-6802, and TK-7802 have a design capacity greater than 1,000,000-gallons. Therefore, these storage tanks are subject to the storage vessel degassing requirements of §60.112c(e).	45CSR16 40 C.F.R. §60.112c(a)(3)
	The permittee must comply with the Subpart Kc monitoring, recordkeeping, and reporting requirements of §60.113c, §60.115c, and §60.116c, respectively.	45CSR16 40 C.F.R. §60.112c(a)(4)

Title V Permit Condition	Summary of Condition	Regulatory Citation
9.1.7.	TK-3802 through TK-6802 will be operated with a closed vent system that routes to a fuel gas system; and TK-7802 will be operated with a closed vent system that routes to a process. Therefore, the design, installation, and operation requirements for a closed vent system routed to a fuel gas system or process were added to the operating permit. NOTE: The provisions of §§60.112c(d)(3), (5), and (7) which apply to control devices and the provision of §60.112c(d)(4) which refers to the alternative means of emission limitation were not included in this condition.	45CSR16 40 C.F.R. §§60.112c(d)(1), (d)(2), and (d)(6)
9.1.8.	TK-3802 through TK-7802 meet the specifications of §60.112c(a)(3) and, therefore, must meet the storage vessel degassing requirements to remove liquids from the storage vessel as much as practicable and the total VOC emissions must be reduced by routing emissions through a closed vent system to a flare or enclosed combustion device for which the permittee elects to comply with the flare provisions as specified in §60.112c(e)(2)(i), to a non-flare control device as specified in §60.112c(e)(2)(ii), or to a fuel gas system or process as specified in §60.112c(e)(2)(iii).	45CSR16 40 C.F.R. §§60.112c(e), (e)(1), and (e)(2) 40 C.F.R. §60.112c(d)(5) 40 C.F.R. §60.113c(c)(1)(iv)(A)
9.2.2.	For storage vessel affected facilities complying with the closed vent system routed to a control device, fuel gas system, or process provisions in §60.112c(d), the permittee must meet the monitoring requirements of §§60.113c(c) and (d). The permittee must conduct monitoring and inspections of the closed vent system as specified in §60.113c(c)(2), repair leaks as specified in §60.113c(c)(3), and determine the maximum true vapor pressure as specified in §60.113c(d). Since a control device as specified in §60.112c(d)(3) will not be used to reduce emissions from the storage tanks, the control device performance testing requirements of §60.113c(c)(1) and the control device monitoring plan requirements of §60.113c(c)(4) were not included in the operating permit.	45CSR16 40 C.F.R. §§60.113c(c), (c)(2), (c)(3), and (d)

Title V Permit Condition	Summary of Condition	Regulatory Citation
9.4.5.	The recordkeeping requirements applicable to storage vessel affected facilities complying with the closed vent system routed to a fuel gas system or process provisions were added to the operating permit. These requirements include: a. Maintain records for at least 5 years, except as otherwise specified; b. Maintain records showing the dimensions and an analysis of the capacity of the storage vessel; c. An exemption from §60.115c(c) which requires a record of the VOL stored to be maintained; d. Maintain the specified records for the closed vent system; and e. Maintain records of standard site procedures used to empty and degas equipment. The recordkeeping requirements of §§60.115c(d)(3)(i) and (ii), (d)(4), and (d)(5) are applicable to storage vessel affected facilities complying with provisions for closed vent systems routed to a control device and were not included in the operating permit.	45CSR16 40 C.F.R. §§60.115c(a), (b), (c)(2), (d), (d)(3), (d)(3)(iii) to (d)(3)(vii), and (e)
9.5.2.	An initial notification must be submitted within 60 days after the storage vessel becomes an affected facility. The information which must be included in notifications for storage vessel affected facilities complying with the closed vent system routed to a fuel gas system or process provisions was added to the operating permit.	45CSR16 40 C.F.R. §§60.116c(a), (a)(1) to (a)(5), (a)(7), and (a)(8)
9.5.3.	The permittee must submit semiannual reports as specified in 40 C.F.R. §§60.116c(c) and (d). The report must contain the information specified in 40 C.F.R. §§60.116c(c)(1) and (c)(8), as applicable. The reporting requirements applicable to storage vessel affected facilities complying with the internal floating roof, external floating roof, or closed vent system routed to a control device provisions were not included in the operating permit.	45CSR16 40 C.F.R. §§60.116c(c), (c)(1), (c)(8), (c)(8)(ii), (c)(8)(iii), (c)(11), (c)(12), and (d)
9.5.4.	Requirements for electronically submitting notifications and reports under 40 C.F.R. Part 60, Subpart Kc.	45CSR16 40 C.F.R. §60.116c(f)

c. The authority of Condition 9.4.4. (previously Condition 10.4.4.) was corrected. Condition 9.4.4. contains the provisions of §§60.116b(a) and (b) which require the permittee to maintain records, for the life of the source, showing the dimension of each storage vessel and an analysis showing the capacity of each storage vessel. The authority of Condition 9.4.4. was corrected from §§60.115b(a) and (b) to §§60.116b(a) and (b).

10. Section 10.0. – Flare

a. 45CSR6 has been revised since the issuance of the previous operating permit. 45CSR§6-8.2., which allowed for variances from the emission standards of 45CSR6 in the event of an equipment malfunction, was removed from the rule. Therefore, these requirements were removed from Condition 10.1.4. of this operating permit.

b. Condition 11.1.8. of the previous operating permit was not included in this renewal permit. This condition required the permittee to comply with the emergency and affirmative defense requirements previously contained in Section 2.17. of the operating permit (Section 2.12. of the NSR permit). However, with the issuance of R13-2896K and R30-05100142-2020 (MM03), the emergency requirements were removed from the boilerplate requirements of NSR and Title V operating permits.

c. **40 C.F.R. Part 64** – *Compliance Assurance Monitoring (CAM)*

The flare S004A meets the CAM applicability criteria of §64.2 for emissions of VOCs:

§64.2(a)(1)
Under Condition 13.1.2.b. of R13-2896K, the flare is subject to an annual emission limit of 39.38 tpy for VOC emissions from the controlled process streams as well as a minimum VOC destruction and removal efficiency of 98%.

§64.2(a)(2)
The flare S004A controls emissions of VOCs and HAPs from sources of waste gas, including pigging, blowdowns, purges from the closed vent system, irregular process vents, and ethane treater (S011, S054) flash tanks.

§64.2(a)(3)
The sources of waste gas collectively have the uncontrolled potential to emit 1,969 tpy of VOCs, which exceeds the Title V major source threshold for criteria pollutants.

Therefore, the sources of waste gas are PSEUs for VOCs. As the post-control device VOC emissions are below the Title V major source thresholds, the sources are considered "other" PSEUs, and the CAM Plan was submitted during this operating permit renewal in accordance with 40 C.F.R. §64.5(b).

The uncontrolled potential emissions of HAPs from pigging, blowdowns, purges from the closed vent system, irregular process vents, and ethane treater (S011, S054) flash tanks do not exceed the Title V major source thresholds. Therefore, the sources of waste gas are not subject to CAM for HAPs per §64.2(a)(3).

To demonstrate compliance with CAM for VOCs, monitoring of the flare will be conducted as follows:

	Indicator No. 1
I. Indicator	Presence of the pilot light flame.
A. Monitoring Approach	A duplex thermocouple or equivalent device is used to detect the presence of a pilot light flame.
II. Indicator Range	An excursion occurs when the pilot light flame is absent. If an excursion occurs, an alarm will alert the facility personnel that the pilot light has been extinguished. Upon confirmation that the pilot light has been extinguished, the facility personnel will reignite the pilot. If the facility personnel are unable to reignite the pilots, further corrective actions will be taken or the associated process units will be shutdown. The occurrence of an excursion will be cause for investigation. Any excursions and corrective actions will be documented and reported.

	Indicator No. 1
A. QIP Threshold	A threshold for requiring the implementation of a QIP has not been specified at this time. The requirements for a QIP have been included by reference in Condition 10.2.8. of the operating permit.
III. Performance Criteria	
A. Data Representativeness	The presence or absence of the flare's pilot light flame is monitored by a thermocouple and recorded in the facility's data acquisition system.
B. Verification of Operational Status	Not Applicable. The flare and thermocouple are neither new nor modified.
C. QA/QC Practices and Criteria	The thermocouple will be calibrated annually. A camera mounted near the flare helps to validate data coming from the ground flare HMI.
D. Monitoring Frequency	The thermocouple will continuously monitor and record the presence or absence of the pilot light flame.
E. Data Collection Procedure	The presence or absence of the pilot light flame will be recorded in the facility's data acquisition system at 15-minute intervals.
F. Averaging Period	None.

The following requirements have been added to the operating permit to demonstrate compliance with CAM:

Title V Permit Condition	Summary of Condition	Regulatory Citation
10.2.2.	Condition 13.2.2. of R13-2896K requires the permittee to use a thermocouple to continuously monitor for the presence of the flare's pilot light flame. This condition has been updated to incorporate the CAM Plan into the operating permit as follows: a. The requirement now specifies that a duplex thermocouple or equivalent device is used to detect for the presence of a flame. b. A recordkeeping requirement to record the presence or absence of the flame in the facility's data acquisition system at 15-minute intervals was added. c. An excursion from the CAM Plan has been defined as the absence of the flame.	40 C.F.R. §64.6(c) 45CSR§30-5.1.c. 45CSR13
10.2.4.	The requirements for proper maintenance of monitoring equipment.	40 C.F.R. §64.7(b) 45CSR§30-5.1.c.
10.2.5.	The permittee shall conduct monitoring as required at all times that the PSEU is in operation.	40 C.F.R. §64.7(c) 45CSR§30-5.1.c.
10.2.6.	The requirements for responding to excursions or exceedances.	40 C.F.R. §64.7(d) 45CSR§30-5.1.c.
10.2.7.	The requirements for documentation of need for improved monitoring.	40 C.F.R. §64.7(e) 45CSR§30-5.1.c.

Title V Permit Condition	Summary of Condition	Regulatory Citation
10.2.8.	A QIP may be required based on the determination made under 40 C.F.R. §64.7(d)(2). If required, the QIP must be developed and implemented in accordance with 40 C.F.R. §§64.8(b) through (e).	40 C.F.R. §64.8 45CSR§30-5.1.c.
10.4.2.	The general recordkeeping requirements for CAM.	40 C.F.R. §64.9(b) 45CSR§30-5.1.c.
10.5.4.	The general reporting requirements for CAM.	40 C.F.R. §64.9(a) 45CSR§30-5.1.c.

11. Section 13.0. – Pigging Operations

    a. With the issuance of R13-2896J and R30-05100142-2020 (MM02), the maximum emission limits for pigging operations (except the propane pig trap) (S035) in Condition 14.1.4. (13.1.4. of this renewal permit) were revised. As part of the revisions, new hourly and annual limits were added for these pigging operations, while the previous annual limits were set to expire twelve months after the issuance of R13-2896J (issued: April 5, 2022). These limits are no longer applicable and, therefore, were removed from the operating permit.

    b. In the previous operating permit, the label 14.1.4. was used for two conditions. This was corrected in this renewal permit, and the subsequent conditions were renumbered accordingly.

12. Section 14.0.: 40 CFR 60, Subparts OOOO, OOOOa, and OOOOb Requirements

    a. Under 40 C.F.R. §60.2, construction is defined as the "fabrication, erection, or installation of an affected facility", and commenced means that "an owner or operator has undertaken a continuous program of construction or modification or that an owner or operator has entered into a contractual obligation to undertake and complete, within a reasonable time, a continuous program of construction or modification". Based upon these definitions, construction of the equipment in the Cryogenic Processing Trains 5 through 7 has not commenced.

    The 40 C.F.R. Part 60 Subpart OOOOa equipment leak provisions for process unit equipment and reciprocating compressors were included by reference in the underlying NSR permits R13-2896F and R13-2896G, and these provisions were incorporated into the initial Title V operating permit. However, since the issuance of these permits, an amended 40 C.F.R. Part 60 Subpart OOOOa and a new 40 C.F.R. Part 60 Subpart OOOOb were published in the Federal Register on March 8, 2024 with an effective date of May 7, 2024. The Subpart OOOOa amendments established that the rule was applicable to affected facilities which commenced construction after September 18, 2015 and on or before December 6, 2022. The standards of Subpart OOOOb were applicable to affected facilities which commenced construction after December 6, 2022.

    As construction of the Cryogenic Processing Trains 5 through 7 will commence after December 6, 2022, each electric reciprocating compressor affected facility and each process unit equipment affected facility that are part of Cryogenic Processing Trains 5 through 7 will be subject to Subpart OOOOb, per §§60.5365b(c) and (f), respectively. Therefore, the following changes were made throughout Section 14.0. of the operating permit:

    i. The references to FUG AREA 5 through 7 were removed from the Subpart OOOOa equipment leak standards for process units. This included revising Condition 14.1.1. of the operating permit (Condition 17.1.1. of R13-2896K) to state that "In accordance with the request given in Permit Application R13-2896K, the permittee shall operate FUG AREA 1 through 4 in accordance with all applicable

requirements given under 40 CFR 60, Subpart OOOOa, even those areas that are eligible to comply with 40 CFR 60, Subparts KKK and OOOO."

ii. References to the reciprocating compressor requirements of 40 C.F.R. Part 60 Subpart OOOOb were added to Condition 14.1.5. of the operating permit (previously Condition 15.1.3. of R30-05100142-2020 (MM03); Condition 17.1.2. of R13-2896K). Under this requirement, the permittee is required to maintain an updated list of all reciprocating compressors and the applicability of each to Subparts OOOO, OOOOa, and OOOOb. A citation to 45CSR§30-5.1.c. was added to the authority of this condition.

b. The following Subpart OOOOb requirements for process unit affected facilities are applicable to FUG AREA 5 through 7 and were added to Section 14.0. of the operating permit:

Title V Permit Condition	Summary of Condition	Regulatory Citation
14.1.3.	FUG AREA 5 through 7 will be subject to the Subpart OOOOb provisions for reducing methane and VOC emissions from equipment leaks in process unit equipment. The standards of §60.5400b as well as the alternative standards of §60.5401b were included in the operating permit as Conditions 14.1.3. and 14.1.4., respectively. NOTE: As the facility is a fractionating plant, 40 C.F.R. §§60.5400b(d)(2), 60.5401b(c)(2), and 60.5401b(c)(3), which contain requirements for pressure relief devices located in a nonfractionating plant, were not included in the operating permit.	45CSR16 40 C.F.R. §§60.5400b(a) to (c), (d), (d)(1), (d)(3), and (e) to (l)
14.1.4.		45CSR16 40 C.F.R. §§60.5401b(a) to (c), (c)(1), (c)(4), (c)(5), and (d) to (m)
14.1.11.	The requirements applicable to closed vent systems that are used to comply with the Subpart OOOOb standards for process unit equipment were added to the operating permit in paragraphs a.2. to a.4. and paragraph c. of this condition.	45CSR16 40 C.F.R. §§60.5411b(a)(2) to (a)(4) and (c)
14.2.2.	Exceptions for the GHG and VOC standards for process unit equipment affected facilities. NOTE: §60.5402b(b), which applies to equipment at a nonfrationating plant, and §60.5402b(c), which applies to the components of a process unit located in the Alaskan North Slope, are inapplicable to the facility and were not included in the operating permit.	45CSR16 40 C.F.R. §§60.5402b(a) and (d) to (f)
14.2.3.	Initial compliance demonstration requirements for process unit equipment affected facilities under Subpart OOOOb.	45CSR16 40 C.F.R. §60.5410b(h)
14.2.4.	Continuous compliance demonstration requirements for process unit equipment affected facilities under Subpart OOOOb.	45CSR16 40 C.F.R. §60.5415b(j)
14.2.11.	The additional continuous compliance demonstration requirements in §60.5415b(f) are applicable to process unit equipment that use a control device to meet the relevant Subpart OOOOb standards and were included in this operating permit by reference.	45CSR16 40 C.F.R. §60.5415b(f)

Title V Permit Condition	Summary of Condition	Regulatory Citation
14.2.12.	The continuous monitoring requirements of §60.5417b are applicable to process unit equipment that use a control device to meet the relevant Subpart OOOOb standards and were included in this operating permit by reference.	45CSR16 40 C.F.R. §60.5417b
14.3.6.	The performance testing procedures for control devices which are applicable when a control device is used to demonstrate compliance with the Subpart OOOOb emission standards for process unit affected facilities. These testing procedures were included in the operating permit by reference.	45CSR16 40 C.F.R. §60.5413b
14.3.7.	The requirements for inspections for closed vent systems and bypass devices at process unit equipment affected facilities under Subpart OOOOb were added to the operating permit in paragraphs a., b., and d. of this condition.	45CSR16 40 C.F.R. §60.5416b(a)
14.3.8.	The no identifiable emissions test methods and procedures of Subpart OOOOb were included in the operating permit by reference.	45CSR16 40 C.F.R. §60.5416b(b)
14.4.3.	For process unit equipment affected facilities under Subpart OOOOb, the permittee must maintain records of each equipment leak monitoring inspection and each leak identified.	45CSR16 40 C.F.R. §60.5421b
14.4.7.	For each process unit equipment affected facility subject to Subpart OOOOb, the permittee must maintain the records for closed vent systems, bypass devices, and control devices specified in paragraphs a. and c. to e. of this condition, as applicable. The permittee must also maintain records of each performance test submitted as specified in paragraph f. of this condition. NOTE: The records required by §§60.5420b(c)(11)(i) through (ix) for control devices used to comply with emission reduction standards were included in the operating permit by reference.	45CSR16 40 C.F.R. §§60.5420b(c), (c)(8), and (c)(10) to (c)(13)
14.5.4.	For each process unit equipment affected facility, the permittee must submit the notifications required in §§60.7(a)(1), (3), and (4) and §60.15(d). The permittee must also submit annual reports containing the information specified in paragraphs b.1. to b.5. of this condition, as applicable, as well as semiannual reports for each process unit as specified in paragraph d. of this condition. NOTE: The information specified in §§60.5420b(b)(11)(v)(A) through (P), which must be included in reports when a control device is used to comply with the emissions standard for process unit equipment, was included in the operation permit by reference.	45CSR16 40 C.F.R. §§60.5420b(a), (a)(1), (b), (b)(1), (b)(1)(i) to (iv), (b)(11) to (b)(13), (b)(15), (d) 40 C.F.R. §60.5422b

c. The following Subpart OOOOb requirements for reciprocating compressor affected facilities are applicable to any electric reciprocating compressors used within Cryogenic Processing Trains 5 through 7 and, therefore, were added to Section 14.0. of the operating permit:

Title V Permit Condition	Summary of Condition	Regulatory Citation
14.1.10.	GHG and VOC standards for reciprocating compressor affected facilities subject to Subpart OOOOb. The permittee may demonstrate compliance either by conducting volumetric flow rate measurements (§§60.5385b(a) to (c)), by using a rod packing emissions collection system to route the rod packing emissions to a process (§60.5385b(d)(1)), by reducing emissions from each rod packing emissions collection system by using a control device (§60.5385b(d)(2)), or by periodically replacing the rod packing (§60.5385b(d)(3)). Additionally, the permittee must demonstrate initial and continuous compliance, submit reports, and maintain records as specified in §§60.5385b(e) to (g).	45CSR16 40 C.F.R. §60.5385b
14.1.11.	The requirements applicable to closed vent systems or covers that are used to comply with the Subpart OOOOb standards for reciprocating compressors were added to the operating permit in paragraphs a.1., a.3., a.4., b., and c. of this condition.	45CSR16 40 C.F.R. §§60.5411b(a)(1), (a)(3), (a)(4), (b)(1), (b)(2), (b)(4), and (c)
14.2.9.	Initial compliance demonstration requirements for reciprocating compressors subject to Subpart OOOOb.	45CSR16 40 C.F.R. §60.5410b(e)
14.2.10.	Continuous compliance demonstration requirements for reciprocating compressors subject to Subpart OOOOb.	45CSR16 40 C.F.R. §60.5415b(g)
14.2.11.	The additional continuous compliance demonstration requirements in §60.5415b(f) are applicable to reciprocating compressors that use a control device to meet the relevant Subpart OOOOb standards and were included in this operating permit by reference.	45CSR16 40 C.F.R. §60.5415b(f)
14.2.12.	The continuous monitoring requirements of §60.5417b are applicable to reciprocating compressors that use a control device to meet the relevant Subpart OOOOb standards and were included in this operating permit by reference.	45CSR16 40 C.F.R. §60.5417b
14.3.5.	The test methods and procedures for reciprocating compressor affected facilities which are located at a natural gas processing plant and which demonstrate compliance with the Subpart OOOOb emission standards through §60.5385b(b)(1)(iii). NOTE: §§60.5386b(c)(1) to (7) contains the requirements for the use of a high-volume sampler to measure emissions and were included in the operating permit by reference.	45CSR16 40 C.F.R. §§60.5386b(a), (a)(1), (a)(1)(i), (a)(2), and (b) to (d)

Title V Permit Condition	Summary of Condition	Regulatory Citation
14.3.6.	The performance testing procedures for control devices which are applicable when a control device is used to demonstrate compliance with the Subpart OOOOb emission standards for reciprocating compressor affected facilities. These testing procedures were included in the operating permit by reference.	45CSR16 40 C.F.R. §60.5413b
14.3.7.	The requirements for inspections of closed vent systems, covers, and bypass devices installed at reciprocating compressor affected facilities under Subpart OOOOb were included in paragraphs a. to d. of this condition.	45CSR16 40 C.F.R. §60.5416b(a)
14.3.8.	The no identifiable emissions test methods and procedures of Subpart OOOOb were included in the operating permit by reference.	45CSR16 40 C.F.R. §60.5416b(b)
14.4.6.	The permittee must maintain records for each reciprocating compressor subject to Subpart OOOOb as applicable.	45CSR16 40 C.F.R. §§60.5420b(c) and (c)(5)
14.4.7.	For each reciprocating compressor affected facility subject to Subpart OOOOb, the permittee must maintain the records for closed vent systems, covers, bypass devices, and control devices specified in paragraphs a. to e. of this condition, as applicable. The permittee must also maintain records of each performance test submitted as specified in paragraph f. of this condition. NOTE: The records required by §§60.5420b(c)(11)(i) through (ix) for control devices used to comply with emission reduction standards were included in the operating permit by reference.	45CSR16 40 C.F.R. §§60.5420b(c) and (c)(8) to (c)(13)
14.5.7.	For reciprocating compressor affected facilities subject to Subpart OOOOb, the permittee is not required to submit the notifications required under §§60.7(a)(1), (3), and (4) and §60.15(d). The permittee must submit an annual report containing the information specified in paragraphs b.1. to b.5. of this condition, as applicable. NOTE: The information specified in §§60.5420b(b)(11)(v)(A) through (P), which must be included in reports when a control device is used to comply with the emissions standard for reciprocating compressors, was included in the operation permit by reference.	45CSR16 40 C.F.R. §§60.5420b(a), (a)(1), (b), (b)(1), (b)(1)(i) to (iv), (b)(6), (b)(11), (b)(12), (b)(13), (b)(15), and (d)

d. The requirements of Section 14.0. were renumbered as necessary due to the inclusion of the applicable requirements under Subpart OOOOb.

e. Condition 14.1.2. (previously Condition 15.1.2.) of this operating permit was revised as follows:

i. 40 C.F.R. §60.5400a has been amended since the issuance of the previous operating permit. A reference to §60.482-1a(e) was added to §60.5400a(a). §60.482-1a(e) excludes equipment designated as being in

VOC service less than 300 hr/yr from the requirements of §§60.482-2a through 60.482-10a. The equipment must be identified as required in §60.486a(e)(6) and must meet any of the conditions specified in §§60.482-1a(e)(1) through (3).

ii. The reference to §60.482-11a was removed from the operating permit. Although a reference to §60.482-11a is included in Subpart OOOOa, the provisions of §60.482-11a were stayed under 73 FR 31376 (effective June 2, 2008) and were removed from Subpart VVa with the amendments established by 89 FR 43070 (effective May 16, 2024).

iii. The Subpart OOOOa requirements of 40 C.F.R. §§60.5400a(d) to (f) were added to this condition as paragraphs b. through d., respectively. Under these provisions, the permittee is subject to the testing methods of §60.485a, except as provided in §60.5400a(f), as well as the recordkeeping requirements of §60.486a and the reporting requirements of §60.487a, except as provided in §60.5401a, §60.5421a, and §60.5422a.

f. Since the issuance of the previous operating permit, 40 C.F.R. §60.5420a(c)(9) has been reserved. Therefore, the reference to this recordkeeping provision was removed from Condition 14.1.8.d. (previously Condition 15.1.6.d. of R30-05100142-2020 (MM03)).

g. Condition 14.1.9. (previously Condition 15.1.7.) contains the closed vent system requirements of 40 C.F.R. §§60.5411a(a) and (d) which are applicable to each closed vent system used to comply with the emission standards for reciprocating compressors subject to Subpart OOOOa. §60.5411a has been amended since the issuance of the previous operating permit. The following changes have been made to this condition:

i. Paragraph a. was revised in accordance with the amendments to §60.5411a(a): the references to pneumatic pumps were removed from this paragraph and the requirement now specifies that the closed vent system must be designed to route all gases, vapors, and fumes emitted from the reciprocating compressor rod packing emissions collection system to a process.

ii. The specification that the requirements of §60.5411a(d)(1) apply to storage vessels were revised to include all the affected facilities listed in §60.5411a(d), including reciprocating compressors. Condition 14.1.9.b.1. was updated accordingly.

iii. §§60.5411a(d)(1), (d)(1)(i), and (d)(1)(ii) have been updated to include that a closed vent system may be certified by either a qualified PE or an in-house engineer. Additionally, the statement "I am aware that there are penalties for knowingly submitting false information," was removed from the required language of the certification.

Additionally, as the facility does not operate any centrifugal compressors, storage vessels, or pneumatic pumps which are subject to Subpart OOOOa, references to the units were removed from Condition 14.1.9. of the operating permit.

h. 40 C.F.R. §§60.5370(b), 60.5370a(b), and 60.5370b(b) contain the general requirements to maintain and operate any affected facility in a manner consistent with good air pollution control practice for minimizing emissions. These requirements were added to the operating permit as Condition 14.1.13.

i. The provisions of 40 C.F.R. §60.5401a are included in Condition 14.2.1. of this operating permit. These provisions include exceptions to the equipment leak GHG and VOC standards for affected facilities at onshore natural gas processing plants. The following exceptions were added to the operating permit:

i. §60.5401a(c) which exempts the sampling connection systems from the requirements of §60.482-5a.

ii. §60.5401a(f) which provides alternate provisions which may be used for demonstrating that a piece of equipment is in light liquid service or in heavy liquid service.

iii. §60.5401a(g) which provides alternate provisions for performing calibration drift assessments.

j. In Condition 14.3.3.d. (previously Condition 15.3.3.d.), the reference to §60.5411a(c)(3)(ii) was corrected to §60.5411a(a)(3)(ii).

k. The Subpart OOOOa recordkeeping requirements for reciprocating compressors have been amended since the issuance of the previous permit. These amendments were incorporated into Condition 14.4.5. of the operating permit as follows:

i. In accordance with §§60.5420a(c)(6)(i) through (iii), the records which must be maintained for each closed vent system inspection were added as paragraphs b.1. through 3. These include records of each closed vent system inspection or no detectable emissions monitoring survey, records of each defect or leak detected, and records for any delay of repair.

ii. In accordance with §§60.5420a(c)(7)(i) through (iii), the records which must be maintained for each cover inspection were added as paragraphs c.1. through c.3. These include records of each cover inspection, records of each defect detected, and records of any delay of repair.

l. Conditions 14.5.1. through 14.5.3. contain the reporting requirements of §60.5422a which apply to affected facilities subject to the Subpart OOOOa GHG and VOC requirements for onshore natural gas processing plants.

i. With 85 FR 57457 (September 15, 2020), the semiannual reporting requirements referenced in §§60.5422a(a) through (c) were revised.

a. The references to §60.487a(b)(4), which requires the permittee to include the number of compressors subject to §60.482-3a in semiannual reports, were removed from §§60.5422a(a) and (b). §§60.5422a(a) and (b) were amended to specify that the reports must include the information in §§60.487a(b)(1) through (3) and (5).

b. Additionally, the reference to §§60.487a(c)(2)(v) and (vi), which requires the permittee to include information related to leaks from compressors subject to §60.482-3a in semiannual reports, were removed from §60.5422a(c). §60.5422a(c) was amended to specify that the reports must include the information in §§60.487a(c)(2)(i) through (iv) and (vii) through (viii).

ii. Following the finalization of these Subpart OOOOa amendments, the semiannual reporting requirements of §§60.487a(b) and (c) were also amended under 89 FR 43071 (May 16, 2024). The requirements applicable to connectors subject to §60.482-11a were removed from Subpart VVa, including the semiannual reporting requirements of §60.487a(b)(5) as well as §§60.487a(c)(2)(vii) and (viii). Therefore, the references to these provisions were not included in Conditions 14.5.1. to 14.5.3. of the operating permit.

m. The reporting requirements of §60.5420a(b)(4)(iii) are applicable to reciprocating compressors which demonstrate compliance with the Subpart OOOOa emission standards through §60.5385a(a)(3). These provisions were added to the operating permit as Condition 14.5.6.b.3.

n. For each closed vent system routing to a control device or process, the permittee is required to submit the certification signed by the qualified professional engineer or in-house engineer in accordance with §60.5411a(d) and §60.5420a(b)(12). This reporting requirement has been added to the operating permit as Condition 14.5.6.d.

13. Section 15.0. – NPP: Turbines and Duct Burners

Blue Racer Midstream, LLC is currently permitted to construct four combustion turbines (Emission Units: TB1A/B to TB4A/B) for the NPP. Each turbine is associated with a duct burner which will be operated downstream of the turbine.

a. The turbines will be constructed according to one of the following operating scenarios:

i. **Scenario A** is comprised of four General Electric LM6000PG SPRINT combustion turbines (Emission Units: TB1A to TB4A). Each of the turbines is rated at a maximum heat input of 482.6 mmBTU/hr and a maximum power output of 55.275 MW. The turbines are fueled by either ethane or natural gas. The turbines were assumed to operate for 8,760 hours per year, but the time spent in periods of startup and shutdown was limited to 12 hours per year for each mode (Condition 4.1.2.f. of R13-3493). Selective catalytic reduction (SCR1 to SCR4) will be used to control nitrogen oxide (NO_X) emissions, and oxidation catalysts (OC1 to OC4) will be used to control carbon monoxide (CO) and volatile organic compound (VOC) emissions.

ii. **Scenario B** is comprised of four Siemens SGT-800 combustion turbines (Emission Units: TB1B to TB4B). Each of the turbines is rated at a maximum heat input of 496.2 mmBTU/hr and has a maximum power output of 57.863 MW. The turbines are fueled by either ethane or natural gas. The turbines were assumed to operate for 8,760 hours per year, but the time spent in periods of startup and shutdown was limited to 256 hours per year for each mode (Condition 4.1.2.f. of R13-3493). Selective catalytic reduction (SCR1 to SCR4) will be used to control NO_X emissions, and oxidation catalysts (OC1 to OC4) will be used to control emissions of CO, VOCs, and Formaldehyde.

b. In either operating scenario, a 475.1-mmBTU/hr duct burner will be operated downstream of each turbine. The duct burners are fueled by pipeline-quality natural gas or ethane. Instead of being routed to a heat recovery steam generator (HRSG), the waste heat from the combustion turbines and the heat from the duct burners will be used to generate hot oil to offset the use of the hot oil heaters S016 to S019, S052, and S053 at the existing NEFPP.

Per Condition 4.1.3.f. of R13-3493, the duct burners are limited to the use of 610.81 mmscf of fuel gas per year (approximately 1,745 hours of operation per year). The duct burners are also not to be operated during periods of startup or shutdown for the turbines. The duct burners share the selective catalytic reduction and oxidation catalyst control devices with the associated turbines to reduce emissions of NO_X, CO, and VOCs. The potential emissions of NO_X, CO, and VOCs from the duct burners are based on post-control device emission factors guaranteed by the control device vendors.

c. The turbines are subject to the following regulations:

i. **45CSR13** – *Permits for Construction, Modification, Relocation, and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permits, Permission to Commence Construction, and Procedures for Evaluation*

ii. **45CSR16** – *Standards of Performance for New Stationary Sources*

iii. **40 C.F.R. Part 60 Subpart KKKK** – *Standards of Performance for Stationary Combustion Turbines*

Subpart KKKK establishes emission standards for the control of NO_X and SO_2 from stationary combustion turbines. Construction of the turbines will begin after February 18, 2005, and, for either operating scenario, the turbines will have a heat input at peak load equal to or greater than 10.7 gigajoules (10 mmBTU) per hour, based on the higher heating value of the fuel. Therefore, per §60.4305(a), the turbines will be subject to the emission standards, monitoring requirements, recordkeeping requirements,

and reporting requirements of Subpart KKKK. The requirements of Subpart KKKK related to demonstrating compliance through the output-based emission standards were not included in the operating permit. A NO_X continuous emissions monitoring system (CEMS) will be installed, operated, and maintained in accordance with §60.4335(b) and §60.4345.

iv. **45CSR40** – *Control of Ozone Season Nitrogen Oxides Emissions*

For either operating scenario, the turbines have a maximum design heat input greater than 250 mmBTU/hr and are not subject to the requirements of the Cross-State Air Pollution Rule (CSAPR). Therefore, per 45CSR§40-4.1., the permittee must comply with the ozone season NO_X emission limitation and monitoring, recordkeeping, and reporting requirements for ozone season emissions of NO_X as established in 45CSR§§40-5 and -6.

v. **40 C.F.R. Part 64** – *Compliance Assurance Monitoring (CAM)*

Because the duct burners are operated with the turbines, the units share control devices, and the units have a common emission point, each turbine and duct burner pair have been considered one emission unit for the purposes of CAM.

a. Under both Scenarios A and B, the turbines and duct burners meet the CAM applicability criteria of 40 C.F.R. §64.2(a) for emissions of CO:

§64.2(a)(1)
The turbines and duct burners as well as the associated oxidation catalysts are subject to emission limits under R13-3493:

1. Conditions 4.1.2.g. and 4.1.3.e. of R13-3493 require the permittee to maintain vendor guarantees of the maximum emission rates (ppmvd at 15% O_2) for CO from the turbines and duct burners, respectively.

2. The emission guarantees were used to establish concentration-based limits (ppmvd at 15% O_2) for CO emissions from the oxidation catalysts which control emissions from both the turbines and the duct burners. These limits were established in Condition 4.1.7.a. of R13-3493. The applicable CO emission limit for the turbines are dependent on which operating scenario is selected.

3. Additionally, under Condition 4.1.2.e. of R13-3493, the turbines of each scenario are subject to hourly limits for CO emissions during startup, shutdown, and steady-state operations and an annual limit for CO emissions. These emission limits are based on the maximum emissions guarantee from the equipment vendor as well as 8,760 hours of operation per year (the number of hours in each operating mode is determined by the limit for the annual startup/shutdown hours of operation in Condition 4.1.2.f. of R13-3493). Similarly, the duct burners are subject to the hourly and annual CO emission limits under Condition 4.1.3.d. of R13-3493, which are based on the equipment vendor's maximum emissions guarantee as well as 1,745 hours of operation per year.

§64.2(a)(2)
In both operating scenarios, the turbines and duct burners use a common oxidation catalyst to reduce emissions of CO.

§64.2(a)(3)

Based on the emission guarantees included in Appendix A: PTE Calculations of this renewal application and the R13-3493 emission limits for the turbines and duct burners, each turbine and duct burner pair has the following uncontrolled potential emissions of CO:

Pre-Control Device CO Emissions

Source	Scenario A [a,c]		Scenario B [b,c]	
	lbs/hr	tpy	lbs/hr	tpy
Turbine – Steady-State	95.8	418	6.1	25.2
Turbine – Startup	153	0.92	51.8	6.6
Turbine – Shutdown	95.8	0.57	12.5	1.6
Duct Burner	106	92.5	106	92.5
Total	--	512	--	125.9

[a] The Scenario A hourly emissions were based on the uncontrolled CO emission guarantees of 94.0 ppmvd for steady-state and shutdown operations and 150.0 ppmvd for startup operations.

The annual emissions from the turbines were based on operation at steady-state for 8,736 hours per year, at startup for 12 hours per year, and at shutdown for 12 hours per year.

[b] The Scenario B hourly emissions were based on the uncontrolled CO emission guarantee of 5.0 ppmvd during steady-state operations and the startup/shutdown CO emission guarantees of 21.6 lbs/startup and 5.2 lbs/shutdown.

The annual emissions from the turbines were based on operation at steady-state for 8,248 hours per year, at startup for 256 hours per year, and at shutdown for 256 hours per year (each startup/shutdown event has an estimated duration of 25 minutes).

[c] The hourly uncontrolled emissions of CO from each duct burner were determined from the post-control device CO potential-to-emit of 2.12 lbs/hr and the 98% control efficiency.

The annual emissions from the duct burners were based on 1,745 hours of operation per year. Operation of the duct burners is not permitted during periods of startup or shutdown of the turbines.

As can be seen in the table above, each turbine and duct burner pair will collectively have pre-control device emissions of CO which exceed the Title V major source thresholds for criteria pollutants.

As the applicability criteria of 40 C.F.R. §64.2(a) are met for emissions of CO, the turbines and duct burners are pollutant-specific emissions units (PSEUs) for CO under CAM. The post-control device CO emissions are below the Title V major source thresholds. Therefore, the turbines are considered "other" PSEUs, and the CAM Plan was submitted during this operating permit renewal in accordance with 40 C.F.R. §64.5(b). The CAM Plan for emissions of CO have been included in this fact sheet under paragraph 13.e.

b. Based on the vendor emission guarantees for the turbines, emissions of VOCs are reduced by the oxidation catalysts in Scenarios A and B, and emissions of Formaldehyde are reduced by the oxidation catalysts in Scenario B. However, the uncontrolled emissions of VOCs and Formaldehyde from the turbines and the duct burners do not exceed the Title V major source thresholds. Therefore, CAM is inapplicable to the turbines and the duct burners for emissions of VOCs and Formaldehyde in accordance with 40 C.F.R. §64.2(a)(3).

c. In both operating scenarios, the turbines are subject to hourly and annual emission limits for NO_X under Condition 15.1.1.e. and concentration-based emission limits for NO_X in Conditions 15.1.1.g. and 15.1.4.a. of the operating permit. Similarly, the duct burners are subject to hourly and annual

emission limits for NO_X under Condition 15.1.2.d. and concentration-based emission limits for NO_X in Conditions 15.1.2.e. and 15.1.4.a. of the operating permit.

These emission limits will be achieved by using SCR, and compliance will be demonstrated with a NO_X CEMS which will be installed, maintained, and operated according to Condition 15.2.4. of the operating permit as well as the provisions of 40 C.F.R. Part 60, Subpart KKKK. Per 40 C.F.R. §§60.4345(b) and 60.4350(b), the CEMS will sample, analyze, and record data for each 15-minute quadrant of an hour. This data will be reduced to the hourly average NO_X emission rate (in ppm) as described in 40 C.F.R. §60.13(h).

In accordance with 40 C.F.R. §64.2(b)(1)(vi), emission limitations for which a part 70 permit specifies a continuous compliance determination method are exempt from the requirements of CAM. 40 C.F.R. §64.1 defines a continuous compliance determination method as a method, which (1) is used to determine compliance with an emission limitation or standard on a continuous basis, consistent with the averaging period established for the emission limitation; and (2) provides data either in units of the standard or correlated directly with the compliance limit.

As the CEMS meets the definition of a continuous compliance determination method, CAM is inapplicable to the turbines and duct burners for emissions of NO_X per 40 C.F.R. §64.2(b)(1)(vi).

d. The duct burners are subject to the following regulations:

i. **45CSR2** – *Control of Particulate Matter Air Pollution from the Combustion of Fuel in Indirect Heat Exchangers*

45CSR2 establishes particulate matter emission standards and requirements for fuel burning units. Per 45CSR§2-2.10., a fuel burning unit includes any furnace, boiler apparatus, device, mechanism, stack, or structure used in the process of burning fuel or other combustible material for the primary purpose of producing heat or power by indirect heat transfer. Therefore, the duct burners are subject to the particulate matter emission standards of this rule.

a. The duct burners are subject to the visible emissions standards in 45CSR§2-3. The 10% opacity limit of 45CSR§2-3.1. has been included in the operating permit as Condition 15.1.2.g.1. Compliance with this limit is demonstrated through visible emission checks conducted in accordance with Method 9 of 40 C.F.R. Part 60, Appendix A, as designated by the Secretary (45CSR§2-3.2.; Condition 4.2.7. of R13-3493).

b. The duct burners are also subject to the weight emission standards of 45CSR§2-4. 45CSR§2-4.1. establishes a facility-wide PM emission limit for all non-exempt fuel burning units located at a facility. This includes the hot oil heaters and cryogenic hot medium oil (HMO) heaters of the NEFPP as well as the duct burners at the NPP. All of these units are Type “b” fuel burning units under 45CSR§2-4.1.2., and, therefore, the PM emission limit is the product of 0.09 and the total design heat input for the units, provided that no more than 600 lbs/hr of PM is discharged into the open air from all such units. As can be seen in the table below, the total design capacity of the applicable units is 2,682.84 mmBTU/hr. Therefore, the facility-wide PM emission limit for the Type “b” fuel burning units is 241.46 lbs/hr, per 45CSR§2-4.1.

45CSR§2-4.1.: Facility-Wide PM Emission Limit for Fuel Burning Units				
Emission Unit ID	**Fuel Burning Unit Description**	**Design Capacity (mmBTU/hr)**	**45CSR§2-4.1. PM Limit (lbs/hr)**	**R13-2896K and R13-3493 PM Limits (lbs/hr)**
NEFPP				
S001	Hot Oil Heater	216.7		1.61
S013	Cryogenic HMO Heater	26.3		0.20
S016	Hot Oil Heater	61.58		0.46
S017	Hot Oil Heater	61.58		0.46
S018	Hot Oil Heater	61.58		0.46
S019	Hot Oil Heater	61.58		0.46
S026	Cryogenic HMO Heater	26.3		0.20
S037	Cryogenic HMO Heater	26.3		0.20
S041	Cryogenic HMO Heater	54.67		0.41
S045	Cryogenic HMO Heater	26.3		0.20
S049	Cryogenic HMO Heater	26.3		0.20
S052	Hot Oil Heater	61.58		0.46
S053	Hot Oil Heater	61.58		0.46
S056	Stabilizer Heater	10.09		0.08
NPP				
TB1A/B	Duct Burner #1	475.1		3.65
TB2A/B	Duct Burner #2	475.1		3.65
TB3A/B	Duct Burner #3	475.1		3.65
TB4A/B	Duct Burner #4	475.1		3.65
Totals		**2,682.84**	**241.46**	**20.46**

The PM emission limits established under R13-2896K and R13-3493 are based on the reported PTE of each individual fuel burning unit and show that the fuel burning units collectively have the potential-to-emit PM at a rate of 20.46 lbs/hr. Since this is much less than the PM emission limit established under 45CSR§2-4.1., compliance with 45CSR§2-4.1. will be shown through compliance with the limits of Conditions 4.1.2. (S001, S016-S019, and S052-S053), 5.1.2. (S013, S026, S037, S041, S045, S049, S056), and 15.1.2.d. (TB1A/B-TB4A/B) of this operating permit.

In accordance with 45CSR2 and R13-3493, the provisions of 45CSR§2-4.1. were included in the operating permit under Condition 15.1.2.g.3.

c. Under 45CSR§2-4.4., the addition of sulfur oxides to a combustion exit gas stream for the purpose of improving emissions control equipment efficiency is not allowed unless written approval is provided by the Secretary. This requirement was added to the operating permit as Condition 15.1.2.g.4.

d. The following monitoring, testing, recordkeeping, and reporting requirements of 45CSR2 are applicable to the duct burners:

1. Under 45CSR§2-8.4.2., the owner/operator of a fuel burning unit which combusts only natural gas is exempt from the testing requirements of 45CSR§2-8.1.1. and the monitoring requirements of 45CSR§2-8.2.

2. The testing requirements of 45CSR§§2-8.1.2. and -8.1.3. are applicable to the duct burners. Under these requirements, the permittee may be required to conduct a performance test to demonstrate compliance with the weight emission standards at such reasonable times as the Secretary may designate. These testing requirements were added to the operating permit as Condition 15.3.5.

3. In accordance with the recordkeeping requirements of 45CSR§2-8.3.3. and 45CSR§2A-7.1.a., the permittee must maintain records of the operating schedule and the quantity and quality of the fuel burned in each unit. As the duct burners combust only natural gas/ethane, these records must include the date and time of start-up and shutdown and the quantity of fuel consumed on a monthly basis. The recordkeeping requirements were added to the operating permit under Condition 15.4.2.

e. Condition 4.1.3.g.(3) of R13-3493 contained the provisions of 45CSR§2-9.1. under which the visible emission standards of 45CSR§2-3 were applicable at all times except for periods of startups, shutdowns, and malfunctions. Since the issuance of R13-3493, 45CSR2 was amended to reserve 45CSR§2-9.1. Therefore, this requirement was not included in the operating permit.

f. The permittee is subject to the start-up, shutdown, and malfunction requirements under 45CSR§§2-9.2. and -9.3., which have been added to the operating permit under Condition 15.1.2.g.5. and 15.5.1., respectively.

ii. **45CSR10** –*Control of Air Pollution from the Emission of Sulfur Oxides*

45CSR10 establishes sulfur oxides emission standards and requirements for fuel burning units. Per 45CSR§10-2.8., a fuel burning unit includes any furnace, boiler apparatus, device, mechanism, stack or structure used in the process of burning fuel or other combustible material for the primary purpose of producing heat or power by indirect heat transfer. Therefore, the duct burners are subject to the emission standards of this rule.

a. The duct burners are subject to the weight emission standards of 45CSR§10-3. The facility is located in Marshall County which is classified under Table 45-10A of 45CSR10 as a Priority I Region. All non-exempt fuel burning units located at the facility are subject the facility-wide SO_2 emission limit specified by 45CSR§10-3.1. The applicable units include the hot oil heaters, cryogenic hot medium oil (HMO) heaters, and the stabilizer heater of the NEFPP as well as the duct burners at the NPP, which are all Type "b" fuel burning units under 45CSR§10-2.8. Therefore, in accordance with 45CSR§10-3.1.5., the SO_2 emission limit for these units is the product of 3.1 and the total design heat input of the units. As can be seen in the table below, the total design heat input of the units is 2,682.84 mmBTU/hr. Therefore, the 45CSR§10-3.1. SO_2 emission limit is 8,316.80 lbs/hr.

45CSR§10-3.1.: Facility-Wide SO_2 Emission Limit for Fuel Burning Units				
Emission Unit ID	**Fuel Burning Unit Description**	**Design Capacity (mmBTU/hr)**	**45CSR§10-3.1.5. SO_2 Limit (lbs/hr)**	**R13-2896K and R13-3493 SO_2 Limits (lbs/hr)**
NEFPP				
S001	Hot Oil Heater	216.7		0.15
S013	Cryogenic HMO Heater	26.3		0.02
S016	Hot Oil Heater	61.58		0.04
S017	Hot Oil Heater	61.58		0.04
S018	Hot Oil Heater	61.58		0.04
S019	Hot Oil Heater	61.58		0.04
S026	Cryogenic HMO Heater	26.3		0.02
S037	Cryogenic HMO Heater	26.3		0.02
S041	Cryogenic HMO Heater	54.67		0.04
S045	Cryogenic HMO Heater	26.3		0.02
S049	Cryogenic HMO Heater	26.3		0.02
S052	Hot Oil Heater	61.58		0.04
S053	Hot Oil Heater	61.58		0.04
S056	Stabilizer Heater	10.09		0.01
NPP				
TB1A/B	Duct Burner #1	475.1		0.28
TB2A/B	Duct Burner #2	475.1		0.28
TB3A/B	Duct Burner #3	475.1		0.28
TB4A/B	Duct Burner #4	475.1		0.28
Totals		**2,682.84**	**8,316.80**	**1.66**

The SO_2 emission limits established under R13-2896K or R13-3493 are based on the reported PTE of each individual fuel burning unit and show that the units collectively have the potential to emit SO_2 at a rate of 1.66 lbs/hr. Since the fuel burning units collectively have the potential to emit SO_2 at a rate significantly less than the facility-wide emission limit established by 45CSR§10-3.1.5., compliance with 45CSR§10-3.1. will be shown through compliance with the emission limits of Conditions 4.1.2., 5.1.2., and 15.1.2.d. of this operating permit.

In accordance with 45CSR10 and R13-3493, the provisions of 45CSR§10-3.1. were included in the operating permit under Condition 15.1.2.h.

b. The emission standards of 45CSR§10-4 are applicable to manufacturing process source operations and, therefore, are inapplicable the NPP.

c. Condition 4.1.3.h.(2) of R13-3493 includes the requirements of 45CSR§10-5.1. which does not permit the combustion of any refinery process gas stream or any other process gas stream that contains hydrogen sulfide in a concentration greater than 50 grains per 100 cubic feet of gas. However, per Condition 4.1.3.a. of R13-3493, the permittee is required to fuel the duct burners with

only pipeline quality natural gas, ethane, or some combination thereof. As pipeline quality natural gas (which includes ethane) has a maximum sulfur content of 20 grains of hydrogen sulfide per 100 cubic feet, the requirements of 45CSR§10-5.1. have not been included in the operating permit.

d. Per 45CSR§10-10.3., the owners and operators of fuel burning units which combust natural gas are exempt from the testing, monitoring, recordkeeping, and reporting requirements of 45CSR§10-8.

iii. **45CSR13** – *Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permits, Permission to Commence Construction, and Procedures for Evaluation*

iv. **45CSR16** – *Standards of Performance for New Stationary Sources*

v. **40 C.F.R. Part 60 Subpart KKKK** – *Standards of Performance for Stationary Combustion Turbines*

Subpart KKKK establishes emission standards for the control of NO_X and SO_2 from stationary combustion turbines. Per 40 C.F.R. §60.4305(a), Subpart KKKK is applicable to the emissions from any duct burners associated with turbines that are subject to Subpart KKKK. Thus, the NPP's duct burners are subject to the requirements of Subpart KKKK.

vi. **40 C.F.R. Part 64** – *Compliance Assurance Monitoring (CAM)*

As discussed in paragraph 13.c.v. of this fact sheet, the turbines and duct burners meet the CAM applicability criteria of 40 C.F.R. §64.2(a) for emissions of CO. The CAM Plan for emissions of CO has been included in the following paragraph 13.e.

e. To demonstrate compliance with CAM for CO emissions, monitoring of the turbines, duct burners, and oxidation catalysts will be conducted as follows:

	Indicator No. 1	**Indicator No. 2**
I. Indicator	Performance Testing of CO from the Oxidation Catalyst Outlet	Catalyst Bed Inlet Temperature
A. Monitoring Approach	Performance testing will be conducted periodically to ensure that the CO emission limits of Conditions 15.1.4.a. are met.	The temperature of the catalyst bed inlet will be monitored by a thermocouple.

	Indicator No. 1	Indicator No. 2
II. Indicator Range	An exceedance occurs when the performance test results demonstrate that CO emissions from the oxidation catalyst surpass the concentration limits in Condition 15.1.4.a. of the operating permit. If an exceedance occurs, an investigation will be conducted and appropriate corrective actions will be taken. Any exceedances and corrective actions will be documented and reported.	Prior to the initial performance test, an excursion occurs when the inlet temperature is outside of the manufacturer's recommended range. The permittee shall maintain a copy of the manufacturer's operation specifications for the oxidation catalysts in a form suitable and readily available for expeditious review. After the initial performance test, an excursion occurs when the inlet temperature is outside of the range established in the performance test. If an excursion occurs, an investigation will be conducted and appropriate corrective actions will be taken. Any excursions and corrective actions will be documented and reported.
A. QIP Threshold	A threshold for requiring the implementation of a QIP has not been specified at this time. The requirements for a QIP have been included by reference in Condition 15.2.14. of the operating permit.	A threshold for requiring the implementation of a QIP has not been specified at this time. The requirements for a QIP have been included by reference in Condition 15.2.14. of the operating permit.
III. Performance Criteria		
A. Data Representativeness	The performance testing will be conducted in accordance with 40 C.F.R. Part 60, Appendix A, Method 10B.	The catalyst inlet temperature will be monitored by a thermocouple with a minimum accuracy within the range of ±0.01% to ±0.25% of the span.
B. Verification of Operational Status	Not Applicable.	The thermocouple will be installed according to the manufacturer's recommendations.
C. QA/QC Practices and Criteria	The performance testing will be conducted in accordance with 40 C.F.R. Part 60, Appendix A, Method 10B.	The thermocouple will be calibrated annually and in accordance with the manufacturer's recommendations.

	Indicator No. 1	Indicator No. 2
D. Monitoring Frequency	An initial performance test must be conducted within 60 days after achieving the maximum capacity of each combustion turbine/duct burner combination, but no later than 180 days after initial startup. Subsequent performance testing must be conducted annually (no more than 14 months following the previous test). If the previous testing results demonstrate that the PSEU achieved compliance of less than or equal to 75% of the applicable CO emission limits, then the subsequent performance testing may be conducted once every two years (no more than 26 months following the previous test).	The catalyst bed inlet temperature data shall be collected every 24 hours of operation of the turbine and/or duct burner.
E. Data Collection Procedure	Data will be collected in accordance with 40 C.F.R. Part 60, Appendix A, Method 10B.	The temperature data will be recorded in the facility's data acquisition system.
F. Averaging Period	Not Applicable.	None.

f. The following requirements were added to the operating permit and are applicable to the turbines and/or duct burners:

Title V Permit Condition	Summary of Condition	Regulatory Citation	R13-3493 Condition
15.1.1.	Applicable requirements for the turbines of both operating scenarios. Under R13-3493, the turbines are subject to emission limits for CO, NO_X, PM, SO_2, VOCs, Formaldehyde, and HAPs; limits for the amount of time spent annually in startup and shutdown modes; and a limit for the maximum amount of power that may be supplied by each turbine to the utility distribution systems. The permittee is also required to maintain vendor emission guarantees that the established CO, NO_X, PM, VOCs, and Formaldehyde emission rates from the turbines are achievable.	45CSR13	4.1.2.a. to h.

Title V Permit Condition	Summary of Condition	Regulatory Citation	R13-3493 Condition
15.1.2.	Applicable requirements for the duct burners. Under R13-3493, the duct burners are subject to a limit for the MDHI; a limit on the type and volume of fuel used; and emission limits for CO, NO_X, PM, SO_2, VOCs, Formaldehyde, and HAPs. The permittee is also required to maintain vendor emission guarantees that the established CO, NO_X, and VOC emission rates from the duct burners are achievable. The duct burners are subject to the visible emission and PM weight emission standards of 45CSR2, as well as the SO_2 weight emission standards of 45CSR10. NOTES: In paragraph 4.1.3.g.(2)(i) of R13-3493, the maximum PM emission limit was mistakenly listed as 1,200 lbs/hr (the maximum PM emission rate for Type "a" fuel burning units) rather than 600 lbs/hr (the maximum PM emission rate for Type "b" fuel burning units). This was corrected in the operating permit. In paragraph 4.1.3.h.(1) of R13-3493, the SO_2 emission standard was mistakenly listed as "the product of 3.2 and the total design heat" rather than "the product of 3.1 and the total design heat". This typo was corrected in the operating permit.	45CSR§§2-3.1., -3.2., -4.1., -4.1.2., -4.4., and -9.2. 45CSR§§10-3.1. and -3.1.5. 45CSR13	4.1.3.a. to h.
15.1.3.	The turbines and associated duct burners are subject to the NO_X and SO_2 emission standards of 40 C.F.R. Part 60 Subpart KKKK.	45CSR13 45CSR16 40 C.F.R. §§60.4320(a), 60.4330(a), and 60.4333(a).	4.1.2.i. and 4.1.3.i.
15.1.4.	The SCR systems and oxidation catalysts which control emissions from the turbines and duct burners are subject the concentration-based emission limits for NO_X, CO, VOCs, and Formaldehyde listed in paragraph a. as well as the operation requirements in paragraphs b. and c. of this condition.	45CSR13	4.1.7.a. to c.
15.1.5.	The turbines are subject to the ozone season NO_X requirements of 45CSR40. The permittee shall install and operate a CEMS to monitor NO_X emissions during the ozone season. The permittee has elected to demonstrate compliance through the operation, monitoring, testing, recordkeeping, and reporting requirements specified in 45CSR§40-6.5.	45CSR§§40-5.1., -6.1., and -6.5.	N/A
15.2.1.	To demonstrate compliance with the maximum startup and shutdown operating hours of Condition 15.1.1.f., the permittee shall monitor and record the total hours each turbine is operated in startup and shutdown modes.	45CSR13	4.2.3.

Title V Permit Condition	Summary of Condition	Regulatory Citation	R13-3493 Condition
15.2.2.	To demonstrate compliance with the maximum power export limit of Condition 15.1.1.h., the permittee must monitor and record the monthly and rolling twelve-month total watts exported to the power grid.	45CSR13	4.2.4.
15.2.3.	To demonstrate compliance with the duct burner fuel usage limit of Condition 15.1.2.f., the permittee must monitor and record the monthly and rolling twelve-month total volume of fuel used.	45CSR13	4.2.5.
15.2.4.a.	To demonstrate continuous with the hourly, annual, and concentration-based NO_X emission limits for the turbines, duct burners, and SCR system, the permittee must install and operate a NO_X CEMS in accordance with the applicable requirements of 40 C.F.R. Part 60 Subpart KKKK. NOTE: Condition 4.2.6. of R13-3493 specifies that the CEMS shall be installed and operated to demonstrate compliance with the turbines' NO_X emission limits under Table 4.1.2.e. (Condition 15.1.1.e. of the operating permit). As each turbine and duct burner pair will share a common control device, the CEMS will also demonstrate compliance with the hourly and annual emission limits for the duct burners in Condition 4.1.3.d. of R13-3493. Additionally, the turbines, duct burners, and SCR system are subject to concentration-based emission limits under Conditions 4.1.2.g., 4.1.3.e., and 4.1.7. Therefore, a reference to the duct burners' NO_X emission limits in Condition 15.1.2.d. as well as the concentration-based NO_X limits in Conditions 15.1.1.g., 15.1.2.e., and 15.1.4. were added to this requirement in the operating permit.	45CSR13 45CSR§30-5.1.c.	4.2.6.
15.2.4.b.	Emissions of NO_X from each turbine and duct burner pair must be monitored by a CEMS that is installed, certified, maintained, and operated in accordance with the requirements of 40 C.F.R. Part 60 Subpart KKKK.	45CSR13 45CSR16 40 C.F.R. §§60.4335(b) and (b)(1), 60.4340(b) and (b)(1), 60.4345, and 60.4350	4.1.2.i. and 4.1.3.i.
15.2.5.	To demonstrate compliance with the visible emissions requirements of 45CSR2 and Condition 15.1.2.g., Method 9 visible emissions observations shall be conducted at times designated by the Secretary. NOTE: Due to a typo, the incorrect paragraph of Condition 4.1.3. was referenced in Condition 4.2.7. of R13-3493. The 45CSR2 visible emissions monitoring requirements which are applicable to the duct burners are contained in Condition 4.1.3.g. of R13-3493. This typo was corrected in the operating permit.	45CSR13	4.2.7.
15.2.6.	Monitoring, recordkeeping, and reporting requirements for the maintenance of the oxidation catalysts. The permittee must maintain a copy of the site-specific maintenance plan or the manufacturer maintenance plan.	45CSR13	4.2.8.

Title V Permit Condition	Summary of Condition	Regulatory Citation	R13-3493 Condition
15.2.7.	Compliance with the 40 C.F.R. Part 60 Subpart KKKK standards for SO_2 will be demonstrated by maintaining a current, valid purchase contract, tariff sheet, or transportation contract for the fuel, specifying that the maximum total sulfur content for the gaseous fuel is 20 grains of sulfur or less per 100 standard cubic feet.	45CSR13 45CSR16 40 C.F.R. §§60.4365, 60.4365(a), 60.4415(a), and 60.4415(a)(1)	4.1.2.i. and 4.1.3.i.
15.2.8.	To demonstrate compliance with CAM, the catalyst bed inlet temperature shall be monitored by a thermocouple, and the temperature data shall be collected every 24 hours of operation.	45CSR§30-5.1.c. 40 C.F.R. §64.6(c)	N/A
15.2.9.	CAM requirements for commencement of operation.	45CSR§30-5.1.c. 40 C.F.R. §64.7(a)	N/A
15.2.10.	CAM requirements for proper maintenance of monitoring equipment.	45CSR§30-5.1.c. 40 C.F.R. §64.7(b)	N/A
15.2.11.	The permittee shall conduct monitoring as required at all times each PSEU is in operation.	45CSR§30-5.1.c. 40 C.F.R. §64.7(c)	N/A
15.2.12.	CAM requirements for the response to excursions or exceedances of monitoring.	45CSR§30-5.1.c. 40 C.F.R. §64.7(d)	N/A
15.2.13.	CAM requirements for documentation of the need for improved monitoring.	45CSR§30-5.1.c. 40 C.F.R. §64.7(e)	N/A
15.2.14.	A QIP may be required based on the determination made under 40 C.F.R. §64.7(d)(2). If required, the QIP must be developed and implemented in accordance with 40 C.F.R. §§64.8(b) through (e).	45CSR§30-5.1.c. 40 C.F.R. §64.8	N/A
15.3.1.	At times designated by the Secretary, the permittee shall conduct testing in accordance with Section 3.3. of the operating permit.	45CSR13	4.3.1.
15.3.2.	Performance testing of NO_X emissions from the turbines and duct burners must be conducted in accordance with the requirements of 40 C.F.R. Part 60 Subpart KKKK. Performance testing of CO emissions from the turbines and duct burners must be conducted in accordance with 40 C.F.R. Part 60, Appendix A, Method 10B. The periodic performance tests will be used as an indicator under the CAM Plan for the oxidation catalysts. After the initial tests, subsequent testing must be conducted on NO_X and CO annually. If the previous performance testing results demonstrate that the affected units achieved compliance of less than or equal to 75% of the applicable emission limits, then the permittee may reduce the frequency of subsequent performance testing to once every two years.	45CSR13 45CSR16 45CSR§30-5.1.c. 40 C.F.R. §60.4340(a) 40 C.F.R. §64.6(c)	4.3.2.

Title V Permit Condition	Summary of Condition	Regulatory Citation	R13-3493 Condition
15.3.3.	Requirements for NO_X performance testing under 40 C.F.R. Part 60 Subpart KKKK.	45CSR13 45CSR16 40 C.F.R. §60.4400	4.1.2.i. and 4.1.3.i.
15.3.4.	Alternative requirements under 40 C.F.R. Part 60 Subpart KKKK for the initial NO_X performance test if a NO_X diluent CEMS is installed and certified in accordance with 40 C.F.R. §60.4345.	45CSR13 45CSR16 40 C.F.R. §60.4405	4.1.2.i. and 4.1.3.i.
15.3.5.	45CSR2 testing requirements for visible emissions observations and PM emissions from the duct burners.	45CSR§§2-8.1.2. and -8.1.3.	N/A
15.4.1.	To demonstrate compliance with the required visible emissions monitoring, records of each visible emissions check must be maintained.	45CSR13	4.4.2.
15.4.2.	Records of the operation of the duct burners and the quantity and quality of fuel consumed on a monthly basis must be maintained.	45CSR§2-8.3.3. 45CSR§§2A-7.1.a. and -7.1.a.1.	N/A
15.4.3.	General recordkeeping requirements under CAM.	45CSR§30-5.1.c. 40 C.F.R. §64.9(b)	N/A
15.5.1.	The permittee must report any malfunctions of the duct burners or the associated air pollution control equipment which results in excess PM emissions or in excess opacity.	45CSR§2-9.3.	N/A
15.5.2.	Reporting requirements for the turbines and duct burners under 40 C.F.R. Part 60 Subpart KKKK.	45CSR13 45CSR16 40 C.F.R. §§60.4375(a) and (b), 60.4380(b), and 60.4395	4.1.2.i. and 4.1.3.i.
15.5.3.	General reporting requirements for monitoring under CAM.	45CSR§30-5.1.c. 40 C.F.R. §64.9(a)	N/A

14. Section 16.0. – NPP: Fuel Gas Heaters

The NPP also operates two 9.9-mmBTU/hr fuel gas heaters (Emission Units: FH1 and FH2) to control the temperature of the turbine fuel streams. The heaters are fueled by natural gas.

a. The fuel gas heaters are subject to the following regulations:

i. **45CSR2** –*Control of Particulate Matter Air Pollution from the Combustion of Fuel in Indirect Heat Exchangers*

45CSR2 establishes particulate matter emission standards and requirements for fuel burning units. Per 45CSR§2-2.10., a fuel burning unit includes any furnace, boiler apparatus, device, mechanism, stack, or structure used in the process of burning fuel or other combustible material for the primary purpose of producing heat or power by indirect heat transfer. Therefore, the fuel gas heaters are subject to the particulate matter emission standards of this rule.

The fuel gas heaters are subject to the visible emissions standards in 45CSR§2-3. The 10% opacity limit of 45CSR§2-3.1. has been included in the operating permit as Condition 16.1.2.a. Compliance with this limit is demonstrated through visible emission checks conducted in accordance with Method 9 of 40 CFR Part 60, Appendix A (45CSR§2-3.2. and Conditions 16.1.2.b. and 16.2.1. of this operating permit).

As each of the fuel gas heaters are limited to a design heat input less than 10 mmBTU/hr, the permittee is exempt from the weight emission standards of Section 4; the fugitive emissions control standards of Section 5; the registration standards of Section 6; the testing monitoring, recordkeeping, and reporting requirements of Section 8; and the start-up, shutdown, and malfunction requirements of Section 9 of this rule per 45CSR§2-11.1.

ii. **45CSR10** – *Control of Air Pollution from the Emission of Sulfur Oxides*

45CSR10 establishes sulfur oxides emission standards and requirements for fuel burning units. Per 45CSR§10-2.8., a fuel burning unit includes any furnace used in the process of burning fuel or other combustible material for the primary purpose of producing heat or power by indirect heat transfer. Therefore, the fuel gas heaters are subject to the emission standards of this rule.

However, per 45CSR§10-10.1., fuel burning units with a design heat input of less than 10 mmBTU/hr are exempt from the weight emission standards of Section 3; the permit requirements of Section 7; and the testing, monitoring, recordkeeping, and reporting requirements of Section 8. Furthermore, 45CSR§10-4.1., which establishes SO_2 emission standards for manufacturing process source operations, is inapplicable because the fuel gas heaters are not part of a manufacturing process; and 45CSR§10-5.1., which limits the concentration of hydrogen sulfide to 50 grains per 100 cubic feet of gas in any refinery or process gas stream that is combusted, is inapplicable because the fuel gas heaters are only fueled by pipeline-quality natural gas (which includes ethane and has a maximum sulfur content of 20 grains of hydrogen sulfide per 100 cubic feet).

Therefore, although the fuel gas heaters are subject to 45CSR10, the emission units currently have no applicable requirements under this rule.

iii. **45CSR13** – *Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permits, Permission to Commence Construction, and Procedures for Evaluation*

b. The following requirements were added to the operating permit for the fuel gas heaters:

Title V Permit Condition	Summary of Condition	Regulatory Citation	R13-3493 Condition
16.1.1.	Under R13-3493, the fuel gas heaters are subject to emission limits for CO, NO_X, PM, SO_2, and VOCs. As the annual emission limits are based on 8,760 hours of operation, there are no annual restrictions on the fuel combusted or the hours of operation of the units.	45CSR13	4.1.4.a. and 4.1.4.c.
16.1.2.	The fuel gas heaters are subject to the visible emission limitations under 45CSR2. Compliance with this limit shall be determined in accordance with 40 C.F.R. Part 60, Appendix A, Method 9.	45CSR§§2-3.1. and -3.2. 45CSR13	4.1.4.d.

Title V Permit Condition	Summary of Condition	Regulatory Citation	R13-3493 Condition
16.2.1.	Method 9 visible emissions observations shall be conducted at times designated by the Secretary.	45CSR13	4.2.7.
16.3.1.	At times designated by the Secretary, the permittee shall conduct testing of the emission limitations in Condition 16.1.1.a.	45CSR13	4.3.1.
16.4.1.	Compliance with visible emissions monitoring shall be demonstrated by maintaining records of each visible emissions check.	45CSR13	4.4.2.

15. Section 17.0. – NPP: Emergency Generator and Emergency Fire Pump Engine

One 1,676-HP emergency generator (Emission Unit: EG1) and one 700-HP emergency fire pump engine (Emission Unit: FP1) will be operated at the NPP to supply electricity in the event of an emergency. Both of the engines are compression ignition (CI) internal combustion engines (ICE) that combust diesel fuel. At the time of writing this permit, construction of the engines has not commenced.

a. The emergency generator and the fire pump engine are subject to the following regulations:

i. **45CSR13** – *Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permits, Permission to Commence Construction, and Procedures for Evaluation*

ii. **45CSR16** – *Standards of Performance for New Stationary Sources*

iii. **40 C.F.R. Part 60 Subpart IIII** – *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*

As construction of the emergency generator will commence after July 11, 2005 and the manufacture date of the engine will be after April 2, 2006, EG1 is subject to the standards of Subpart IIII per §§60.4200(a)(2) and (a)(2)(i). The emergency generator will be a model year 2007 and later emergency stationary CI ICE with a rating of 1,676 HP and a displacement of less than 10 liters per cylinder. Therefore, the engine is subject to the Tier 2 emission standards for NO_X + NMHC, CO, and PM in Appendix I to 40 C.F.R. Part 1039 and to smoke opacity standards of 40 C.F.R. §1039.105. The engine must also be installed with a non-resettable hour meter.

As construction of the emergency fire pump will commence after July 11, 2005 and the manufacture date of the engine will be after July 1, 2006, FP1 is subject to the standards of Subpart IIII per §§60.4200(a)(2) and (a)(2)(ii). The emergency fire pump will be a CI ICE with a rating of 700 HP and a displacement of less than 10 liters per cylinder. Therefore, the engine is subject to the emission standards for NO_X, CO, and PM in Table 4 to Subpart IIII. The engine must be installed with a non-resettable hour meter.

iv. **45CSR34** – *Emission Standards for Hazardous Air Pollutants*

v. **40 C.F.R. Part 63 Subpart ZZZZ** – *National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*

In accordance with §63.6590(a)(2)(iii), the emergency generator and the fire pump engine are classified as new stationary RICEs as construction of the engines commenced after June 12, 2006 and the facility

is an area source of HAPs. Per §§63.6590(c) and (c)(1), these engines demonstrate compliance with the requirements of Subpart ZZZZ through compliance with the requirements of 40 C.F.R. Part 60 Subpart IIII.

b. The following requirements are applicable to the emergency generator and the fire pump engine and have been added to Section 17.0. of the operating permit:

Title V Permit Condition	Summary of Condition	Regulatory Citation	R13-3493 Condition
17.1.1.	Under R13-3493, the emergency generator and the emergency fire pump are subject to limits for the maximum engine power; the type of fuel used; the annual hours of operation; emissions of CO, NO_X, PM, SO_2, VOCs, and HAPs; and the Subpart IIII not-to-exceed standards which the engines' PTE was based on.	45CSR13	4.1.5.a. to 4.1.5.d.
17.1.2.	The standards of 40 C.F.R. Part 60 Subpart IIII are applicable to the emergency generator (EG1) and the emergency fire pump (FP1), per §§60.4200(a)(2)(i) and (a)(2)(ii).	45CSR13 45CSR16	4.1.5.e.
	<u>Emergency Generator</u>: Under §60.4205(b), owners and operators of 2007 model year and later emergency stationary CI ICE with a displacement of less than 30 liters per cylinder that are not fire pump engines must comply with the emission standards for new nonroad CI engines in §60.4202. EG1 will be a model year 2007 and later emergency stationary CI ICE with a displacement of less than 10 liters per cylinder and a rating of 1,676 HP. Therefore, in accordance with §60.4202(a)(2), EG1 is subject to the Tier 2 emission standards for NO_X + NMHC, CO, and PM of Table 2 to Appendix I of 40 C.F.R. Part 1039 and the opacity standards specified in 40 C.F.R. §1039.105(b), as applicable.	40 C.F.R. §§60.4202(a)(2) and 60.4205(b) Table 2 to Appendix I of 40 C.F.R. Part 1039 40 C.F.R. §1039.105(b)	
	<u>Emergency Fire Pump</u>: As a fire pump engine with a displacement of less than 30 liters per cylinder, the emergency fire pump is subject to the NMHC + NO_X, CO, and PM emission standards for 2009 model year and later engines with a rating greater than or equal to 450 kW and less than or equal to 560 kW in Table 4 to Subpart IIII of 40 C.F.R. Part 60.	40 C.F.R. §60.4205(c) Table 4 to Subpart IIII of 40 C.F.R. Part 60	
	Both engines are subject to the fuel requirements for diesel-fueled engines with a displacement less than 30 liters per cylinder, must be installed with a non-resettable hour meter, and the compliance demonstration requirements for stationary CI ICEs and emergency engines.	40 C.F.R. §§60.4206; 60.4207(b); 60.4209(a); and 60.4211(a), (c), and (f)	

Title V Permit Condition	Summary of Condition	Regulatory Citation	R13-3493 Condition
17.1.3.	As new stationary RICEs located at an area source of HAPs, the emergency generator and the emergency fire pump must meet the requirements of 40 C.F.R. Part 63 Subpart ZZZZ through the requirements of 40 C.F.R. Part 60 Subpart IIII.	45CSR13 45CSR34 40 C.F.R. §§63.6590(c) and (c)(1)	4.1.5.f.
17.3.1.	At times designated by the Secretary, the permittee shall conduct testing of the emission limitations in Conditions 17.1.1.b. and 17.1.1.c.	45CSR13	4.3.1.
17.3.2.	For a stationary CI ICE with a maximum rating greater than 500 HP that is not installed, configured, operated and maintained according to the manufacturer's emission-related instructions, the permittee must conduct an initial performance test to demonstrate compliance with the applicable emission standards within one year of startup, or within one year after an engine and control device are no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within one year after the emission-related settings are changed in a way that is not permitted by the manufacturer, and must conduct subsequent performance testing every 8,760 hours of operation or every three years.	45CSR13 45CSR16 40 C.F.R. §§60.4211(g) and (g)(3) and 60.4212(a) to (c)	4.1.5.e.
17.4.1.	The emergency generator and emergency fire pump are subject to the Subpart IIII requirements to record the time of operation of the engines and the reason the engine was in operation during that time.	45CSR13 45CSR16 40 C.F.R. §60.4214(b)	4.1.5.e.
17.5.1.	For an emergency CI ICE with a maximum engine power of more than 100 HP that operates as specified in §60.4211(f)(3)(i), the permittee must submit an annual report as specified in §60.4214(d).	45CSR13 45CSR16 40 C.F.R. §60.4214(d)	4.1.5.e.

16. Section 18.0. – NPP: Storage Tanks

The power plant will also operate several storage tanks: four 5,000-gallon lubricating oil tanks (OT1 to OT4), four 250-gallon waste oil tanks (OT5 to OT8), one 60,000-gallon ammonia/urea storage tank (AT1), four 250-gallon washout sumps (WS1 to WS4), four 1,000-gallon glycol tanks (GT1 to GT4), one 25-gallon fuel tank for the emergency generator (FT1), and one 25-gallon fuel tank for the emergency fire pump (FT2).

a. The storage tanks are subject to the following regulation:

i. **45CSR13** – *Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permits, Permission to Commence Construction, and Procedures for Evaluation*

The potential emissions from each of the storage tanks are minimal. However, the design capacity and material stored in the tanks is limited under R13-3493.

b. **40 C.F.R. Part 60 Subpart Kc** – *Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for which Construction, Reconstruction, or Modification Commenced After October 4, 2023* – In accordance with §60.110c(a), Subpart Kc is applicable to each storage vessel with a capacity greater than or equal to 20,000 gallons that is used to store volatile organic liquids for which construction commenced after October 4, 2023. With the exception of the ammonia storage tank (AT1), the NPP's storage tanks (OT1 to OT8, WS1 to WS4, GT1 to GT4, FT1, and FT2) do not have a design capacity greater than 20,000 gallons. The design capacity of AT1 is greater than 20,000 gallons, but the tank does not store a volatile organic liquid. Therefore, the NPP's storage tanks are not subject to Subpart Kc.

c. The storage tanks are subject to the following requirements:

Title V Permit Condition	Summary of Condition	Regulatory Citation	R13-3493 Condition
18.1.1.	The storage tanks operated at the NPP are limited to the tank size and the material stored listed in the Emission Units Table.	45CSR13	4.1.6.

17. Section 19.0. – NPP: Component Leaks

The uncontrolled emissions of VOCs and HAPs from equipment leaks at the NPP were based on emission factors taken from the document EPA-453/R-95-017 – "Protocol for Equipment Leak Emission Estimates." Emission factors were taken from Table 2-4: "Oil and Gas Production Operations Average Emission Factors (kg/hr/source)." As stated in the document, the average emission factor approach is one accepted approach for estimating emissions from components in service within the oil and gas industry. This method is most effective when used for estimating emissions from a population of equipment. The component counts were based on the estimated maximum counts.

a. Equipment leaks from the NPP are subject to the following regulation:

i. **45CSR13** – *Permits for Construction, Modification, Relocation, and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permits, Permission to Commence Construction, and Procedures for Evaluation*

b. The equipment leaks are subject to the following requirements:

Title V Permit Condition	Summary of Condition	Regulatory Citation	R13-3493 Condition
19.1.1.	Within 180 days of the NPP's startup, the permittee must submit a permit revision to revise the number and type of components in gas/vapor service or light liquid service if the as-built number of components results in calculated VOC or HAP emissions in excess of those given in Attachment N of Permit Application R13-3493.	45CSR13	4.1.8.

Non-Applicability Determinations

The following requirements have been determined not to be applicable to the subject facility due to the following:

1. **45CSR19** – *Permits for Construction and Major Modification of Major Stationary Sources Which Cause or Contribute to Nonattainment Areas* – This rule establishes a preconstruction permit program for any area designated nonattainment for any national ambient air quality standard (NAAQS) and applies to any new major stationary source or major modification that is major for the pollutant for which the area is designated nonattainment. Marshall County is currently designated as in attainment for the NAAQS. Therefore, 45CSR19 is inapplicable.

2. **45CSR27** – *To Prevent and Control the Emissions of Toxic Air Pollutants* – Natural gas is included as a petroleum product and contains less than 5% benzene by weight. 45CSR§27-2.4. exempts equipment "used in the production and distribution of petroleum products providing that such equipment does not produce or contact materials containing more than 5% benzene by weight."

3. **45CSR43** – *Cross-State Air Pollution Rule to Control Annual Nitrogen Oxides Emissions, Annual Sulfur Dioxide Emissions, and Ozone Season Nitrogen Oxides Emissions* – This rule adopts the federal Cross-State Air Pollution Rule (CSAPR) to limit the interstate transport of emissions of NO_X and SO_2 through emissions trading programs under 40 C.F.R. Part 97 Subparts AAAAA, CCCCC, and EEEEE. The turbines TB1A/B through TB4A/B do not qualify as units subject to these rules, and, therefore, 45CSR43 is inapplicable.

4. **40 C.F.R. Part 60 Subpart Da** – *Standards of Performance for Electric Utility Steam Generating Units* – In accordance with §60.4305(a), the turbines and duct burners (TB1A/B to TB4A/B) are subject to 40 C.F.R. Part 60 Subpart KKKK. Therefore, per §60.40Da(e)(1) and §60.4305(b), the provisions of Subpart Da are inapplicable to TB1A/B through TB4A/B.

5. **40 C.F.R. Part 60 Subpart GG** – *Standards of Performance for Stationary Gas Turbines* – In accordance with §60.4305(a), the turbines TB1A/B to TB4A/B are subject to 40 C.F.R. Part 60 Subpart KKKK. Therefore, per §60.4305(b), the turbines are exempt from the provisions of Subpart GG.

6. **40 C.F.R. Part 60 Subparts TTTT and TTTTa** – *Standards of Performance for Greenhouse Gas Emissions for Electric Generating Units* – Per §60.5509(b)(3) and §60.5509a(b)(3), an electric generating unit is not subject to Subpart TTTT or TTTTa if the unit is a combined heat and power unit subject to a federally enforceable permit condition limiting annual net-electric sales to no more than either 219,000 MWh or the product of the design efficiency and the potential electric output, whichever is greater. Under Condition 4.1.2.h. of R13-3493 (Condition 15.1.1.h. of the operating permit), the amount of power supplied by each turbine to the utility distribution systems is limited to 219,000 MWh per year. Therefore, per §60.5509(b)(3) and §60.5509a(b)(3), the turbines are not subject to Subparts TTTT and TTTTa.

7. **40 C.F.R. Part 63 Subpart HH** – *National Emission Standards for Hazardous Air Pollutants from Oil and Natural Gas Production Facilities* – The facility is not subject to the equipment leak standards under 40 C.F.R. §63.769 because it is an area source of HAPs, which limits applicability under Subpart HH to only the (TEG) dehydration unit according to 40 C.F.R. §63.760(b)(2).

8. **40 C.F.R. Part 63 Subpart YYYY** – *National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines* – Per §63.6085, this subpart applies to stationary combustion turbines located at a major source of HAP emissions. As the facility is an area source of HAP emissions, this subpart is inapplicable.

9. **40 C.F.R. Part 63 Subpart DDDDD** – *National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters* – In accordance with 40 C.F.R. §63.7480, this subpart does not apply to the facility since it is not a major source of HAPs as defined in 40 C.F.R. §63.7575.

10. **40 C.F.R. Part 63 Subpart UUUUU** – *National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units* – Per §63.9980, Subpart UUUUU applies to coal- or oil-fired electric utility steam generating units as defined in §63.10042. The turbines located at the NPP are required under Condition 4.1.2.b. of R13-3493 (Condition 15.1.1.b. of this operating permit) to combust pipeline-quality natural gas, ethane, or some combination thereof. Therefore, Subpart UUUUU is inapplicable to the facility.

11. **40 C.F.R. Part 63 Subpart JJJJJJ** – *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources* – This subpart does not apply to the facility since the heaters are fueled by natural gas, and gas-fired boilers are exempt per 40 C.F.R. §63.11195(e).

12. **40 C.F.R. Part 72 Subpart A** – *Acid Rain Program General Provisions* – In accordance with 40 C.F.R. §72.6(b)(4)(ii), units that are not affected units subject to the requirements of the Acid Rain Program include units located at a cogeneration facility for which construction commenced after November 15, 1990 and which supplies equal to or less than one-third its potential electrical output capacity or equal to or less than 219,000 MWh actual electric output on an annual basis to any utility power distribution system for sale (on a gross basis). Condition 4.1.2.h. of R13-3493 (Condition 15.1.1.h. of this operating permit) limits the amount of power supplied by each of the turbines TB1A/B through TB4A/B to the utility power distribution systems to be less than 219,000 MW-hours per year. Therefore, the turbines TB1A/B through TB4A/B are not subject to the requirements of the Acid Rain Program.

13. **40 C.F.R. Part 97 Subpart AAAAA/CCCCC/EEEEE** – *CSAPR NO_X Annual Trading Program/CSAPR SO_2 Group 1 Trading Program/CSAPR NO_X Ozone Season Group 2 Trading Program* – In accordance with §52.38(a)(2)(i) and §52.39(b), the provisions of 40 CFR Part 97 Subparts AAAAA and CCCCC are applicable to sources located in West Virginia with regard to emissions occurring in 2015 and each subsequent year; similarly, in accordance with §52.38(b)(2)(ii)(D)(1) and §52.38(b)(2)(iii)(D)(1), the provisions of 40 C.F.R. Part 97 Subpart EEEEE are applicable to sources located in West Virginia with regard to emissions occurring in 2023 and thereafter. Per the applicability criteria of §97.404(a)(1), §97.604(a)(1), and §97.804(a)(1), the sources considered to be subject to the CSAPR include any stationary fossil fuel-fired boiler or stationary, fossil fuel-fired combustion turbine serving, at any time on or after January 1, 2005, a generator with a nameplate capacity of more than 25 MWe producing electricity for sale. However, §97.404(b)(1)(i), §97.604(b)(1)(i), and §97.804(b)(1)(i) exempt any unit that otherwise qualifies as a source subject to the CSAPR from Subparts AAAAA, CCCCC, and EEEEE, respectively, if the unit also qualifies as a cogeneration unit throughout the 12-month period starting on the date the unit first produces electricity and continuing to qualify as a cogeneration unit throughout each calendar year after such 12-month period and that does not supply in any calendar year more than one-third of its potential electrical output capacity or 219,000 MWh, whichever is greater, to any utility power distribution system for sale. The turbines TB1A/B through TB4A/B are cogeneration units which produce heat and electricity for use at the facility and, under Condition 4.1.2.h. of R13-3493 (Condition 15.1.1.h. of this operating permit), are subject to a federally enforceable limit that restricts the maximum amount of power supplied by each turbine to the utility distribution system to less than 219,000 MWh per year. Therefore, the facility is not subject to the CSAPR NO_X Annual Trading Program, the CSAPR SO_2 Group 1 Trading Program, nor the CSAPR NO_X Ozone Season Group 2 Trading Program, in accordance with §97.404(b)(1)(i), §97.604(b)(1)(i) and §97.804(b)(1)(i), respectively.

Request for Variances or Alternatives

None.

Insignificant Activities

Insignificant emission unit(s) and activities are identified in the Title V application.

Comment Period

Beginning Date: July 3, 2025
Ending Date: August 4, 2025

Point of Contact

All written comments should be addressed to the following individual and office:

Sarah Barron
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street SE
Charleston, WV 25304
304/414-1915
sarah.k.barron@wv.gov

Procedure for Requesting Public Hearing

During the public comment period, any interested person may submit written comments on the draft permit and may request a public hearing, if no public hearing has already been scheduled. A request for public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. The Secretary shall grant such a request for a hearing if he/she concludes that a public hearing is appropriate. Any public hearing shall be held in the general area in which the facility is located.

Response to Comments (Statement of Basis)

Not applicable.