TENASKA® PENNSYLVANIA PARTNERS, LLC

Initial Title V Operating Permit Application

Tenaska Pennsylvania Partners, LLC

Tenaska Westmoreland Generating Station

Plan Approval: 65-00990C

Plant Code: 26-4286063-1

July 2024

Contents

Tables

Appendices

1.0 Introduction

1.1 Facility Description

The Tenaska Pennsylvania Partners, LLC (Tenaska) Westmoreland Generating Station is a natural gas-fired, combined cycle combustion turbine (CCCT) electric generation facility (Facility). The Facility consists of two (2) CCCTs, each equipped with a heat recovery steam generator (HRSG) and supplemental natural gas-fired duct burners, collectively serving a single steam turbine generator. Each CCCT is equipped with Dry Low-NOx (DLN) burners and emissions from each CCCT/HRSG are controlled by selective catalytic reduction (SCR) and oxidation catalysts prior to being emitted to the atmosphere.

The Facility also includes a natural gas-fired auxiliary boiler, an emergency diesel fire pump engine, and an evaporative circulating wet cooling tower equipped with drift eliminators for control of PM emissions. As detailed in Section 2.2, various Trivial Activities are also located at the Facility.

1.2 Permitting History

The Facility currently operates under Plan Approval (PA) 65-00990C, expiring November 28, 2024. Table 1 includes a summary of permitting history to-date.

Table 1 – Permitting History

Plan Approval #[1]	Issuance Date	Description
65-00990A	NA	Secure emission reduction credits ahead of construction – application withdrawn.
65-00990B	NA	Initial Plan Approval application for multiple plant configurations/manufacturers – application withdrawn.
65-00990C	04/01/2015	Authorized construction and temporary operation of the Facility.
65-00990D	11/24/2015	Authorized transfer and use of VOC emission reduction credits (ERCs) required by PA 65-00990C, Section C, Condition #020.
65-00990E	02/12/2016	Reduced startup/shutdown emissions and facility-wide potential-to-emit.
65-00990D	08/08/2017 (revision)	Authorized transfer and use of VOC emission reduction credits (ERCs) required by PA 65-00990E, Section C, Condition #002.
65-00990C	02/12/2019 (extension)	Combined 65-00990C, 65-00990D, and 65-00990E
65-00990C	08/14/2019 (revision)	Corrected source inventory list and extend temporary operation until 02/28/2020.
65-00990F[2]	11/28/2023	Revised stack test submission requirements, startup definition, duct burner operating limitations, added combustion tuning provisions, and incorporated NSPS Subpart TTTT requirements.

Plan Approval #[1]	Issuance Date	Description
65-00990C[2]	06/07/2024 (revision)	Combined 65-00990C and 65-00990F and added RACT III requirements.

[1] In addition to the revisions listed, PA 65-00990C was routinely extended every six months as required.

[2] Plan Approval 65-00990C will be posted in the Pennsylvania Bulletin 07/13/2024. At the time of this application 65-00990F remains active; however, this application is prepared under the presumption 65-00990C will not be appealed.

Pursuant to 25 Pa. Code 127.505(a), Tenaska received a letter dated March 15, 2024, from the PaDEP Southwest Regional Office indicating the Facility's initial Title V operating permit application was due within 120 days (i.e., July 13, 2024).

Title V application forms are provided in Appendix A and a Supplemental Compliance Review Form is provided in Appendix B. The required county/municipal notifications are provided in Appendix C and copy of the application fee in Appendix D.

2.0 Emission Source Inventory

2.1 Operating Permit Source Inventory

An inventory of emissions sources and associated emission points at the Facility includes:

Table 2 – Operating Permit Source/Emission Point Inventory

Source/Stack ID	Source Name
031	Auxiliary Boiler
101	Combined Cycle Unit #1
102	Combined Cycle Unit #2
104	Emergency Fire Pump Engine
105	Cooling Tower
C101A	SCR 101
C101B	Oxidation Catalyst 101
C102A	SCR 102
C102B	Oxidation Catalyst 102
S031	Auxiliary Boiler Stack
S101	Combined Cycle Unit #1 Stack
S102	Combined Cycle Unit #2 Stack
S104	Fire Pump Engine Stack
S105A-N	Cooling Tower

Sections 2.1.1-2.1.5 and Section 5.1 provide details on differences between the inventory included above in comparison to the inventory included in PA 65-00990C.

2.1.1 Fire Pump Diesel Storage Tank

The Fire Pump Diesel Storage Tank (PA 65-00990C, Source ID 107) is a 572-gallon diesel storage tank dedicated to the Emergency Fire Pump Engine (Source ID 104). The Fire Pump Diesel Storage Tank was included in the original PA 65-00990C issued April 1, 2015, and has been included in

subsequent issuances. However, due to the size of the tank and limited throughput, the potential-to-emit (assuming the maximum operating time of the Emergency Fire Pump Engine (i.e., 500 hrs/yr)) is only 1.05E-04 tons/yr and is routinely below the Annual Emission Statement reporting threshold. In addition, PA 65-00990C does not contain any source specific conditions related to the tank. Therefore, Tenaska believes Source ID 107 qualifies as a Trivial Activity and should be removed from the Operating Permit Source Inventory.

2.1.2 Diesel Storage Tank

An additional 500-gallon diesel storage tank is also located at the Facility. This tank is used to fuel Facility support equipment (i.e., gator, man lift, etc.). This tank was deemed exempt from Plan Approval requirements via 25 Pa. Code 127.14(a)(8) and Item #31 in PaDEP's Air Quality Permit Exemption list. A Request for Determination (RFD) was submitted to PaDEP on December 21, 2017. Similarly to Source ID 107 discussed above, due to the low emissions from the tank, Tenaska believes it qualifies as a Trivial Activity and is therefore not included in this application.

2.1.3 Turbine Lube Oil Storage Tanks

The Turbine Lube Oil Storage Tanks (PA 65-00990C, Source ID 108) consist of one, 6500-gallon tank and two, 7200-gallon tanks. The Turbine Lube Oil Storage Tanks were included in the original PA 65-00990C issued April 1, 2015, and have been included in subsequent issuances. Based on the configuration, product, and operation of the tanks, emissions are consistently less than the Annual Emission Statement reporting thresholds due to the products having a vapor pressure less than two (2) at 100 KPa, a high flash point, and no evaporation rate. In addition, PA 65-00990C does not contain any source specific conditions related to the tanks. Therefore, Tenaska believes Source ID 108 qualifies as a Trivial Activity and should be removed from the Operating Permit Source Inventory.

2.1.4 Aqueous Ammonia Storage Tank

The Aqueous Ammonia Storage Tank (PA 65-00990C, Source ID 109) is a 30,000-gallon storage tank that was included in the original PA 65-00990C issued April 1, 2015, and has been included in subsequent issuances. However, the tank does not have an active vent and is operated at the vapor pressure of the fluid, resulting in no breathing losses. During tank filling, all emissions are recovered by the delivery truck, which eliminates working losses. In addition, PA 65-00990C does not contain any source specific conditions related to the tank. Therefore, Tenaska believes Source ID 109 qualifies as a Trivial Activity and should be removed from the Operating Permit Source Inventory.

2.1.5 Circuit Breakers

The Circuit Breakers (PA 65-00990C, Source ID 110) consist of various sulfur hexafluoride-insulated circuit breakers located throughout the Facility. The Circuit Breakers were included in the original PA 65-00990C issued April 1, 2015, and have been included in subsequent issuances. The Circuit Breakers are non-emitting sources by design and monitored daily via operator rounds and continuously via remote monitoring system (as required by PA 65-00990C, Condition C#011). Therefore, Tenaska believes Source ID 110 qualifies as a Trivial Activity and should be removed from the Operating Permit Source Inventory. Lastly, if emissions did occur, they would be reported in accordance with the Mandatory Greenhouse Gas Reporting Rule (40 CFR 98).

2.1.6 Natural Gas Meter Stations

Two natural gas metering stations are associated with the Facility, each serving independent gas-supply lines. Both meter stations are exempt from Plan Approval requirements per 25 Pa. Code 127.14(a)(8) #31, confirmed via Request for Determinations (RFDs) submitted June 15, 2017, and May 31, 2018, for the TETCO Meter Station and DTI Meter Station[1], respectively. Due to the low emissions from the meter stations (0.07 tpy VOC, combined), Tenaska believes the meter stations qualify as Trivial Activities and are therefore not included in this application.

2.1.7 Gasoline Storage Tank

An RFD was submitted December 21, 2017, for a 186-gallon gasoline storage tank; however, the tank was never installed and is therefore not included in this application.

2.2 Non-Listed Trivial Activities

In addition to the activities discussed in 2.1.1 to 2.1.7 above, Tenaska believes the activities included in Table 3 also qualify as Trivial Activities but are not included in the *Air Quality Permit Exemptions* document (July 2021). Due to the portable nature and non-routine operation of these sources, emissions are negligible.

Table 3 – Non-Listed Trivial Activities

Source	Specifications
Portable Pump	10.6 hp / diesel
Master Heaters (4)	400 mBtu / diesel
Master Heaters (4)	190 mBtu / diesel
Portable Generator	98 cc / gasoline
Portable Generator	149 cc / gasoline
Portable Gasoline Tanks (2)	50 gal
Portable Diesel Tanks (2)	50 gal

Various “listed” Trivial Activities are also located at the Facility but are not included herein per the exemptions document.

[1] The Natural Gas Meter Stations are not onsite and are located several miles away. Tenaska only owns a portion of each meter station. RFDs were conservatively submitted for these sources.

3.0 Potential Emissions

The Facility is considered a major source of NO_x, CO, and VOC emissions. A summary of facility potential emissions is provided in Table 4. Detailed calculations are provided in Appendix E.

Table 4 – Facility Potential Emissions

Pollutant	Total Emissions (tpy)
NO_x	303.07
CO	657.16
SO_2	22.79
VOC	222.19
PM	95.44
PM_{10}	92.15
$PM_{2.5}$	88.88
Sulfuric Acid Mist	15.19
NH_3	193.84
HCHO	8.67
Total HAPs	22.07
CO_2	3,693,644
CH_4	1,168.13
N_2O	6.64
CO_2e	3,724,827

4.0 Regulatory Analysis

4.1 Pennsylvania Regulations

4.1.1 25 Pa. Code 122 – National Standards of Performance for New Stationary Sources

Chapter 122 adopts, by reference, the federal New Source Performance Standards (NSPS) codified in 40 CFR 60. Tenaska will comply with applicable NSPS regulations as discussed in Section 4.2.

4.1.2 25 Pa. Code 123 – Standards for Contaminants

4.1.2.1 25 Pa. Code 123.1 – Prohibition of certain fugitive emissions

Fugitive emissions are prohibited, except from sources specified in 25 Pa Code 123.1(a)(1). No operations or sources at the Facility are on the list of exemptions and as such, the entire facility is subject to this regulation.

Tenaska will ensure that no fugitive emissions are produced. Due to the nature of the activities at the Facility, fugitive emissions are negligible.

4.1.2.3 25 Pa. Code 123.11 – Combustion units

The Facility is subject to the particulate matter emissions standards contained in Chapter 123.11 per the following Table 5.

Table 5 – Pa. Code 123.11 Particulate Matter Emissions Standards

Rated Heat Input Range (mmBtu/hr)	Particulate Matter Emission Standard	Tenaska Units Subject to Limit
> 2.5 and < 50	0.4 lb/mmBtu	Fire Pump Engine (Source 104)
≥50 and < 600	$A = 3.6E^{-0.56}$, where: A = allowable emissions (lb/mmBtu) E = heat input (mmBtu/hr) $A = 3.6*245^{-0.56}$ = 0.1653 lb/mmBtu	Auxiliary Boiler (Source 031)
≥ 600	0.1 lb/mmBtu	Combined Cycle Unit #1 and #2 (Source 101 and 102)

Emission limits included in PA 65-00990C are more stringent than the above standards; therefore, compliance with PA 65-00990C limits ensures compliance with Chapter 123.11.

4.1.2.4 25 Pa. Code 123.22 – Combustion units

The combustion units at the Facility are subject to the SO_2 emission limits in Chapter 123.22(a)(1). As such, each unit complies with an SO_2 emission limitation of 4 lb/mmBtu heat input over any 1-hour period. Furthermore, No. 2 fuel oil combusted in any of the units is limited to 0.0015 % sulfur per Chapter 123.22(a)(2).

4.1.2.5 25 Pa. Code 123.31 – Limitations

In accordance with Chapter 123.31(b), the emission of malodorous air contaminants from any source in such a manner that the malodors are detectable outside the property boundary of the facility are prohibited. Due to the nature of the operations at the Facility, malodors of this nature are not expected.

4.1.2.6 25 Pa. Code 123.41 – Limitations

Visible emissions from any emissions source are limited to the following per Chapter 123.41:

- Equal to or greater than 20 percent opacity for a period or periods aggregating more than 3 minutes in any 1-hour; and
- Equal to or greater than 60 percent opacity at any time.

Tenaska will monitor compliance with daily visible emissions inspections.

4.1.2.7 25 Pa. Code 123.51 – Monitoring requirements

Chapter 123.51 requires combustion units with a rated heat input of 250 mmBtu/hr or greater and an annual average capacity factor of greater than 30% to install a continuous emissions monitoring system (CEMS) to monitor NOx. Compliance is met via the installation, operation, and maintenance of CEMS on Combined Cycle Units #1 and #2 (Source IDs 101 and 102).

4.1.3 25 Pa. Code 124 – National Emission Standards for Hazardous Air Pollutants

Chapter 124 adopts, by reference, the federal National Emission Standards for Hazardous Air Pollutants (NESHAP) codified in 40 CFR 61. The NESHAP codified in 40 CFR 63 are adopted into the Plan Approval program per 25 Pa. Code 127.35(b). Tenaska will comply with all applicable NESHAP standards as discussed in Section 4.3.

4.1.4 25 Pa. Code 129 – Standards for Sources

4.1.4.1 25 Pa. Code 129.112 – Presumptive RACT requirements

Chapter 129.112 establishes presumptive Reasonably Available Control Technology (RACT) requirements to address the 2015 National Ambient Air Quality Standards (NAAQS) for Ozone (i.e., RACT III). RACT III applies to certain emission units that commenced operation prior to August 3, 2018, and are located at facilities that are major sources of NO_x or VOC emissions.

The Auxiliary Boiler (Source ID 031) commenced operation prior to August 3, 2018, and is located at a major source of NO_x/VOC and is therefore subject to RACT III. Specifically, the Auxiliary Boiler is subject to 129.112(g)(1)(i) and must comply with a NO_x limit of 0.10 lb/mmBtu. Compliance with this limit is met by complying with PA 65-00990C limit of 0.011 lb/mmBtu.

Although Combined Cycle Units #1 and #2 (Source IDs 101 and 102) are located at a major source of NO_x/VOC, neither began operation prior to August 3, 2018. However, PaDEP asserts both units are subject to RACT III. Specifically, the units must comply with a NO_x limit of 4 ppmvd @ 15% O_2 (129.112(g)(2)(iii)(A)) and a VOC limit of 2 ppmvd (as propane) @ 15% O_2 (129.112(g)(2)(iii)(B)). Compliance with the NO_x limit is met by complying with PA 65-00990C limit of 2.0 ppmvd @ 15% O_2, as measured by the CEMS, and compliance with the VOC limit is demonstrated via stack testing.

4.1.5 25 Pa. Code 139 – Sampling and Testing

Required sampling and testing is conducted in accordance with the procedures in Chapter 139. The CEMS installed on Combined Cycle Units #1 and #2 (per 25 Pa. Code 123.51(b)) meet the requirements of Chapter 139, Subpart C.

4.1.6 25 Pa. Code 145 – Interstate Pollution Transport Reduction

Chapter 145 establishes general provisions and the applicability, allowance, excess emissions, monitoring, and opt-in provisions for the NO_x, SO_2, and CO_2 trading programs. Additional program details are provided in Sections 4.4.2 and 4.4.3.

The CO_2 trading program is accomplished via the Regional Greenhouse Gas Initiative (RGGI); however, the RGGI regulation is currently under litigation, preventing Pennsylvania's participation in the program.

4.2 New Source Performance Standards (40 CFR 60)

4.2.1 Subpart Db – Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units

The Auxiliary Boiler (Source 031) was installed after June 19, 1984, and has an input capacity greater than 100 mmBtu/hr and is therefore an affected facility under Subpart Db. The Auxiliary Boiler is subject to the NO_x limit of 0.20 lb/mmBtu as specified in 40 CFR 60.44b(a). Compliance with the NO_x limit is demonstrated via a predictive monitoring system (PEMS) that utilizes a burner management system to continuously monitor pertinent operating conditions that could affect NO_x emissions and automatically make adjustments, if necessary. The SO_2 and PM limits do not apply since the Auxiliary Boiler utilizes natural gas exclusively.

Per 40 CFR 60.4305(b), the HRSG units and duct burners subject to NSPS Subpart KKKK are exempt from the requirements of Subpart Db.

4.2.2 Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

The Emergency Fire Pump Engine (Source 104) was purchased after July 11, 2005, and is a certified National Fire Protection Agency (NFPA) fire pump manufactured after July 1, 2006, with a displacement less than 10 liters per cylinder as is therefore subject to Subpart IIII. Specifically, the engine is subject to the NO_x, non-methane hydrocarbons (NMHC), CO and PM emissions limits in 60.4202 which are complied with by the purchase of an EPA-certified engine. In addition, diesel used by the fire pump engine shall have a maximum sulfur content of 15 ppm and either a minimum cetane index of 40 or a maximum aromatic content of 35 volume percent (60.4207).

Lastly, the fire pump engine is equipped with a non-resettable hour meter and routine maintenance checks and readiness testing are limited to 100 hours per year (of which 50 hours can be used for non-emergency purposes).

4.2.3 Subpart KKKK - Standards of Performance for Stationary Combustion Turbines

The Combined Cycle Units #1 and #2 (Sources 101 and 102) were installed after February 18, 2005, with heat inputs greater than 10 mmBtu/hr and are therefore subject to Subpart KKKK. The HRSG units and duct burners associated with the turbines are also subject to the requirements of Subpart KKKK.

The combustion turbines are new units which fire natural gas with a heat input greater than 850 mmBtu/hr. Therefore, NO_X emissions from each unit, inclusive of emissions from the associated HRSG and duct burners, are limited to 15 ppm at 15 percent O_2 or 54 nanograms per Joule (ng/J) of useful output (0.43 lb/MWh).

Emissions of SO_2 from each combustion turbine are limited to the following:

- Less than 110 ng/J of SO_2 (0.90 lb/MWH) gross output; or

- Burn fuel which contains total potential sulfur emissions equal to or less than 26 ng/J of SO_2 (0.060 lb/mmBtu) heat input.

The SO_2 limits are met by firing only natural gas in the combustion turbines and HRSGs.

4.2.4 Subpart TTTT - Standards of Performance for Greenhouse Gas Emissions for Electric Generating Units

The Combined Cycle Units #1 and #2 (Sources 101 and 102) were installed after January 8, 2014, with base load heat input greater than 250 mmBtu/hr each and serve a generator capable of selling greater than 25 MW to the grid. As such, the combustion turbines are subject to Subpart TTTT.

Specifically, the combustion turbines are subject to the CO_2 emission standard of 1,000 lb/MWh of gross energy output. Because the combustion turbines are permitted to burn natural gas exclusively, they are only subject to the fuel use monitoring requirements in 60.5520(d)(1).

4.3 National Emission Standards for Hazardous Air Pollutants (40 CFR 63)

4.3.1 Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

The Emergency Fire Pump Engine (Source 104) is a new stationary reciprocating internal combustion engine (RICE) at an area source of HAPs and is therefore subject to Subpart ZZZZ. In accordance with 63.6590(c)(1), the requirements of Subpart ZZZZ are met by complying with 40 CFR 60 Subpart IIII.

4.4 Other Federal Regulations

4.4.1 Compliance Assurance Monitoring

In accordance with 40 CFR 64, Compliance Assurance Monitoring (CAM) applies to emission units at major sources that are required to obtain a Part 70 permit (i.e., Title V) if the following pollutant-specific criteria are met:

- The unit is subject to an emission limitation or standard for the applicable pollutant, other than limitations or standards exempted per 40 CFR 64.2(b)(1);
- The unit uses a control device to achieve compliance with any such limitation or standard; and
- The unit has the potential pre-control device emissions for the applicable pollutant that exceed major source thresholds.

Combined Cycle Units #1 and #2 (Sources 101 and 102) are the only emission units at the Facility with uncontrolled potential emissions exceeding major source thresholds. Specifically, emissions of NO_x, CO, and VOC exceed the thresholds. The units are also subject to emission limitations or standards for each of the pollutants identified via PA 65-00990C, NSPS Subpart KKKK, the Acid Rain Program, and the Cross-State Air Pollution Rule (CSAPR). Compliance with the emission limitations or standards is met via control by oxidation catalyst, for CO and VOC, and SCR, for NO_x.

However, per 40 CFR 64.2(b)(1)(i), (iii), (iv), and (vi), CAM requirements do not apply to emissions limitations or standards:

- Proposed after November 15, 1990 (i.e., Subpart KKKK),
- Associated with Acid Rain Program requirements
- That apply under an emissions trading program (i.e., CSAPR)
- For which a CEMS is installed to determine compliance (i.e., NO_x and CO)

Therefore, both NO_x and CO are exempt from CAM requirements.

A CAM Plan for Combined Cycle Units #1 and #2 VOC emissions is provided in Appendix F.

4.4.2 Acid Rain Program

Combined Cycle Units #1 and #2 (Sources 101 and 102) are subject to the Acid Rain Program codified in 40 CFR 72 to 78, which regulate SO_2 and NO_x emissions. In accordance with 72.30(b)(2)(ii), a complete Acid Rain Permit Application was submitted at least 24 months prior to commencing operation. An Acid Rain Permit Renewal Application is included in Appendix G.

4.4.3 Cross-State Air Pollution Rule

The Cross-State Air Pollution Rule (CSAPR), codified in 40 CFR 97, was finalized on July 6, 2011, and requires 28 states to reduce SO_2 and NO_x emissions from electric generating units (EGUs) that contribute to smog and soot formation in downwind states. In doing so, this helps downwind areas attain compliance with the NAAQS. On March 15, 2023, the final Good Neighbor Plan was released which further reduced NO_x ozone-season emissions in 23 states.

Combined Cycle Units #1 and #2 (Sources 101 and 102) are subject to CSAPR and compliance is met via EPA's Clean Air Markets Division (CAMD) allowance-based trading program.

4.4.4 Mandatory Greenhouse Gas Reporting

The Mandatory Greenhouse Gas Reporting Rule, codified in 40 CFR 98, requires qualifying facilities, including EGUs, to report greenhouse gas emissions annually. Per 40 CFR 98.2(a)(1), EGUs must report emissions from stationary fuel combustion and all applicable source categories.

Annually, emissions from the combustion turbines are reported under Subpart D and emissions from other stationary non-emergency combustion equipment (i.e., auxiliary boiler) is reported under Subpart C.

5.0 Proposed Modifications

This section includes modifications from the current Plan Approval that Tenaska requests be incorporated into the Title V Permit. The proposed modifications discussed in this section are reflected throughout the permit application.

5.1 Emission Source Listing

As discussed in Section 2.1, Tenaska believes the following sources in Table 6 meet the requirements to be Trivial Activities in the Title V Permit and requests they be removed from the source inventory list:

Table 6 – Emission Source to Trivial Activities

Source ID	Source Name
107 Z107	Fire Pump Diesel Storage Tank Fugitive Emissions (Fire Pump Diesel Tank)
108 Z108	Turbine Lube Oil Storage Tanks Fugitive Emissions (Lube Oil Tank)
109 Z109	Aqueous Ammonia Storage Tank Fugitive Emissions (Ammonia Tank)
110 Z110	Circuit Breakers Fugitive Emissions (Circuit Breakers)

In addition, Tenaska requests Source ID Z105, Fugitive Emissions (Cooling Tower) be changed to S105A-N, Cooling Tower. When the Facility air emissions were modeled in support of the 2013 Plan Approval application, each cooling tower fan was treated as a discrete emission point and not as a fugitive emission source. Therefore, Tenaska would prefer to represent each fan as a stack in the Title V permit.

Lastly, Tenaska requests Source ID Z001, Fugitive Emissions be removed from the source inventory list as there are no associated fugitive emission sources included in the source inventory list.

5.2 Source Groups

PA 65-00990C includes Source Groups G001, G002, and G004 that all apply to Combined Cycle Units #1 and #2 (Source IDs 101 and 102). Specifically, G002 includes requirements specific to NSPS Subpart KKKK, G004 includes requirements specific to NSPS Subpart TTTT, and G001 includes all other requirements. Tenaska requests all requirements specific to Source IDs 101 and 102 be included in Group G001 and G002/G004 be removed.

PA 65-00990C includes Source Group 003 for units subject to NSPS Subpart IIII. The only unit subject to NSPS Subpart IIII is the Emergency Fire Pump Engine (Source ID 104). Therefore, Tenaska requests G003 be removed and all NSPS Subpart IIII requirements incorporated into the Source ID 104 section of the permit.

5.3 Facility-Wide VOC Limit

The facility-wide VOC limit included in PA 65-00990C, Section C, Condition #007 is incorrectly listed as 221.41 tpy. PA 65-00990E, issued February 12, 2016, lowered the limit from 1251.00 tpy to 222.41 tpy. Modified PA 65-00990C was issued February 12, 2019, and combined 65-00990C, 65-00990D, and 65-00990E. It appears during this modification the VOC limit was inadvertently listed as 221.41 tpy and has since been carried forward in subsequent PA extensions.

Therefore, Tenaska requests the facility-wide VOC limit be listed as 222.41 tpy in the Title V permit, as originally permitted in 65-00990E.

5.4 Stack Test Frequency

Section E, Condition #010 of PA 65-00990C requires stack testing for VOC, formaldehyde (HCHO), and PM (filterable and condensable) at least every two (2) years. Additionally, Condition #011 requires CO_2 stack testing every 25,000 hours of operation. Tenaska herein requests the testing frequency for VOC/HCHO/PM and CO_2 be reduced to once per permit term.

As summarized in the Tables 7 and 8, historical stack test results have consistently been within plan approval limits[2]; therefore, Tenaska believes a reduction in stack test frequency is warranted.

In addition to routine testing, the CAM Plan (see Appendix F) will also be used for ongoing compliance assurance with the VOC limits. Compliance with PM and CO_2 limits would continue to be demonstrated through the required stack testing.

[2] The initial stack test tests completed in January 2019 did not demonstrate compliance with the formaldehyde limit. However, through independent review it was determined those results were invalid due to substandard test procedures and/or equipment. Subsequent stack testing utilizing a different vendor has been utilized and results are consistently well below plan approval limits. Due to being invalid, the January 2019 HCHO results are not included in Tables 7 and 8.

Table 7 – Combined Cycle Unit #1 Test Results[1]

Results	Units	PA Limit	Jan 2019	May 2019	Dec 2020	May 2022	Oct 2022
VOC (w/ DB)	ppm_v @ 15%O_2 lb/hr	*2.4* *9.4*	0.4 (17%) 5.2 (55%)	0.0 (<1%) 0.2 (2%)	0.0 (<1%) 0.1 (1%)	--	0.2 (8%) 1.8 (19%)
VOC (w/o DB)	ppm_v @ 15%O_2 lb/hr	*1.4* *9.4*	0.4 (17%) 0.6 (6%)	0.0 (1%) 0.2 (2%)	0.1 (7%) 1.0 (11%)	--	0.0 (<1%) 0.2 (2%)
HCHO (w/ DB)	lb/hr	*0.986*	--	0.309 (31%)	0.150 (15%)	--	0.071 (7%)
HCHO (w/o DB)	lb/hr	*0.986*	--	0.320 (32%)	0.017 (2%)	--	0.068 (7%)
PM	lb/mmBtu lb/hr	*0.0039* *11.8*	0.0009 (23%) 3.3 (28%)	NA	0.0028 (72%) 9.6 (81%)	--	0.0023 (59%) 7.3 (62%)
CO_2	lb/MWh	*1000*	--	--	--	789 (79%)	--

[1] The percentage of the respective limit is included in parentheses next to each test result.

Table 8 – Combined Cycle Unit #2 Test Results[1]

Results	Units	PA Limit	Jan 2019	Mar 2019	Dec 2020	May 2022	Oct 2022
VOC (w/ DB)	ppm_v @ 15%O_2 lb/hr	*2.4* *9.4*	0.6 (25%) 7.5 (80%)	0.1 (5%) 1.3 (13%)	0.2 (8%) 2.1 (22%)	--	0.0 (<1%) 0.3 (3%)
VOC (w/o DB)	ppm_v @ 15%O_2 lb/hr	*1.4* *9.4*	0.3 (21%) 3.4 (36%)	0.1 (8%) 1.2 (12%)	0.3 (21%) 3.9 (41%)	--	0.0 (<1%) 0.0 (<1%)
HCHO (w/ DB)	lb/hr	*0.986*	--	0.246 (25%)	0.036 (4%)	--	0.09 (9%)
HCHO (w/o DB)	lb/hr	*0.986*	--	0.254 (26%)	0.154 (16%)	--	0.09 (9%)
PM	lb/mmBtu lb/hr	*0.0039* *11.8*	0.0017 (44%) 6.2 (53%)	NA	0.0013 (33%) 4.4 (37%)	--	0.0015 (38%) 4.9 (42%)
CO_2	lb/MWh	*1000*	--	--	--	792 (79%)	--

[1] The percentage of the respective limit is included in parentheses next to each test result.

Appendix A

Title V Operating Permit Application Forms

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

TITLE V OPERATING PERMIT APPLICATION

FOR OFFICIAL USE ONLY
OP #: _____
Date: _____

Section 1 - General Information

1.1 Application Type

Type of permit for which application is made: (Check one)

☒ Initial _____

☐ Renewal Operating Permit No. _____

1.2 Facility Information

Firm Name:	Tenaska Pennsylvania Partners, LLC	Federal Tax ID:	26-4286063
Facility Name:	Tenaska Westmoreland Generating Station	Plant Code:	26-4286063-1
NAICS Code:	221112	SIC Code:	49119907
Description of NAICS Code:	Fossil Fuel Electric Generation		
Description of SIC Code:	Fossil Fuel Electric Generation		
County:	Westmoreland	Municipality:	South Huntingdon Township
Latitude:	40.175304	Longitude:	-79.696941

Horizontal Reference Datum:	NAD83	Horizontal Collection Method:	TIGER	Reference Point:	CNTER

1.3 Permit Contact Information

Name:	Larry Carlson	Title:	Vice President, Environmental Affairs
Address:	14302 FNB Parkway		
City:	Omaha	State: NE	ZIP: 68154
Telephone:	402-938-1661		
Email:	lcarlson@tenaska.com		

1.4 Small Business Question

Are you a small business as defined by the Pennsylvania Air Pollution Control Act? ☐ Yes ☒ No

Are you a small business as defined by the U.S. Small Business Administration? ☐ Yes ☒ No

1.5 Request for Confidentiality

Do you request any information on this application to be treated as "Confidential"? ☐ Yes ☒ No

Place confidential information on separate page(s) marked "Confidential".

In order to request confidential treatment for information in any document, you must submit a redacted version of the relevant document with the confidential information blacked out (and thus suitable for public disclosure), along with a letter of request containing a table identifying the page and line number of each redaction, along with a justification for each redacted item as to why it should be deemed confidential under the specific criteria allowed under 25 Pa. Code §127.12(d) and Section 13.2 of the APCA.

1.6 Certification of Truth, Accuracy and Completeness by a Responsible Official

I certify that, subject to the penalties of Title 18 Pa. C.S.A. Section 4904 and 35 P.S. Section 4009(b)(2), I am the responsible official having primary responsibility for the design and operation of the facilities to which this application applies and that the information provided in this application is true, accurate, and complete to the best of my knowledge, information, and belief formed after reasonable inquiry.

(Signed) _____ Date: 02-10-2024

Name (Typed): Buck Hunt Title: Vice President, Operations

Telephone: 402-691-9500

Email: bhunt@tenaska.com

Section 2 - Applicable Requirements for the Entire Site

Describe and cite all applicable requirements pertaining to the entire site.

Note: A Method of Compliance Worksheet (Addendum 1) must be completed for each requirement listed.

Citation No.	Citation Limitation	Limitation Used
25 Pa. Code 121.7 / 65-00990C C#001	Prohibition of air pollution	NA
25 Pa. Code 123.1 / 65-00990C C#002	Prohibition of certain fugitive emissions	NA
25 Pa. Code 123.2 / 65-00990C C#003	Visible PM emissions not permitted outside property	NA
25 Pa. Code 123.31 / 65-00990C C#004	Detectable malodors not permitted outside property	NA
25 Pa. Code 123.41 / 65-00990C C#005	Opacity not permitted: ≥20% for more than 3 min/hr and ≥60% at any time	NA
25 Pa. Code 127.12b / 65-00990C C#007	On a 12-month rolling basis: Nitrogen Oxides (NOx): 310.43 tpy Carbon Monoxide (CO): 657.83 tpy Sulfur Oxides (SOx): 23.00 tpy Volatile Organic Compounds (VOC): 222.41 tpy Particulate Matter (PM): 96.00 tpy PM10: 92.00 tpy PM2.5: 89.00 tpy Sulfuric Acid Mist (H2SO4): 15.20 tpy Ammonia (NH3): 194.00 tpy Formaldehyde (HCHO): 8.67 tpy Total Hazardous Air Pollutants (HAPs): 22.07 tpy Greenhouse Gases, expressed as Carbon Dioxide Equivalent (CO2e): 3,725,716 tpy	NA
25 Pa. Code 127.12b / 65-00990C C#010	Inspections for visible stack emissions, fugitive emissions, and malodors once each operating day	NA
25 Pa. Code 127.12b / 65-00990C C#011	SF6 Leak Detection Program	NA
25 Pa. Code 127.12b / 65-00990C C#012	Recordkeeping Requirements	NA
25 Pa. Code 127.12b / 65-00990C C#014	Malfunction Reporting	NA
25 Pa. Code 127.12b / 65-00990C C#017	Annual Emissions Reporting by March 1	NA
25 Pa. Code 127.12b / 65-00990C C#020	Operate in accordance with manufacture specs and recommended maintenance schedules	NA

Section 3 - Site Inventory

3.1 Provide a complete list of all air pollution sources, control equipment, emission points, and fuel material locations within this site.

If preprinted information is provided, correct and/or add any new sources as necessary. Note: One (1) of the following sections (5, 6 or 7) of the application must be completed for each new source listed here.

Unit ID	Unit Name	Unit Type
031	Auxiliary Boiler	Industrial Boiler
101	Combined Cycle Unit #1	Combined Cycle Gas Turbine
102	Combined Cycle Unit #2	Combined Cycle Gas Turbine
104	Emergency Fire Pump Engine	Emergency Diesel Engine
105	Cooling Tower	Cooling Tower
C101A	SCR 101	Selective Catalytic Reduction (SCR)
C101B	Oxidation Catalyst 101	Oxidation Catalyst
C102A	SCR 102	Selective Catalytic Reduction (SCR)
C102B	Oxidation Catalyst 102	Oxidation Catalyst
S031	Auxiliary Boiler Stack	Emission Point (Unit 031)
S101	Combined Cycle Unit #1 Stack	Emission Point (Unit 101)
S102	Combined Cycle Unit #2 Stack	Emission Point (Unit 102)
S104	Fire Pump Engine Stack	Emission Point (Unit 104)
S105A-N	Cooling Tower	Emission Points (Unit 105)

3.2 Provide a narrative description of the facility's operation. The project narrative should include a description of the basic operational activities this facility is engaged in. The narrative should describe how these activities generate air emissions and how they are controlled. Attach the narrative if more space is needed.

The Tenaska Pennsylvania Partners, LLC (Tenaska) Westmoreland Generating Station is a natural gas-fired, combined cycle combustion turbine (CCCT) electric generation facility (Facility). The Facility consists of two (2) CCCTs, each equipped with a heat recovery steam generator (HRSG) and supplemental natural gas-fired duct burners, collectively serving a single steam turbine generator. Each CCCT is equipped with Dry Low-NOx (DLN) burners and emissions from each CCCT/HRSG are controlled by selective catalytic reduction (SCR) and oxidation catalysts prior to being emitted to the atmosphere.

The Facility also includes a natural gas-fire auxiliary boiler, an emergency diesel fire pump engine, and an evaporative circlulating wet cooling tower equipped with drift eliminators for control of PM emissions.

3.3 Attach flow diagram of processes giving all (gaseous, liquid and solid) flow rates. Also, list all raw materials charged to process equipment, and the amounts charged (tons/hour, etc.) at rated capacity (give maximum, minimum and average charges describing fully expected variations in production rates). Indicate (on diagram) all points where contaminants are controlled (location of water sprays, collection hoods, or other pickup points, etc.) Describe collection hoods location, design, airflow and capture efficiency. Describe any restriction requested and how it will be monitored. Indicate all fugitive emission points and any by-pass stack. **See attached.**

3.4 Provide a listing of all changes in chronological order (additions and subtractions) made at a facility since the last submittal and attach it to this application. For example:

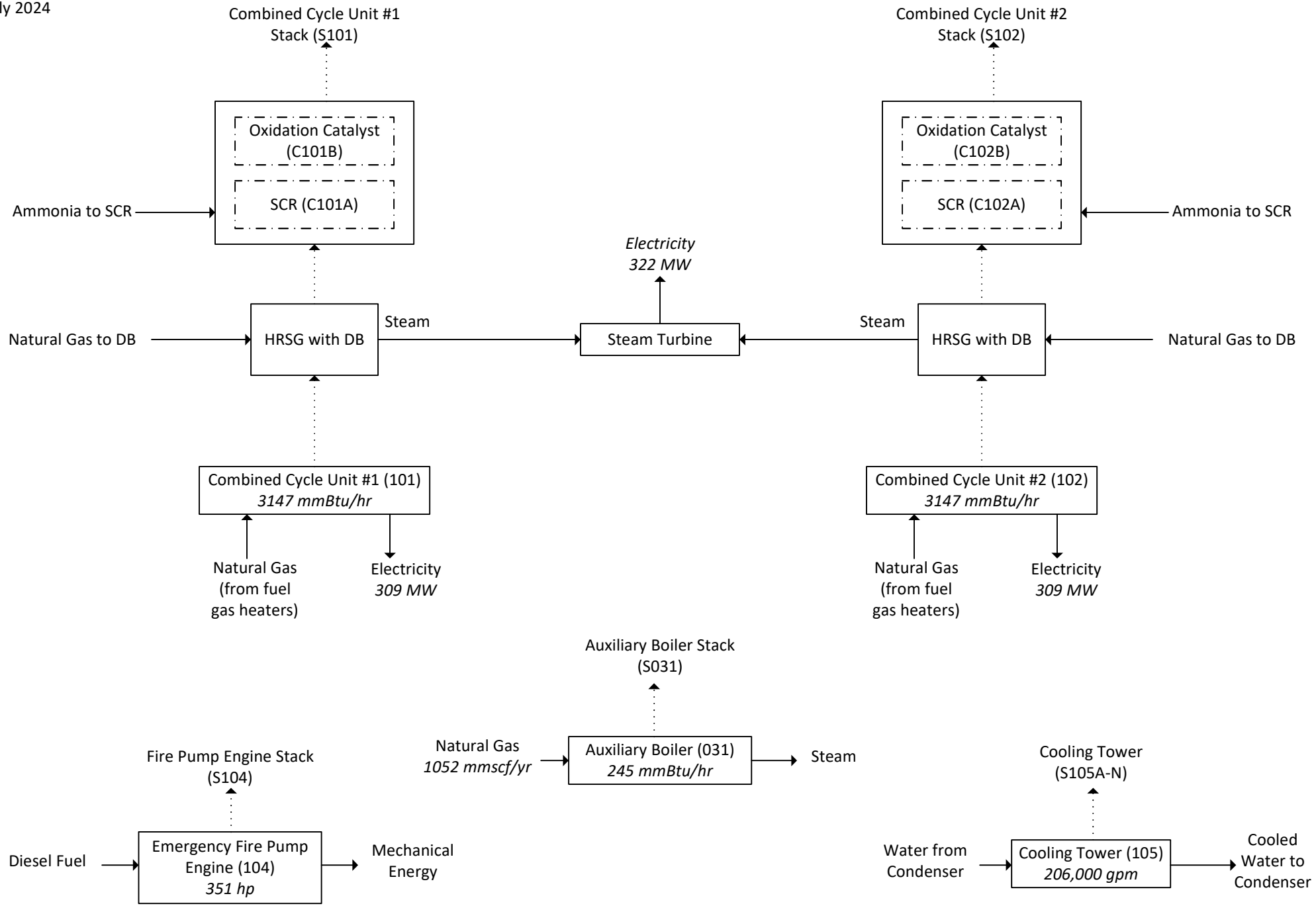
- March 2016 - Added shot blast booth 5, exempted by the attached Request for Determination.
- Dec 2017 - Installed new paint line in accordance with Plan Approval XX-XXXXX
- Etc.

NA – initial Title V application.

3.5 For renewals, please review the current operating permit. If you are proposing any changes to the conditions of the permit, please provide the condition number, the requested change, and justification for the requested change.

NA – initial Title V Application.

Tenaska Pennsylvania Partners, LLC
Initial Title V Operating Permit Application
Section 3.3, Process Flow Diagram
July 2024



Section 4 - Source Group (optional)

4.1 Source Group Definition

Define groups of sources that are subject to one or more applicable requirements that apply to all sources in the group.

Group No.	Source ID (for sources in this group)
G001	101, 102

4.2 Applicable Requirements for Source Groups

Describe and cite all applicable requirements pertaining to all source groups.

Note: A Method of Compliance Worksheet (Addendum 1) must be completed for each requirement listed.

Group No.	Citation No.	Citation Limitation	Limitation Used
G001	25 Pa. Code 127.12b / 25 Pa. Code 129.112(g)(2)(iii)(A) / 65-00990C G001, E#002 40 CFR 60 Subpart TTTT Table 2 / 65-00990C G004, E#001	Nitrogen Oxides (NOx): (1) 2.0 ppmvd @ 15% O2 (2) 26.5 lb/hr Carbon Monoxide (CO): (1) 2.0 ppmvd @ 15% O2 (2) 15.9 lb/hr Volatile Organic Compounds (VOC): (1) 2.4 ppmvd @ 15% O2 with duct burners (2) 1.4 ppmvd @ 15% O2 without duct burners (3) 9.4 lb/hr Total Particulate Matter (PM): (1) 0.0039 lb/mmBtu (2) 11.8 lb/hr Total PM10: (1) 0.0039 lb/mmBtu (2) 11.8 lb/hr Total PM2.5: (1) 0.0039 lb/mmBtu (2) 11.8 lb/hr Sulfuric Acid Mist (H2SO4): (1) 5.74E-04 lb/mmBtu (2) 1.8 lb/hr Sulfur Dioxide (SO2): (1) 2.7 lb/hr Ammonia Slip (NH3): (1) 5.0 ppmvd (2) 22.9 lb/hr Formaldehyde (HCHO): (1) 0.986 lb/hr Carbon Dioxide (CO2): (1) 1,000 lbs CO2/MWh (gross) on a 12-month annual average basis. Compliance with these limits ensures compliance with the applicable RACT III requirements at 129.112(g)(2)(iii)(A). [4 ppmvd NOx @ 15% oxygen]	NA

G001	25 Pa. Code 127.12b / 65-00990C G001, E#003	On a 12-month rolling basis, emissions from each Unit (101 and 102), shall not exceed: Nitrogen Oxides (NOx): 148.4 tpy Carbon Monoxide (CO): 318.6 tpy Volatile Organic Compounds (VOC): 109.6 tpy Total Particulate Matter (PM): 42.5 tpy Total PM10: 42.5 tpy Total PM2.5: 42.5 tpy Sulfuric Acid Mist (H2SO4): 7.5 tpy Sulfur Oxides (SOx): 11.25 tpy Ammonia (NH3): 96.9 tpy Greenhouse Gases, expressed as Carbon Dioxide Equivalent (CO2e): 1,830,976 tpy	NA
G001	25 Pa. Code 127.12b / 65-00990C G001, E#004	NOx: 340 lb/hr, each CCCT	NA
G001	25 Pa. Code 127.12b / 65-00990C G001, E#005	Opacity not permitted: ≥10% for more than 3 min/hr and ≥10% for more than 6 minutes during startup and shutdown	NA
G001	25 Pa. Code 127.12b / 65-00990C G001, E#006	Monthly average fuel sulfur limit: 0.25 gr/100 scf	NA
G001	25 Pa. Code 129.112(g)(2)(iii)(B) / 65-00990C G001, E#007	2 ppmvd VOC (as propane) @ 15% oxygen when firing natural gas or a noncommercial gaseous fuel.	NA
G001	25 Pa. Code 127.12b / 65-00990C G001, E#008	Total fuel usage of each duct burner of Source IDs 101 and 102 shall not exceed 2,039 MMscf/yr each on a 12-month rolling basis.	NA
G001	25 Pa. Code 127.12b / 65-00990C G001, E#009	Total startup/shutdown/combustion tuning duration, each CCCT: 390 hours/12-monthh rolling basis Each startup event: 1.5 hour Each shutdown: 0.5 hr	NA
G001	25 Pa. Code 127.12b / 65-00990C G001, E#011	Conduct VOC, HCHO, and PM (filterable + condensable) stack testing at least once per permit term (see Application Narrative Section 5.4)	NA
G001	25 Pa. Code 127.12b / 65-00990C G001, E#012	Conduct CO2 stack testing at least once per permit term (see Application Narrative Section 5.4)	NA
G001	25 Pa. Code 127.12b / 65-00990C G001, E#013, 014, 015	Install, certify, maintain, and operate continuous emissions monitoring systems (CEMS) for NOx, CO, NH3, and O2 on each CCCT stack	NA
G001	40 CFR Part 72-78 / 65-00990C C#034	Acid Rain Program	NA
G001	40 CFR Part 97 CSAPR / 65-00990C C#035	Subpart AAAAA – NOx Annual Subpart CCCCC – SO2 Group 1 Subpart GGGGG – NOx Ozone Season Group 3	NA

G001	40 CFR Part 98 / 65-00990C C#036	Mandatory Greenhouse Gas Reporting	NA
G001	40 CFR 60.4320 / 65-00990C G002, E#001	40 CFR 60 Subpart KKKK NOx: 15 ppm @ 15% O2 (0.43 lb/MWh)	NA
G001	40 CFR 60.4330 / 65-00990C G002, E#002	40 CFR 60 Subpart KKKK SO2: 0.90 lb/MWh gross output, 0.060 lb SO2/mmBtu	NA
G001	40 CFR 60.4340, 4345, 4350 / 65-00990C G002, E#003, #004, #005	Install, calibrate, maintain, and operate NOx CEMS for compliance with 40 CFR 60 Subpart KKKK	NA
G001	40 CFR 64	Compliance Assurance Monitoring (CAM) (see Addendum 3 and application text)	NA

Section 5 - Combustion Operational Inventory

(Complete this section for each combustion source at this site. Duplicate this section as needed).

For renewals, review and correct any pre-printed information and add additional sections for any new combustion unit listed in Section 3 of this application.

5.1 General Source Information

a. Source ID: 031 b. Source Name: Auxiliary Boiler

c. Plan Approval or Operating Permit Number: Plan Approval 65-00990C

d. Manufacturer: Locke – B&W e. Model Number: FM 120-124

f. Source Description: Auxiliary Boiler

g. Rated Heat Input/Throughput: 245 mmBtu/hr h. Installation Date: 07/06/2018

i. Rated Power/Electric Output: NA

j. Exhaust Temperature: 331 Units °F k. Exhaust % Moisture: NA l. Exhaust Flow Volume: 71,670 ACFM

5.2 Compliance Assurance Monitoring (CAM) Information

Yes	No	
☐	☒	Emissions unit uses a control device to achieve compliance.
☐	☒	Potential precontrol emissions of applicable pollutant are at least 100 percent of major source amount.

(Addendum 3 must be completed if both boxes are checked "Yes.")

5.3 Exhaust System Components

Explain how the exhaust components are configured:

From Unit ID	Unit ID Description	To Unit ID	Unit ID Description	Percent Flow
031	Auxiliary Boiler	S031	Auxiliary Boiler Stack	100

5.4 Source Classification Code (SCC) Listing for Standard Operation

Fuel/Material	Associated SCC	Max. Throughput Rate	Firing Sequence
Natural Gas	10100601	245 mmBtu/hr	NA

5.5 Maximum Fuel Physical Characteristics

If taking limitations on Fuel Physical Characteristics, see instructions.

SCC/Fuel Burned	FML*	% Sulfur	% Ash	BTU Content (Units)
Natural Gas	NA	0.25 gr/100 scf	Negligible	1040 Btu/scf

*FML = Fuel Material Location

5.6 Limitations on Source Operation

Complete this section if you are requesting a limitation on operational hours and/or a permit limitation on the throughput rate equal to or lower than that stated in Section 5.1 of the application.

Maximum number of hours of source operation per year: _____

Fuel/SCC	Hours/Day	Days/Week	Days/Year	Hours/Year	Max. Throughput	Units/Time
Natural Gas					1052	MMscf/yr

5.7 Source Applicable Requirements

Describe and cite all applicable requirements pertaining to this source.

Note: A Method of Compliance Worksheet (Addendum 1) must be completed for each requirement listed.

Fuel/SCC	Citation No.	Limitation associated with the citation	Limitation Used
Natural Gas	25 Pa. Code 127.12b / 65-00990C 031 D#001	NOx: 0.011 lb/mmBtu or 5.76 tpy on a 12-month rolling basis. CO: 0.037 lb/mmBtu or 19.85 tpy on a 12-month rolling basis. VOC: 0.0054 lb/mmBtu or 2.89 tpy on a 12-month rolling basis. Total PM: 0.0075 lb/mmBtu or 4.00 tpy on a 12-month rolling basis. Total PM10: 0.0075 lb/mmBtu or 4.00 tpy on a 12-month rolling basis. Total PM2.5: 0.0075 lb/mmBtu or 4.00 tpy on a 12-month rolling basis. H2SO4: 9.20E-06 lb/mmBtu or 4.94E-03 tpy on a 12-month rolling basis. SO2: 0.0006 lb/mmBtu or 0.32 tpy on a 12-month rolling basis. Compliance with the above emission limits ensures compliance with 25 Pa. Code 123.11, 123.22, and the applicable RACT III requirement at 129.112(g)(1)(i). [0.10 lb NOx/mmBtu]	NA
Natural Gas	25 Pa. Code 127.12b / 65-00990C 031 D#002	Opacity not permitted: ≥10% for more than 3 min/hr and ≥30% at any time	NA
Natural Gas	25 Pa. Code 127.12b / 65-00990C 031 D#003	Fuel usage: 1052 MMscf/yr on a 12-month rolling basis	NA
Natural Gas	25 Pa. Code 129.112 / 65-00990C 031 D#004	Presumptive RACT III Per 25 Code 129.112(d), the owner and operator of a combustion unit located at a major VOC emitting facility subject to 129.111 shall install, maintain and operate the source in accordance with the manufacturer's specifications and with good operating practices for the control of the VOC emissions.	NA
Natural Gas	40 CFR 60.40b / 65-00990C 031 D#006	40 CFR 60 Subpart Db NOx: 0.20 lb/mmBtu	NA
Natural Gas	40 CFR Part 98	Mandatory Greenhouse Gas Reporting	NA

Section 5 - Combustion Operational Inventory

(Complete this section for each combustion source at this site. Duplicate this section as needed).

For renewals, review and correct any pre-printed information and add additional sections for any new combustion unit listed in Section 3 of this application.

5.1 General Source Information

a. Source ID: 101 b. Source Name: Combined Cycle Unit #1

c. Plan Approval or Operating Permit Number: Plan Approval 65-00990C

d. Manufacturer: MHPSA e. Model Number: M501J

f. Source Description: Electric generating unit consisting of a combustion turbine equipped with a heat recovery steam generator and supplemental natural gas-fired duct burners

g. Rated Heat Input/Throughput: 3,147.2 mmBtu/hr h. Installation Date: 09/28/2018

i. Rated Power/Electric Output: 309 MW

j. Exhaust Temperature: 192 Units °F k. Exhaust % Moisture: NA l. Exhaust Flow Volume: 1,483,027 ACFM

5.2 Compliance Assurance Monitoring (CAM) Information

Yes	No	
☒	☐	Emissions unit uses a control device to achieve compliance.
☒	☐	Potential precontrol emissions of applicable pollutant are at least 100 percent of major source amount.

(Addendum 3 must be completed if both boxes are checked "Yes.")

5.3 Exhaust System Components

Explain how the exhaust components are configured:

From Unit ID	Unit ID Description	To Unit ID	Unit ID Description	Percent Flow
101	Combined Cycle Unit #1	C101B	Oxidation Catalyst 101	100
C101B	Oxidation Catalyst 101	C101A	SCR 101	100
C101A	SCR 101	S101	Combined Cycle Unit #1 Stack	100

5.4 Source Classification Code (SCC) Listing for Standard Operation

Fuel/Material	Associated SCC	Max. Throughput Rate	Firing Sequence
Natural Gas	20100201	3,147 mmBtu/hr	NA

5.5 Maximum Fuel Physical Characteristics

If taking limitations on Fuel Physical Characteristics, see instructions.

SCC/Fuel Burned	FML*	% Sulfur	% Ash	BTU Content (Units)
Natural Gas	NA	0.25 gr/100 scf	Negligible	1040 Btu/scf

*FML = Fuel Material Location

5.6 Limitations on Source Operation

Complete this section if you are requesting a limitation on operational hours and/or a permit limitation on the throughput rate equal to or lower than that stated in Section 5.1 of the application.

Maximum number of hours of source operation per year: NA

Fuel/SCC	Hours/Day	Days/Week	Days/Year	Hours/Year	Max. Throughput	Units/Time

5.7 Source Applicable Requirements

Describe and cite all applicable requirements pertaining to this source.

Note: A Method of Compliance Worksheet (Addendum 1) must be completed for each requirement listed.

Fuel/SCC	Citation No.	Limitation associated with the citation	Limitation Used
See Section 4, G001, for Applicable Requirements			

Section 5 - Combustion Operational Inventory

(Complete this section for each combustion source at this site. Duplicate this section as needed).

For renewals, review and correct any pre-printed information and add additional sections for any new combustion unit listed in Section 3 of this application.

5.1 General Source Information

a. Source ID: 102 b. Source Name: Combined Cycle Unit #2

c. Plan Approval or Operating Permit Number: Plan Approval 65-00990C

d. Manufacturer: MHPSA e. Model Number: M501J

f. Source Description: Electric generating unit consisting of a combustion turbine equipped with a heat recovery steam generator and supplemental natural gas-fired duct burners

g. Rated Heat Input/Throughput: 3,147.2 mmBtu/hr h. Installation Date: 09/22/2018

i. Rated Power/Electric Output: 309 MW

j. Exhaust Temperature: 192 Units °F k. Exhaust % Moisture: NA l. Exhaust Flow Volume: 1,483,027 ACFM

5.2 Compliance Assurance Monitoring (CAM) Information

Yes	No	
☒	☐	Emissions unit uses a control device to achieve compliance.
☒	☐	Potential precontrol emissions of applicable pollutant are at least 100 percent of major source amount.

(Addendum 3 must be completed if both boxes are checked "Yes.")

5.3 Exhaust System Components

Explain how the exhaust components are configured:

From Unit ID	Unit ID Description	To Unit ID	Unit ID Description	Percent Flow
102	Combined Cycle Unit #2	C102B	Oxidation Catalyst 102	100
C101B	Oxidation Catalyst 102	C102A	SCR 102	100
C102A	SCR 102	S102	Combined Cycle Unit #2 Stack	100

5.4 Source Classification Code (SCC) Listing for Standard Operation

Fuel/Material	Associated SCC	Max. Throughput Rate	Firing Sequence
Natural Gas	20100201	3,147 mmBtu/hr	NA

5.5 Maximum Fuel Physical Characteristics

If taking limitations on Fuel Physical Characteristics, see instructions.

SCC/Fuel Burned	FML*	% Sulfur	% Ash	BTU Content (Units)
Natural Gas	NA	0.25 gr/100 scf	Negligible	1040 Btu/scf

*FML = Fuel Material Location

5.6 Limitations on Source Operation

Complete this section if you are requesting a limitation on operational hours and/or a permit limitation on the throughput rate equal to or lower than that stated in Section 5.1 of the application.

Maximum number of hours of source operation per year: NA

Fuel/SCC	Hours/Day	Days/Week	Days/Year	Hours/Year	Max. Throughput	Units/Time

5.7 Source Applicable Requirements

Describe and cite all applicable requirements pertaining to this source.

Note: A Method of Compliance Worksheet (Addendum 1) must be completed for each requirement listed.

Fuel/SCC	Citation No.	Limitation associated with the citation	Limitation Used
See Section 4, G001, for Applicable Requirements			

Section 5 - Combustion Operational Inventory

(Complete this section for each combustion source at this site. Duplicate this section as needed).

For renewals, review and correct any pre-printed information and add additional sections for any new combustion unit listed in Section 3 of this application.

5.1 General Source Information

a. Source ID: 104 b. Source Name: Emergency Fire Pump Engine

c. Plan Approval or Operating Permit Number: Plan Approval 65-00990C

d. Manufacturer: John Deere / Clarke e. Model Number: JW6H-UFADD0

f. Source Description: Emergency Fire Pump Engine

g. Rated Heat Input/Throughput: 351 HP h. Installation Date: 03/19/2018

i. Rated Power/Electric Output: N/A

j. Exhaust Temperature: 906 Units °F k. Exhaust % Moisture: NA l. Exhaust Flow Volume: 3,328 ACFM

5.2 Compliance Assurance Monitoring (CAM) Information

Yes	No	
☐	☒	Emissions unit uses a control device to achieve compliance.
☐	☒	Potential precontrol emissions of applicable pollutant are at least 100 percent of major source amount.

(Addendum 3 must be completed if both boxes are checked "Yes.")

5.3 Exhaust System Components

Explain how the exhaust components are configured:

From Unit ID	Unit ID Description	To Unit ID	Unit ID Description	Percent Flow
104	Emergency Fire Pump Engine	S104	Fire Pump Eng Stack	100

5.4 Source Classification Code (SCC) Listing for Standard Operation

Fuel/Material	Associated SCC	Max. Throughput Rate	Firing Sequence
Diesel Fuel	20200102	9500 gallons	NA

5.5 Maximum Fuel Physical Characteristics

If taking limitations on Fuel Physical Characteristics, see instructions.

SCC/Fuel Burned	FML*	% Sulfur	% Ash	BTU Content (Units)
Diesel Fuel	NA	15 ppm	Negligible	147,000 Btu/gal

*FML = Fuel Material Location

5.6 Limitations on Source Operation

Complete this section if you are requesting a limitation on operational hours and/or a permit limitation on the throughput rate equal to or lower than that stated in Section 5.1 of the application.

Maximum number of hours of source operation per year: 500

Fuel/SCC	Hours/Day	Days/Week	Days/Year	Hours/Year	Max. Throughput	Units/Time
Diesel Fuel				500		

5.7 Source Applicable Requirements

Describe and cite all applicable requirements pertaining to this source.

Note: A Method of Compliance Worksheet (Addendum 1) must be completed for each requirement listed.

Fuel/SCC	Citation No.	Limitation associated with the citation	Limitation Used
Diesel Fuel	25 Pa. Code 127.12b / 65-00990C 104 D#001	NOx: 3.30 lb/hr and 0.82 tpy on a 12-month rolling basis. CO: 0.85 lb/hr and 0.21 tpy on a 12-month rolling basis. VOC: 0.11 lb/hr and 0.03 tpy on a 12-month rolling basis. Total PM: 0.13 lb/hr and 0.03 tpy on a 12-month rolling basis. Total PM10: 0.11 lb/hr and 0.03 tpy on a 12-month rolling basis. Total PM2.5: 0.11 lb/hr and 0.03 tpy on a 12-month rolling basis. SO2: 0.007 lb/hr and 0.002 tpy on a 12-month rolling basis.	NA
Diesel Fuel	25 Pa. Code 127.12b / 65-00990C 104 D#002 / 40 CFR 60.4207 / 65-00990C G003, E#004	Diesel Fuel Sulfur Content: 15 ppm	NA
Diesel Fuel	25 Pa. Code 127.12b / 65-00990C 104 D#003	Operating Hours: 500 hrs on a 12-month rolling basis	NA
Diesel Fuel	40 CFR 60.4202 / 65-00990C G003, E#002	40 CFR 60 Subpart IIII 100 hours per year (non-emergency), NNMC+NOx: 3.0 g/HP-hr PM: 0.20 g/HP-hr	NA
Diesel Fuel	40 CFR 60.4209 / 65-00990C G003, E#006	40 CFR 60 Subpart IIII Install non-resettable hour meter	NA
Diesel Fuel	40 CFR 63.6590(c)(1) / 65-00990C 104 D#006	40 CFR Subpart 63 ZZZZ Compliance with 40 CFR 60 Subpart IIII assures compliance with 40 CFR 63 Subpart ZZZZ	NA

Section 6 - Incinerator Operational Inventory

(Complete this section for each incinerator at the site. Duplicate this section as needed).

For renewals, review and correct any pre-printed information and add additional sections for any new incinerator listed in Section 3 of this application.

6.1 General Source Information

a. Source ID: NA b. Source Name: _____

c. Plan Approval or Operating Permit Number: _____

d. Manufacturer: _____ e. Model Number: _____

f. Source Description: _____

g. Rated Heat Input/Throughput: _____ h. Installation Date: _____

i. Rated Power/Electric Output: _____

j. Exhaust Temperature: _____ Units: _____ k. Exhaust % Moisture: _____ l. Exhaust Flow Volume: _____ SCFM

m. Incin. Capacity: _____ Lbs/Hr n. Primary Burner Heat Input: _____ Units _____

o. Exhaust % CO_2: _____ p. Secondary Burner Heat Input: _____ Units _____

q. Incinerator Class: _____

r. Waste Type: _____ s. Waste BTU/Lb: _____

6.2 CAM Information

Yes	No	
☐	☒	Emissions unit uses a control device to achieve compliance with emissions limitations or standards.
☐	☒	Potential precontrol emissions of applicable pollutant are at least 100 percent of major source amount.

(Addendum 3 must be completed if both boxes are checked "Yes.")

6.3 Exhaust System Components

Explain how the exhaust components are configured:

From Unit ID	Unit ID Description	To Unit ID	Unit ID Description	Percent Flow
NA				

6.4 Source Classification Code (SCC) Listing for Standard Operation

Fuel / Material	Associated SCC	Max. Throughput Rate	Firing Sequence
NA			

6.5 Maximum Fuel Physical Characteristics

If taking limitations on Fuel Physical Characteristics, see instructions.

SCC/Fuel Burned	FML*	% Sulfur	% Ash	BTU Content (Units)
NA				

*FML = Fuel Material Location

6.6 Limitations on Source Operation

Complete this section if you are requesting a limitation on operational hours and/or a permit limitation on the throughput rate equal to or lower than that stated in Section 6.3 of this application.

Maximum number of hours of source operation per year: _____

Fuel/SCC	Hours/Day	Days/Week	Days/Year	Hours/Year	Max. Throughput	Units/Time
NA						

6.7 Source Applicable Requirements

Describe and cite all applicable requirements pertaining to this source.

Note: A Method of Compliance Worksheet (Addendum 1) must be completed for each requirement listed.

Fuel/SCC	Citation No.	Limitation associated with the citation	Limitation Used
NA			

Section 7 - Process Operational Inventory

(Complete this section for each process at this site. Duplicate this section as needed).

For renewals, review and correct any pre-printed information and add additional sections for any new process listed in Section 3 of this application.

7.1 General Source Information

a. Source ID: 105 b. Source Name: Cooling Tower

c. Plan Approval or Operating Permit Number: Plan Approval 65-00990C

d. Manufacturer: EvapTech e. Model Number: ESB1445-548R

f. Source Description: Evaporative Cooling Tower

g. Rated Capacity (for engines use BHP): 206,000 gpm h. Installation Date: 05/09/2018

i. Exhaust Temperature: Ambient Units NA j. Exhaust % Moisture: ambient k. Exhaust Flow Volume: 738,222 ACFM

7.2 CAM Information

Yes	No	
☐	☒	Emissions unit uses a control device to achieve compliance with emission limitations or standards.
☐	☒	Potential precontrol emissions of applicable pollutant are at least 100 percent of major source amount.

(Addendum 3 must be completed if both are checked "Yes")

7.3 Exhaust System Components

Explain how the exhaust components are configured:

From Unit ID	Unit ID Description	To Unit ID	ID Description	Percent Flow
105	Cooling Tower	S105A-N	Cooling Tower	100

7.4 Source Classification Code (SCC) Listing for Standard Operation

Fuel/Material	Associated SCC	Max. Throughput Rate	Firing Sequence
NA			

7.5 Maximum Fuel Physical Characteristics

If taking limitations on Fuel Physical Characteristics, see instructions.

SCC/Fuel Burned	FML*	% Sulfur	% Ash	BTU Content (Units)
NA				

*FML = Fuel Material Location

7.6 Limitations on Source Operation

Complete this section if you are requesting a limitation on operational hours and/or a permit limitation on the throughput rate equal to or lower than that stated in Section 7.3 of this application.

Maximum number of hours of source operation per year: NA

Fuel/SCC	Hours/Day	Days/Week	Days/Year	Hours/Year	Max. Throughput	Units/Time
NA						

7.7 Source Applicable Requirements

Describe and cite all applicable requirements pertaining to this source.

Note: A Method of Compliance Worksheet (Addendum 1) must be completed for each requirement listed.

Fuel/SCC	Citation No.	Limitation associated with the citation	Limitation Used
NA	25 Pa. Code 127.12b / 65-00990C 105 D#001	Total PM: 1.5 lb/hr and 6.57 tpy on a 12-month rolling basis. Total PM10: 0.75 lb/hr and 3.29 tpy on a 12-month rolling basis. Total PM2.5: 0.002 lb/hr and 0.009 tpy on a 12-month rolling basis.	NA
NA	25 Pa. Code 127.12b / 65-00990C 105 D#002	TDS: 2000 ppm	NA
NA	25 Pa. Code 127.12b / 65-00990C 105 D#003	sample, analyze, and record the circulating water TDS content monthly	NA
NA	25 Pa. Code 127.12b / 65-00990C 105 D#006	Drift eliminators: drift rate < 0.0005%	NA

Section 8 - Control Device Information (duplicate this section as needed)

For renewals, review and correct any pre-printed information and add additional sections for any new control device listed in Section 3 of this application.

8.1 General Control Device Information

a. Unit ID: C101A b. Unit Name: SCR 101

c. Used by Sources: 101

d. Type: Selective Catalytic Reduction

e. Pressure Drop (in. H_2O): NA f. Capture Efficiency: 100%

g. Flow Rate (specify unit): 1,483,027 acfm

h. Manufacturer: Vector Systems / Cormetech i. Model Number: NA / Elite Catalyst

j. Installation Date: 11/16/2018

8.2 Control Device Efficiencies for this Control Device:

Pollutant Name	CAS No.	Control Efficiency	Basis for Efficiency Estimate
NOx	NA	93.8	Manufacturer

Section 8 - Control Device Information (duplicate this section as needed)

For renewals, review and correct any pre-printed information and add additional sections for any new control device listed in Section 3 of this application.

8.1 General Control Device Information

a. Unit ID: C101B b. Unit Name: Oxidation Catalyst 101

c. Used by Sources: 101

d. Type: Oxidation Catalyst

e. Pressure Drop (in. H_2O): NA f. Capture Efficiency: 100%

g. Flow Rate (specify unit): 1,483,027 acfm

h. Manufacturer: Johnson Matthey i. Model Number: SC47

j. Installation Date: 11/16/2018

8.2 Control Device Efficiencies for this Control Device:

Pollutant Name	CAS No.	Control Efficiency	Basis for Efficiency Estimate
CO	630-08-0	91-96%	Manufacturer
VOC	NA	41-49%	Manufacturer

Section 8 - Control Device Information (duplicate this section as needed)

For renewals, review and correct any pre-printed information and add additional sections for any new control device listed in Section 3 of this application.

8.1 General Control Device Information

a. Unit ID: C102A b. Unit Name: SCR 102

c. Used by Sources: 102

d. Type: Selective Catalytic Reduction

e. Pressure Drop (in. H_2O): NA f. Capture Efficiency: 100%

g. Flow Rate (specify unit): 1,483,027 acfm

h. Manufacturer: Vector Systems / Cormetech i. Model Number: NA / Elite Catalyst

j. Installation Date: 11/16/2018

8.2 Control Device Efficiencies for this Control Device:

Pollutant Name	CAS No.	Control Efficiency	Basis for Efficiency Estimate
NOx	NA	93.8	Manufacturer

Section 8 - Control Device Information (duplicate this section as needed)

For renewals, review and correct any pre-printed information and add additional sections for any new control device listed in Section 3 of this application.

8.1 General Control Device Information

a. Unit ID: C102B b. Unit Name: Oxidation Catalyst 102

c. Used by Sources: 102

d. Type: Oxidation Catalyst

e. Pressure Drop (in. H_2O): NA f. Capture Efficiency: 100%

g. Flow Rate (specify unit): 1,483,027 acfm

h. Manufacturer: Johnson Matthey i. Model Number: SC47

j. Installation Date: 11/16/2018

8.2 Control Device Efficiencies for this Control Device:

Pollutant Name	CAS No.	Control Efficiency	Basis for Efficiency Estimate
CO	630-08-0	91-96%	Manufacturer
VOC	NA	41-49%	Manufacturer

Section 9 - Stack/Flue Information (duplicate this section as needed)

For renewals, review and correct any pre-printed information and add additional sections for any new stack/flue listed in Section 3 of this application.

9.1 General Stack/Vent Information

a. Unit ID: S031 b. Unit Name: Auxiliary Boiler Stack

c. Discharge Type: Vertical and unobstructed

d. Diameter (ft): 5.8 Height (ft): 120 Base Elevation (ft): 1213.91

e. Exhaust Temperature: 331°F Exhaust % Moisture: NA Exhaust Velocity: 13.78 m/s

f. Exhaust Volume: 71,670 ACFM Exhaust Volume: 47,840 SCFM

g. Distance to Nearest Property Line (ft): 720 h. Weather Cap?: ☐ Yes ☒ No

i. Used by Units: 031 – Auxiliary Boiler

j. Latitude: 40.175303 Longitude: -79.696068

Horizontal Reference Datum: NAD83 Horizontal Collection Method: TIGER Reference Point: AIRST

k. Does the stack have a bypass? ☐ Yes ☒ No

a. Unit ID: S101 b. Unit Name: Combined Cycle Unit #1 Stack

c. Discharge Type: Vertical and unobstructed

d. Diameter (ft): 20 Height (ft): 180 Base Elevation (ft): 1198

e. Exhaust Temperature: 183°F Exhaust % Moisture: NA Exhaust Velocity: 21.61 m/s

f. Exhaust Volume: 1,483,027 ACFM Exhaust Volume: 1,217,789 SCFM

g. Distance to Nearest Property Line (ft): 780 h. Weather Cap?: ☐ Yes ☒ No

i. Used by Units: 101 – Combined Cycle Unit #1

j. Latitude: 40.175912 Longitude: -79.696578

Horizontal Reference Datum: NAD83 Horizontal Collection Method: TIGER Reference Point: AIRST

k. Does the stack have a bypass? ☐ Yes ☒ No

Section 9 - Stack/Flue Information (duplicate this section as needed)

For renewals, review and correct any pre-printed information and add additional sections for any new stack/flue listed in Section 3 of this application.

9.1 General Stack/Vent Information

a. Unit ID: S102 b. Unit Name: Combined Cycle Unit #2 Stack

c. Discharge Type: Vertical and unobstructed

d. Diameter (ft): 20 Height (ft): 180 Base Elevation (ft): 1198

e. Exhaust Temperature: 183°F Exhaust % Moisture: NA Exhaust Velocity: 21.61 m/s

f. Exhaust Volume: 1,483,027 ACFM Exhaust Volume: 1,217,789 SCFM

g. Distance to Nearest Property Line (ft): 780 h. Weather Cap?: ☐ Yes ☒ No

i. Used by Units: 102 – Combined Cycle Unit #2

j. Latitude: 40.175629 Longitude: -79.696179

Horizontal Reference Datum: NAD83 Horizontal Collection Method: TIGER Reference Point: AIRST

k. Does the stack have a bypass? ☐ Yes ☒ No

a. Unit ID: S104 b. Unit Name: Fire Pump Engine Stack

c. Discharge Type: Vertical and unobstructed

d. Diameter (ft): 0.5 Height (ft): 25 Base Elevation (ft): 1237

e. Exhaust Temperature: 906 Exhaust % Moisture: NA Exhaust Velocity: 86.10 m/s

f. Exhaust Volume: 3328 ACFM Exhaust Volume: 1267 SCFM

g. Distance to Nearest Property Line (ft): 425 h. Weather Cap?: ☐ Yes ☒ No

i. Used by Units: 104 – Emergency Fire Pump Engine

j. Latitude: 40.174445 Longitude: -79.696335

Horizontal Reference Datum: NAD83 Horizontal Collection Method: TIGER Reference Point: AIRST

k. Does the stack have a bypass? ☐ Yes ☒ No

Section 9 - Stack/Flue Information (duplicate this section as needed)

For renewals, review and correct any pre-printed information and add additional sections for any new stack/flue listed in Section 3 of this application.

9.1 General Stack/Vent Information

a. Unit ID: S105A-N b. Unit Name: Cooling Tower

c. Discharge Type: Vertical and unobstructed

d. Diameter (ft): 26 Height (ft): 54 Base Elevation (ft): 1223

e. Exhaust Temperature: Ambient Exhaust % Moisture: variable Exhaust Velocity: 7.06 m/s

f. Exhaust Volume: 737,792 ACFM Exhaust Volume: 737,792 SCFM

g. Distance to Nearest Property Line (ft): 420 h. Weather Cap?: ☐ Yes ☒ No

i. Used by Units: 105 – Cooling Tower (14 cells)

j. Latitude: 40.173936 Longitude: -79.695632

Horizontal Reference Datum: NAD83 Horizontal Collection Method: TIGER Reference Point: CNTER

k. Does the stack have a bypass? ☐ Yes ☒ No

a. Unit ID: NA b. Unit Name:

c. Discharge Type:

d. Diameter (ft): Height (ft): Base Elevation (ft):

e. Exhaust Temperature: Exhaust % Moisture: Exhaust Velocity:

f. Exhaust Volume: ACFM Exhaust Volume: SCFM

g. Distance to Nearest Property Line (ft): h. Weather Cap?: ☐ Yes ☐ No

i. Used by Units:

j. Latitude: Longitude:

Horizontal Reference Datum: Horizontal Collection Method: Reference Point:

k. Does the stack have a bypass? ☐ Yes ☐ No

Section 10 - Fuel Material Location (FML) Information

For renewals, review and correct any pre-printed information and add additional sections for any new FML listed in Section 3 of this application.

10.1 Fuel Material Location Information

a. FML ID: NA b. Name: ______

c. Capacity: ______ Units: ______ d. Fuel: ______

e. Maximum Fuel Characteristics: If fuel is coal, what is the moisture content? ______

% Ash: ______ % Sulfur: ______ BTU Content: ______ Units: ______

f. Used by Source:

a. FML ID: NA b. Name: ______

c. Capacity: ______ Units: ______ d. Fuel: ______

e. Maximum Fuel Characteristics: If fuel is coal, what is the moisture content? ______

% Ash: ______ % Sulfur: ______ BTU Content: ______ Units: ______

f. Used by Source:

a. FML ID: NA b. Name: ______

c. Capacity: ______ Units: ______ d. Fuel: ______

e. Maximum Fuel Characteristics: If fuel is coal, what is the moisture content? ______

% Ash: ______ % Sulfur: ______ BTU Content: ______ Units: ______

f. Used by Source:

Section 11 - Compliance Plan for the Facility

11.1	Will your facility be in compliance with all applicable requirements at the time of permit issuance and continue to comply with these requirements during the permit duration?	☒ Yes	☐ No
11.2	Will your facility be in compliance with all applicable requirements presently scheduled to take effect during the term of the permit?	☒ Yes	☐ No
11.3	Will these requirements be met by the regulatory required dates?	☒ Yes	☐ No

If you checked "No" in Part 11.1, 11.2 or 11.3, answer the following questions:

11.4 Identify applicable requirement(s) for which compliance is not or will not be achieved:

Unit ID	Citation No.
NA	

11.4.1 Briefly describe how compliance with this/these applicable requirement(s) will be achieved:

NA

11.4.2 Provide a detailed schedule of compliance for the noncomplying sources or activities identified in this section of the application. Include an enforceable sequence of corrective actions with milestone and projected compliance dates.

Date	Action/Milestone
NA	

11.4.3 Indicate the submittal frequency for the progress report (s): NA

11.4.4 Starting date for the submittal of the progress report(s): NA

Section 12 – Alternative Operating Scenario (optional)

(Duplicate this section for each source participated in this alternative scenario.)

12.1 General Information

a. Alternative Operating Scenario Name or ID: NA

b. Unit ID: _____ c. Unit Name: _____

d. Unit Type (check one): ☐ Combustion ☐ Incinerator ☐ Process
☐ Control Device ☐ Fuel Material Location

e. Give a brief description of this alternative scenario stating how it is different from the standard operation:

12.2 Operational Flexibility Request

Check all that apply.

☐ Alternative exhaust system component configuration
If this box is checked, complete Sections 12.3 and 12.7

☐ Alternative type of fuel usage replacing or in addition to an existing fuel in standard operation.
If this box is checked, complete Sections 12.4 and/or 12.5 and 12.7

☐ Alternative process method replacing or in addition to a process SCC existing in standard operation.
If this box is checked, complete Section 12.6 and 12.7

☐ Alternative lower limitations. Describe

12.3 Exhaust System Components

Specify the complete exhaust system component configuration for this alternative operating scenario.

From Component Type	From Component Number	To Component Type	To Component Number	Percent Flow	Begin Date	End Date
NA						

12.4 Source Classification Code (SCC) Listing for Alternative Operation

Give a complete listing of all fuels burned, products produced by a process or waste incinerated for this alternative operating scenario.

Fuel	Associated SCC	Max. Throughout Rate	Firing Sequence
NA			

12.5 Alternative Fuel Physical Characteristics

Give a complete listing of all fuels physical characteristics for this alternative operating scenario.

SCC/Fuel Burned	FML	% Sulfur	% Ash	BTU Content (Units)
NA				

12.6 Alternative Process/Product Description

Give a complete listing of all fuels physical characteristics for this alternative operating scenario.

a. Briefly describe the change(s) in raw materials and/or process methods used in this operating scenario, if applicable:
NA

b. Provide and briefly describe the process SCC associated with this alternative operating scenario:
NA

Process SCC: SCC Description:

c. Alternative Product(s): NA

12.7 Source Potential to Emit

Give potential emission estimate for all air pollutants emitted at this source for this operating scenario.

Pollutant or CAS Number	Fuel/SCC	Emission/Activity Allowable per Unit	Calc. Method	Max. Capacity	Total Hours	Emission in TPY
NA						

Section 13 – Compliance Certification

13.1 Schedule for Compliance Certification Submission

a. Frequency of Submittal: Annual

b. Schedule specified in current Title V

Operating Permit or proposed starting date: TBD based on permit issuance

13.2 Monitoring Compliance

Is the site identified in this application in compliance with all applicable requirements and compliance certification requirements?

☒ Yes ☐ No

If "No", describe which requirements are not being met:

NA

COMMONWEALTH OF PENSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

ADDENDUM 1
METHOD OF COMPLIANCE WORKSHEET

SECTION A. APPLICABLE REQUIREMENT

Federal Tax ID	26-4286063
Firm Name	Tenaska Pennsylvania Partners, LLC
Plant Code	26-4286063-1
Plant Name	Tenaska Westmoreland Generating Station

Applicable Requirement for: (check only one)

☒ Entire Site
☐ Group of Sources Group ID
☐ Single Source Unit ID
☐ Alternative Operating Scenario Scenario Name

Citation No. 25 Pa. Code 121.7 / 65-00990C C#001

Compliance Method Based Upon ☒ Applicable Requirement ☐ CAM ☐ Other

Method of Compliance Type: [check all that apply and complete all appropriate section(s)]

☐ Monitoring ☐ Testing ☐ Reporting
☐ Record Keeping ☒ Work Practice Standard

SECTION B. MONITORING

Monitoring Device Type (stack test, CEM, etc.)	NA
Monitoring Device Location	NA

Describe all parameters being monitored along with the frequency and duration of monitoring each parameter.
NA

How will data be reported? NA

SECTION C. TESTING

Reference Test Method Description	NA
Reference Test Method Citation	NA

SECTION D. RECORD KEEPING

Describe what parameters will be recorded and the frequency of recording.
NA

SECTION E. REPORTING

Describe what is to be reported and the frequency of reporting.
NA

Reporting Start Date NA

SECTION F. WORK PRACTICE STANDARD

Describe any work practice standard(s).
No person may permit air pollution as that term is defined in the act.

COMMONWEALTH OF PENSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

ADDENDUM 1
METHOD OF COMPLIANCE WORKSHEET

SECTION A. APPLICABLE REQUIREMENT

Federal Tax ID	26-4286063
Firm Name	Tenaska Pennsylvania Partners, LLC
Plant Code	26-4286063-1
Plant Name	Tenaska Westmoreland Generating Station

Applicable Requirement for: (check only one)

☒ Entire Site
☐ Group of Sources Group ID
☐ Single Source Unit ID
☐ Alternative Operating Scenario Scenario Name

Citation No. 25 Pa. Code 123.1 / 65-00990C C#002

Compliance Method Based Upon ☒ Applicable Requirement ☐ CAM ☐ Other

Method of Compliance Type: [check all that apply and complete all appropriate section(s)]

☐ Monitoring ☐ Testing ☐ Reporting
☐ Record Keeping ☒ Work Practice Standard

SECTION B. MONITORING

Monitoring Device Type (stack test, CEM, etc.)	NA
Monitoring Device Location	NA

Describe all parameters being monitored along with the frequency and duration of monitoring each parameter.

NA

How will data be reported? NA

SECTION C. TESTING

Reference Test Method Description	NA
Reference Test Method Citation	NA

SECTION D. RECORD KEEPING

Describe what parameters will be recorded and the frequency of recording.

NA

SECTION E. REPORTING

Describe what is to be reported and the frequency of reporting.

NA

Reporting Start Date NA

SECTION F. WORK PRACTICE STANDARD

Describe any work practice standard(s).

No person may permit the emission into the outdoor atmosphere of fugitive air contaminant from a source other than those listed in 25 Pa. Code 123.1.

COMMONWEALTH OF PENSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

ADDENDUM 1
METHOD OF COMPLIANCE WORKSHEET

SECTION A. APPLICABLE REQUIREMENT

Federal Tax ID	26-4286063
Firm Name	Tenaska Pennsylvania Partners, LLC
Plant Code	26-4286063-1
Plant Name	Tenaska Westmoreland Generating Station

Applicable Requirement for: (check only one)

☒ Entire Site
☐ Group of Sources Group ID
☐ Single Source Unit ID
☐ Alternative Operating Scenario Scenario Name

Citation No. 25 Pa. Code 123.2 / 65-00990C C#003, C#010

Compliance Method Based Upon ☒ Applicable Requirement ☐ CAM ☐ Other

Method of Compliance Type: [check all that apply and complete all appropriate section(s)]

☒ Monitoring ☒ Testing ☐ Reporting
☒ Record Keeping ☒ Work Practice Standard

SECTION B. MONITORING

Monitoring Device Type (stack test, CEM, etc.) NA

Monitoring Device Location Facility property line

Describe all parameters being monitored along with the frequency and duration of monitoring each parameter.
Visible fugitive emissions at least once each operating day

How will data be reported? NA

SECTION C. TESTING

Reference Test Method Description NA

Reference Test Method Citation NA

SECTION D. RECORD KEEPING

Describe what parameters will be recorded and the frequency of recording.
Records of visible fugitive emissions inspections at least once each operating day

SECTION E. REPORTING

Describe what is to be reported and the frequency of reporting.
NA

Reporting Start Date NA

SECTION F. WORK PRACTICE STANDARD

Describe any work practice standard(s).
Visible fugitive particulate matter emissions are not permitted outside the property.

COMMONWEALTH OF PENSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

ADDENDUM 1
METHOD OF COMPLIANCE WORKSHEET

SECTION A. APPLICABLE REQUIREMENT

Federal Tax ID	26-4286063
Firm Name	Tenaska Pennsylvania Partners, LLC
Plant Code	26-4286063-1
Plant Name	Tenaska Westmoreland Generating Station

Applicable Requirement for: (check only one)

☒ Entire Site
☐ Group of Sources Group ID
☐ Single Source Unit ID
☐ Alternative Operating Scenario Scenario Name

Citation No. 25 Pa. Code 123.31 / 65-00990C C#004, C#010

Compliance Method Based Upon ☒ Applicable Requirement ☐ CAM ☐ Other

Method of Compliance Type: [check all that apply and complete all appropriate section(s)]

☒ Monitoring ☐ Testing ☐ Reporting
☒ Record Keeping ☒ Work Practice Standard

SECTION B. MONITORING

Monitoring Device Type (stack test, CEM, etc.) NA

Monitoring Device Location Facility property line

Describe all parameters being monitored along with the frequency and duration of monitoring each parameter.
Detectable malodors at least once each operating day

How will data be reported? NA

SECTION C. TESTING

Reference Test Method Description NA

Reference Test Method Citation NA

SECTION D. RECORD KEEPING

Describe what parameters will be recorded and the frequency of recording.
Records of detectable malodor inspections at least once each operating day

SECTION E. REPORTING

Describe what is to be reported and the frequency of reporting.
NA

Reporting Start Date NA

SECTION F. WORK PRACTICE STANDARD

Describe any work practice standard(s).
Detectable malodors are not permitted outside the property.

COMMONWEALTH OF PENSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

ADDENDUM 1
METHOD OF COMPLIANCE WORKSHEET

SECTION A. APPLICABLE REQUIREMENT

Federal Tax ID	26-4286063
Firm Name	Tenaska Pennsylvania Partners, LLC
Plant Code	26-4286063-1
Plant Name	Tenaska Westmoreland Generating Station

Applicable Requirement for: (check only one)

☒ Entire Site
☐ Group of Sources Group ID
☐ Single Source Unit ID
☐ Alternative Operating Scenario Scenario Name

Citation No. 25 Pa. Code 123.41 / 65-00990C C#005, C#010

Compliance Method Based Upon ☒ Applicable Requirement ☐ CAM ☐ Other

Method of Compliance Type: [check all that apply and complete all appropriate section(s)]

☒ Monitoring ☒ Testing ☐ Reporting
☒ Record Keeping ☒ Work Practice Standard

SECTION B. MONITORING

Monitoring Device Type (stack test, CEM, etc.) NA

Monitoring Device Location Facility

Describe all parameters being monitored along with the frequency and duration of monitoring each parameter.
Visible emissions at least once each operating day

How will data be reported? NA

SECTION C. TESTING

Reference Test Method Description Visible emissions

Reference Test Method Citation EPA Method 22

SECTION D. RECORD KEEPING

Describe what parameters will be recorded and the frequency of recording.
Records of opacity observations, if applicable

SECTION E. REPORTING

Describe what is to be reported and the frequency of reporting.
NA

Reporting Start Date NA

SECTION F. WORK PRACTICE STANDARD

Describe any work practice standard(s).
Opacity not permitted from any source: ≥20% for more than 3 min/hr and ≥60% at any time

COMMONWEALTH OF PENSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

ADDENDUM 1
METHOD OF COMPLIANCE WORKSHEET

SECTION A. APPLICABLE REQUIREMENT

Federal Tax ID	26-4286063
Firm Name	Tenaska Pennsylvania Partners, LLC
Plant Code	26-4286063-1
Plant Name	Tenaska Westmoreland Generating Station

Applicable Requirement for: (check only one)

☒ Entire Site
☐ Group of Sources Group ID
☐ Single Source Unit ID
☐ Alternative Operating Scenario Scenario Name

Citation No. 25 Pa. Code 127.12b / 65-00990C C#007, #017, and #018

Compliance Method Based Upon ☒ Applicable Requirement ☐ CAM ☐ Other

Method of Compliance Type: [check all that apply and complete all appropriate section(s)]

☒ Monitoring ☐ Testing ☒ Reporting
☒ Record Keeping ☐ Work Practice Standard

SECTION B. MONITORING

Monitoring Device Type (stack test, CEM, etc.)	NA
Monitoring Device Location	NA

Describe all parameters being monitored along with the frequency and duration of monitoring each parameter.
Facility-wide emissions on a 12-month rolling basis

How will data be reported? Annual Emission Report

SECTION C. TESTING

Reference Test Method Description	NA
Reference Test Method Citation	NA

SECTION D. RECORD KEEPING

Describe what parameters will be recorded and the frequency of recording.
Facility-wide emissions, monthly

SECTION E. REPORTING

Describe what is to be reported and the frequency of reporting.
Facility-wide emissions, annually

Reporting Start Date 2018

SECTION F. WORK PRACTICE STANDARD

Describe any work practice standard(s).
NA

COMMONWEALTH OF PENSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

ADDENDUM 1
METHOD OF COMPLIANCE WORKSHEET

SECTION A. APPLICABLE REQUIREMENT

Federal Tax ID	26-4286063
Firm Name	Tenaska Pennsylvania Partners, LLC
Plant Code	26-4286063-1
Plant Name	Tenaska Westmoreland Generating Station

Applicable Requirement for: (check only one)

☒ Entire Site
☐ Group of Sources Group ID
☐ Single Source Unit ID
☐ Alternative Operating Scenario Scenario Name

Citation No. 25 Pa. Code 127.12b / 65-00990C C#011

Compliance Method Based Upon ☒ Applicable Requirement ☐ CAM ☐ Other

Method of Compliance Type: [check all that apply and complete all appropriate section(s)]

☒ Monitoring ☐ Testing ☐ Reporting
☐ Record Keeping ☒ Work Practice Standard

SECTION B. MONITORING

Monitoring Device Type (stack test, CEM, etc.) Low-pressure alarms

Monitoring Device Location Circuit breakers containing SF6

Describe all parameters being monitored along with the frequency and duration of monitoring each parameter.
Circuit breaker SF6 pressure, monitored continuously

How will data be reported? NA

SECTION C. TESTING

Reference Test Method Description NA

Reference Test Method Citation NA

SECTION D. RECORD KEEPING

Describe what parameters will be recorded and the frequency of recording.
NA

SECTION E. REPORTING

Describe what is to be reported and the frequency of reporting.
NA

Reporting Start Date NA

SECTION F. WORK PRACTICE STANDARD

Describe any work practice standard(s).
When alarms triggered, facility must take corrective action as soon as practicable

COMMONWEALTH OF PENSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

ADDENDUM 1
METHOD OF COMPLIANCE WORKSHEET

SECTION A. APPLICABLE REQUIREMENT

Federal Tax ID	26-4286063
Firm Name	Tenaska Pennsylvania Partners, LLC
Plant Code	26-4286063-1
Plant Name	Tenaska Westmoreland Generating Station

Applicable Requirement for: (check only one)

☒ Entire Site
☐ Group of Sources Group ID
☐ Single Source Unit ID
☐ Alternative Operating Scenario Scenario Name

Citation No. 25 Pa. Code 127.12b / 65-00990C C#012

Compliance Method Based Upon ☒ Applicable Requirement ☐ CAM ☐ Other

Method of Compliance Type: [check all that apply and complete all appropriate section(s)]

☐ Monitoring ☐ Testing ☐ Reporting
☒ Record Keeping ☐ Work Practice Standard

SECTION B. MONITORING

Monitoring Device Type (stack test, CEM, etc.)	NA
Monitoring Device Location	NA

Describe all parameters being monitored along with the frequency and duration of monitoring each parameter.

NA

How will data be reported? NA

SECTION C. TESTING

Reference Test Method Description	NA
Reference Test Method Citation	NA

SECTION D. RECORD KEEPING

Describe what parameters will be recorded and the frequency of recording.

Facility-wide 12-month rolling emissions, fuel usage and hours of operation; facility-wide inspections; copies of manufacturer recommended maintenance schedules and all maintenance performed; current natural gas sulfur content; amount of SF6 added to each circuit break monthly and date/time each circuit braker low-pressure is activated and corrective action taken

SECTION E. REPORTING

Describe what is to be reported and the frequency of reporting.

NA

Reporting Start Date NA

SECTION F. WORK PRACTICE STANDARD

Describe any work practice standard(s).

NA

COMMONWEALTH OF PENSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

ADDENDUM 1
METHOD OF COMPLIANCE WORKSHEET

SECTION A. APPLICABLE REQUIREMENT

Federal Tax ID	26-4286063
Firm Name	Tenaska Pennsylvania Partners, LLC
Plant Code	26-4286063-1
Plant Name	Tenaska Westmoreland Generating Station

Applicable Requirement for: (check only one)

☒ Entire Site
☐ Group of Sources Group ID
☐ Single Source Unit ID
☐ Alternative Operating Scenario Scenario Name

Citation No.	25 Pa. Code 127.12b / 65-00990C C#014

Compliance Method Based Upon ☒ Applicable Requirement ☐ CAM ☐ Other

Method of Compliance Type: [check all that apply and complete all appropriate section(s)]

☐ Monitoring ☐ Testing ☒ Reporting
☐ Record Keeping ☐ Work Practice Standard

SECTION B. MONITORING

Monitoring Device Type (stack test, CEM, etc.)	NA
Monitoring Device Location	NA

Describe all parameters being monitored along with the frequency and duration of monitoring each parameter.
NA

How will data be reported? NA

SECTION C. TESTING

Reference Test Method Description	NA
Reference Test Method Citation	NA

SECTION D. RECORD KEEPING

Describe what parameters will be recorded and the frequency of recording.
NA

SECTION E. REPORTING

Describe what is to be reported and the frequency of reporting.
Report each malfunction that may result in an increase in the emission of air contaminants.

Reporting Start Date As required, if malfunction occurs

SECTION F. WORK PRACTICE STANDARD

Describe any work practice standard(s).
NA

COMMONWEALTH OF PENSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

ADDENDUM 1
METHOD OF COMPLIANCE WORKSHEET

SECTION A. APPLICABLE REQUIREMENT

Federal Tax ID	26-4286063
Firm Name	Tenaska Pennsylvania Partners, LLC
Plant Code	26-4286063-1
Plant Name	Tenaska Westmoreland Generating Station

Applicable Requirement for: (check only one)

☒ Entire Site
☐ Group of Sources Group ID
☐ Single Source Unit ID
☐ Alternative Operating Scenario Scenario Name

Citation No. 25 Pa. Code 127.12b / 65-00990C C#019

Compliance Method Based Upon ☒ Applicable Requirement ☐ CAM ☐ Other

Method of Compliance Type: [check all that apply and complete all appropriate section(s)]

☐ Monitoring ☐ Testing ☐ Reporting
☐ Record Keeping ☒ Work Practice Standard

SECTION B. MONITORING

Monitoring Device Type (stack test, CEM, etc.)	NA
Monitoring Device Location	NA

Describe all parameters being monitored along with the frequency and duration of monitoring each parameter.

NA

How will data be reported? NA

SECTION C. TESTING

Reference Test Method Description	NA
Reference Test Method Citation	NA

SECTION D. RECORD KEEPING

Describe what parameters will be recorded and the frequency of recording.

NA

SECTION E. REPORTING

Describe what is to be reported and the frequency of reporting.

NA

Reporting Start Date NA

SECTION F. WORK PRACTICE STANDARD

Describe any work practice standard(s).

All sources and control devices should be constructed, operated, and maintained in accordance with the manufacturer's specifications and recommended maintenance schedules.

COMMONWEALTH OF PENSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

ADDENDUM 1
METHOD OF COMPLIANCE WORKSHEET

SECTION A. APPLICABLE REQUIREMENT

Federal Tax ID	26-4286063
Firm Name	Tenaska Pennsylvania Partners, LLC
Plant Code	26-4286063-1
Plant Name	Tenaska Westmoreland Generating Station

Applicable Requirement for: (check only one)

☐	Entire Site		
☒	Group of Sources	Group ID	G001
☐	Single Source	Unit ID	
☐	Alternative Operating Scenario	Scenario Name	

Citation No.

25 Pa. Code 127.12b / 65-00990C G001, E#002, #003, #004, #005, #011, #012, #013, #014, #015

25 Pa. Code 129.112(g)(2)(iii)(A) / 65-00990C G001, E#002

25 Pa. Code 129.112(g)(2)(iii)(B) / 65-00990C G001, E#007

25 Pa. Code 127.12b / 65-00990C G002, E#001, #002, #003, #004, #005

40 CFR 60 Subpart TTTT / 65-00990C G004, E#001

Compliance Method Based Upon ☒ Applicable Requirement ☐ CAM ☐ Other

Method of Compliance Type: [check all that apply and complete all appropriate section(s)]

☒	Monitoring	☒	Testing	☐	Reporting
☐	Record Keeping	☐	Work Practice Standard		

SECTION B. MONITORING

Monitoring Device Type (stack test, CEM, etc.)	CEMS, stack test
Monitoring Device Location	S101, S102

Describe all parameters being monitored along with the frequency and duration of monitoring each parameter.

CEMS: NOx, CO, NH3

Stack Test: VOC, HCHO, PM (proposing one test per permit term in this application)

Stack Test: CO2 (proposing one test per permit term in this application)

Daily Inspection: Opacity

How will data be reported? Quarterly EDR to PADEP/EPA; Semiannual Excess Emission Report; Annual Emission Report

SECTION C. TESTING

Reference Test Method Description	PM (front half/back half), THC, CH4/C2H6/HCHO, CO2
Reference Test Method Citation	EPA Methods 3A, 5/202, 25A, 320 (as approved by PADEP)

SECTION D. RECORD KEEPING

Describe what parameters will be recorded and the frequency of recording.

Actual heat input and power output on a 12-month rolling basis.
The number of startups and shutdowns and the dates each occur.
Duration of each startup and shutdown event.
The type of each startup (i.e. cold, warm, or hot).
Duct burner fuel usage on a 12-month rolling basis.
Requirements established in 25 Pa. Code §139 Subchapter C, requirements for source monitoring for stationary sources.
Requirements in the most recent version of the Department's Continuous Source Monitoring Manual.

SECTION E. REPORTING

Describe what is to be reported and the frequency of reporting.

Quarterly EDR to PADEP/EPA; Semiannual Excess Emission Report; Annual Emission Report

Reporting Start Date 2018

SECTION F. WORK PRACTICE STANDARD

Describe any work practice standard(s).

The permittee shall operate all air cleaning devices at all times once operating parameters (temperature, flow, etc.) are sufficient for proper operation.
Install, certify, maintain, and operate continuous emissions monitoring systems (CEMS) for NOx, CO, NH3, and O2 on each CCCT stack

COMMONWEALTH OF PENSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

ADDENDUM 1
METHOD OF COMPLIANCE WORKSHEET

SECTION A. APPLICABLE REQUIREMENT

Federal Tax ID	26-4286063
Firm Name	Tenaska Pennsylvania Partners, LLC
Plant Code	26-4286063-1
Plant Name	Tenaska Westmoreland Generating Station

Applicable Requirement for: (check only one)

☐	Entire Site		
☒	Group of Sources	Group ID	G001
☐	Single Source	Unit ID	
☐	Alternative Operating Scenario	Scenario Name	

Citation No. 25 Pa. Code 127.12b / 65-00990C G001, E#006

Compliance Method Based Upon ☒ Applicable Requirement ☐ CAM ☐ Other

Method of Compliance Type: [check all that apply and complete all appropriate section(s)]

☒	Monitoring	☒	Testing	☒	Reporting
☐	Record Keeping	☐	Work Practice Standard		

SECTION B. MONITORING

Monitoring Device Type (stack test, CEM, etc.)	Lab sample
Monitoring Device Location	Natural gas supply line

Describe all parameters being monitored along with the frequency and duration of monitoring each parameter.

Total sulfur content, monthly

How will data be reported? Semiannual Excess Emission Report

SECTION C. TESTING

Reference Test Method Description	Total Sulfur
Reference Test Method Citation	GPA-2199

SECTION D. RECORD KEEPING

Describe what parameters will be recorded and the frequency of recording.

NA

SECTION E. REPORTING

Describe what is to be reported and the frequency of reporting.

Semiannual Excess Emission Report

Reporting Start Date 2019

SECTION F. WORK PRACTICE STANDARD

Describe any work practice standard(s).

NA

COMMONWEALTH OF PENSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

ADDENDUM 1
METHOD OF COMPLIANCE WORKSHEET

SECTION A. APPLICABLE REQUIREMENT

Federal Tax ID	26-4286063
Firm Name	Tenaska Pennsylvania Partners, LLC
Plant Code	26-4286063-1
Plant Name	Tenaska Westmoreland Generating Station

Applicable Requirement for: (check only one)

☐	Entire Site		
☒	Group of Sources	Group ID	G001
☐	Single Source	Unit ID	
☐	Alternative Operating Scenario	Scenario Name	

Citation No. 25 Pa. Code 127.12b / 65-00990C G001, E#008, #009

Compliance Method Based Upon ☒ Applicable Requirement ☐ CAM ☐ Other

Method of Compliance Type: [check all that apply and complete all appropriate section(s)]

☒	Monitoring	☐	Testing	☐	Reporting
☒	Record Keeping	☒	Work Practice Standard		

SECTION B. MONITORING

Monitoring Device Type (stack test, CEM, etc.)	DCS
Monitoring Device Location	NA

Describe all parameters being monitored along with the frequency and duration of monitoring each parameter.

Duct burner fuel usage, monthly

Startup/shutdown/combustion tuning duration, hourly

How will data be reported? NA

SECTION C. TESTING

Reference Test Method Description	NA
Reference Test Method Citation	NA

SECTION D. RECORD KEEPING

Describe what parameters will be recorded and the frequency of recording.

Duct burner fuel usage, monthly; startup/shutdown/combustion tuning duration, hourly

SECTION E. REPORTING

Describe what is to be reported and the frequency of reporting.

NA

Reporting Start Date NA

SECTION F. WORK PRACTICE STANDARD

Describe any work practice standard(s).

The durations of startups, shutdowns, and combustion tuning events shall be minimized to the maximum extent possible.

COMMONWEALTH OF PENSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

ADDENDUM 1
METHOD OF COMPLIANCE WORKSHEET

SECTION A. APPLICABLE REQUIREMENT

Federal Tax ID	26-4286063
Firm Name	Tenaska Pennsylvania Partners, LLC
Plant Code	26-4286063-1
Plant Name	Tenaska Westmoreland Generating Station

Applicable Requirement for: (check only one)

☐	Entire Site		
☒	Group of Sources	Group ID	G001
☐	Single Source	Unit ID	
☐	Alternative Operating Scenario	Scenario Name	

Citation No. 40 CFR Part 72-78 (Acid Rain Program) / 65-00990C C#034

Compliance Method Based Upon ☒ Applicable Requirement ☐ CAM ☐ Other

Method of Compliance Type: [check all that apply and complete all appropriate section(s)]

☐ Monitoring ☐ Testing ☐ Reporting
☐ Record Keeping ☐ Work Practice Standard

SECTION B. MONITORING

Monitoring Device Type (stack test, CEM, etc.) CEMS

Monitoring Device Location S101, S102

Describe all parameters being monitored along with the frequency and duration of monitoring each parameter.

CEMS: NOx

SO2/CO2: calculation in accordance with 40 CFR Part 75

How will data be reported? Quarterly EDR to EPA

SECTION C. TESTING

Reference Test Method Description NA

Reference Test Method Citation NA

SECTION D. RECORD KEEPING

Describe what parameters will be recorded and the frequency of recording.

NOx, SO2, CO2, heat input/fuel flow; continuously

SECTION E. REPORTING

Describe what is to be reported and the frequency of reporting.

NOx, SO2, and CO2 emissions; quarterly

Reporting Start Date 2019

SECTION F. WORK PRACTICE STANDARD

Describe any work practice standard(s).

40 CFR Part 75 QA/QC Requirements

Acid Rain Permit Application

COMMONWEALTH OF PENSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

ADDENDUM 1
METHOD OF COMPLIANCE WORKSHEET

SECTION A. APPLICABLE REQUIREMENT

Federal Tax ID	26-4286063
Firm Name	Tenaska Pennsylvania Partners, LLC
Plant Code	26-4286063-1
Plant Name	Tenaska Westmoreland Generating Station

Applicable Requirement for: (check only one)

☐	Entire Site		
☒	Group of Sources	Group ID	G001
☐	Single Source	Unit ID	
☐	Alternative Operating Scenario	Scenario Name	

Citation No. 40 CFR Part 97 CSAPR (Subpart AAAAA, CCCCC, GGGGG) / 65-00990C C#035

Compliance Method Based Upon ☒ Applicable Requirement ☐ CAM ☐ Other

Method of Compliance Type: [check all that apply and complete all appropriate section(s)]

☒	Monitoring	☐	Testing	☒	Reporting
☒	Record Keeping	☒	Work Practice Standard		

SECTION B. MONITORING

Monitoring Device Type (stack test, CEM, etc.) CEMS

Monitoring Device Location S101, S102

Describe all parameters being monitored along with the frequency and duration of monitoring each parameter.

CEMS: NOx
SO2: calculation in accordance with 40 CFR Part 75

How will data be reported? Quarterly EDR to EPA

SECTION C. TESTING

Reference Test Method Description NA

Reference Test Method Citation NA

SECTION D. RECORD KEEPING

Describe what parameters will be recorded and the frequency of recording.

NOx, SO2, heat input/fuel flow; continuously

SECTION E. REPORTING

Describe what is to be reported and the frequency of reporting.

NOx and SO2 emissions; quarterly

Reporting Start Date 2019

SECTION F. WORK PRACTICE STANDARD

Describe any work practice standard(s).

40 CFR Part 75 QA/QC Requirements

COMMONWEALTH OF PENSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

ADDENDUM 1
METHOD OF COMPLIANCE WORKSHEET

SECTION A. APPLICABLE REQUIREMENT

Federal Tax ID	26-4286063
Firm Name	Tenaska Pennsylvania Partners, LLC
Plant Code	26-4286063-1
Plant Name	Tenaska Westmoreland Generating Station

Applicable Requirement for: (check only one)

☐	Entire Site		
☒	Group of Sources	Group ID	G001
☐	Single Source	Unit ID	
☐	Alternative Operating Scenario	Scenario Name	

Citation No. 40 CFR Part 98 (Mandatory Greenhouse Gas Reporting) / 65-00990C C#036

Compliance Method Based Upon ☐ Applicable Requirement ☐ CAM ☐ Other

Method of Compliance Type: [check all that apply and complete all appropriate section(s)]

☒	Monitoring	☐	Testing	☒	Reporting
☒	Record Keeping	☒	Work Practice Standard		

SECTION B. MONITORING

Monitoring Device Type (stack test, CEM, etc.)	CEMS
Monitoring Device Location	S101, S102

Describe all parameters being monitored along with the frequency and duration of monitoring each parameter.

CO2: calculation in accordance with 40 CFR Part 75

How will data be reported? Quarterly EDR to EPA

SECTION C. TESTING

Reference Test Method Description	NA
Reference Test Method Citation	NA

SECTION D. RECORD KEEPING

Describe what parameters will be recorded and the frequency of recording.

CO2 and heat input/fuel flow; continuously

SECTION E. REPORTING

Describe what is to be reported and the frequency of reporting.

CO2 emissions; quarterly

Reporting Start Date 2019

SECTION F. WORK PRACTICE STANDARD

Describe any work practice standard(s).

40 CFR Part 75 QA/QC Requirements

COMMONWEALTH OF PENSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

ADDENDUM 1
METHOD OF COMPLIANCE WORKSHEET

SECTION A. APPLICABLE REQUIREMENT

Federal Tax ID	26-4286063
Firm Name	Tenaska Pennsylvania Partners, LLC
Plant Code	26-4286063-1
Plant Name	Tenaska Westmoreland Generating Station

Applicable Requirement for: (check only one)

☐	Entire Site		
☐	Group of Sources	Group ID	
☒	Single Source	Unit ID	031
☐	Alternative Operating Scenario	Scenario Name	

Citation No. 25 Pa. Code 127.12b / 65-00990C 031 D#001, #003, #004, #006

Compliance Method Based Upon ☒ Applicable Requirement ☐ CAM ☐ Other

Method of Compliance Type: [check all that apply and complete all appropriate section(s)]

☒	Monitoring	☒	Testing	☒	Reporting
☒	Record Keeping	☒	Work Practice Standard		

SECTION B. MONITORING

Monitoring Device Type (stack test, CEM, etc.)	Fuel flow meter
Monitoring Device Location	031

Describe all parameters being monitored along with the frequency and duration of monitoring each parameter.

Natural gas fuel flow, PEMS

How will data be reported? Fuel flow will be used to calculate emissions to demonstrate compliance with permit limits

SECTION C. TESTING

Reference Test Method Description	Nitrogen Oxides (initial and presumptive RACT III)
Reference Test Method Citation	EPA Method 7E

SECTION D. RECORD KEEPING

Describe what parameters will be recorded and the frequency of recording.

Natural gas fuel flow; continuously

SECTION E. REPORTING

Describe what is to be reported and the frequency of reporting.

Annual Emission Report

Reporting Start Date 2018

SECTION F. WORK PRACTICE STANDARD

Describe any work practice standard(s).

Operate in accordance with manufacturer specifications and good combustion practices

COMMONWEALTH OF PENSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY
ADDENDUM 1
METHOD OF COMPLIANCE WORKSHEET

SECTION A. APPLICABLE REQUIREMENT

Federal Tax ID	26-4286063		
Firm Name	Tenaska Pennsylvania Partners, LLC		
Plant Code	26-4286063-1		
Plant Name	Tenaska Westmoreland Generating Station		
Applicable Requirement for: (check only one)			
☐ Entire Site			
☐ Group of Sources		Group ID	
☒ Single Source		Unit ID	031
☐ Alternative Operating Scenario		Scenario Name	
Citation No.	25 Pa. Code 127.12b / 65-00990C 031 D#002		
Compliance Method Based Upon	☒ Applicable Requirement	☐ CAM	☐ Other
Method of Compliance Type: [check all that apply and complete all appropriate section(s)]			
☐ Monitoring	☒ Testing	☐ Reporting	
☒ Record Keeping	☒ Work Practice Standard		

SECTION B. MONITORING

Monitoring Device Type (stack test, CEM, etc.)	NA
Monitoring Device Location	NA

Describe all parameters being monitored along with the frequency and duration of monitoring each parameter.

NA

How will data be reported? NA

SECTION C. TESTING

Reference Test Method Description	Visible emissions
Reference Test Method Citation	EPA Method 22

SECTION D. RECORD KEEPING

Describe what parameters will be recorded and the frequency of recording.

Records of opacity observations, if applicable

SECTION E. REPORTING

Describe what is to be reported and the frequency of reporting.

NA

Reporting Start Date NA

SECTION F. WORK PRACTICE STANDARD

Describe any work practice standard(s).

Opacity not permitted: ≥10% for more than 3 min/hr and ≥30% at any time

COMMONWEALTH OF PENSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

ADDENDUM 1
METHOD OF COMPLIANCE WORKSHEET

SECTION A. APPLICABLE REQUIREMENT

Federal Tax ID	26-4286063
Firm Name	Tenaska Pennsylvania Partners, LLC
Plant Code	26-4286063-1
Plant Name	Tenaska Westmoreland Generating Station

Applicable Requirement for: (check only one)

- ☐ Entire Site
- ☐ Group of Sources — Group ID
- ☒ Single Source — Unit ID: 031
- ☐ Alternative Operating Scenario — Scenario Name

Citation No.: 40 CFR Part 98 (Mandatory Greenhouse Gas Reporting) / 65-00990C C#027

Compliance Method Based Upon: ☐ Applicable Requirement ☐ CAM ☐ Other

Method of Compliance Type: [check all that apply and complete all appropriate section(s)]

- ☒ Monitoring
- ☐ Testing
- ☒ Reporting
- ☒ Record Keeping
- ☐ Work Practice Standard

SECTION B. MONITORING

Monitoring Device Type (stack test, CEM, etc.)	Fuel flow meter
Monitoring Device Location	031

Describe all parameters being monitored along with the frequency and duration of monitoring each parameter.

Natural gas fuel flow

How will data be reported? Fuel flow will be used to calculate CO2 emissions

SECTION C. TESTING

Reference Test Method Description	NA
Reference Test Method Citation	NA

SECTION D. RECORD KEEPING

Describe what parameters will be recorded and the frequency of recording.

Natural gas fuel flow; continuously

SECTION E. REPORTING

Describe what is to be reported and the frequency of reporting.

CO2 emissions; annual

Reporting Start Date 2018

SECTION F. WORK PRACTICE STANDARD

Describe any work practice standard(s).

NA

COMMONWEALTH OF PENSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

ADDENDUM 1
METHOD OF COMPLIANCE WORKSHEET

SECTION A. APPLICABLE REQUIREMENT

Federal Tax ID	26-4286063
Firm Name	Tenaska Pennsylvania Partners, LLC
Plant Code	26-4286063-1
Plant Name	Tenaska Westmoreland Generating Station

Applicable Requirement for: (check only one)

☐	Entire Site		
☐	Group of Sources	Group ID	
☒	Single Source	Unit ID	104
☐	Alternative Operating Scenario	Scenario Name	

Citation No. 25 Pa. Code 127.12b / 65-00990C 104 D#001, #003

Compliance Method Based Upon ☒ Applicable Requirement ☐ CAM ☐ Other

Method of Compliance Type: [check all that apply and complete all appropriate section(s)]

☒	Monitoring	☐	Testing	☒	Reporting
☒	Record Keeping	☒	Work Practice Standard		

SECTION B. MONITORING

Monitoring Device Type (stack test, CEM, etc.)	Non-resettable hour meter
Monitoring Device Location	104

Describe all parameters being monitored along with the frequency and duration of monitoring each parameter.

Hours of operation, when running

How will data be reported? Hours of operation will be used to calculate emissions and determine compliance with 500 hr/yr 12-month rolling limit

SECTION C. TESTING

Reference Test Method Description	NA
Reference Test Method Citation	NA

SECTION D. RECORD KEEPING

Describe what parameters will be recorded and the frequency of recording.

Hours of operation/purpose of operation; each time engine operates

SECTION E. REPORTING

Describe what is to be reported and the frequency of reporting.

Emissions and hours of operation, Annual Emission Report

Reporting Start Date 2018

SECTION F. WORK PRACTICE STANDARD

Describe any work practice standard(s).

Operate and maintain engine in accordance with manufacturer's specifications

Operation limited to 100 hrs/yr for maintenance and testing and emergency demand response (50 hr/yr can be used for non-emergency situations)

No operation limit for emergency situations

COMMONWEALTH OF PENSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

ADDENDUM 1
METHOD OF COMPLIANCE WORKSHEET

SECTION A. APPLICABLE REQUIREMENT

Federal Tax ID	26-4286063
Firm Name	Tenaska Pennsylvania Partners, LLC
Plant Code	26-4286063-1
Plant Name	Tenaska Westmoreland Generating Station

Applicable Requirement for: (check only one)

☐	Entire Site		
☐	Group of Sources	Group ID	
☒	Single Source	Unit ID	104
☐	Alternative Operating Scenario	Scenario Name	

Citation No. 25 Pa. Code 127.12b / 65-00990C 104 D#002

Compliance Method Based Upon ☒ Applicable Requirement ☐ CAM ☐ Other

Method of Compliance Type: [check all that apply and complete all appropriate section(s)]

☒	Monitoring	☐	Testing	☐	Reporting
☒	Record Keeping	☐	Work Practice Standard		

SECTION B. MONITORING

Monitoring Device Type (stack test, CEM, etc.)	Fuel Receipt
Monitoring Device Location	NA

Describe all parameters being monitored along with the frequency and duration of monitoring each parameter.

Diesel fuel sulfur content

How will data be reported? NA

SECTION C. TESTING

Reference Test Method Description	NA
Reference Test Method Citation	NA

SECTION D. RECORD KEEPING

Describe what parameters will be recorded and the frequency of recording.

Fuel receipt for each delivery received

SECTION E. REPORTING

Describe what is to be reported and the frequency of reporting.

NA

Reporting Start Date NA

SECTION F. WORK PRACTICE STANDARD

Describe any work practice standard(s).

NA

COMMONWEALTH OF PENSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

ADDENDUM 1
METHOD OF COMPLIANCE WORKSHEET

SECTION A. APPLICABLE REQUIREMENT

Federal Tax ID	26-4286063
Firm Name	Tenaska Pennsylvania Partners, LLC
Plant Code	26-4286063-1
Plant Name	Tenaska Westmoreland Generating Station

Applicable Requirement for: (check only one)

☐ Entire Site
☐ Group of Sources Group ID
☒ Single Source Unit ID 104
☐ Alternative Operating Scenario Scenario Name

Citation No. 40 CFR 60.4202 (40 CFR 60 Subpart IIII) / 65-00990C G003, E#002
40 CFR 60.4207 (40 CFR 60 Subpart IIII) / 65-00990C G003, E#004
40 CFR 60.4209 (40 CFR 60 Subpart IIII) / 65-00990C G003, E#006
40 CFR 63.6590(c)(1) (40 CFR 63 Subpart ZZZZ) / 65-00990C 104 D#006

Compliance Method Based Upon ☒ Applicable Requirement ☐ CAM ☐ Other

Method of Compliance Type: [check all that apply and complete all appropriate section(s)]

☒ Monitoring ☐ Testing ☐ Reporting
☒ Record Keeping ☒ Work Practice Standard

SECTION B. MONITORING

Monitoring Device Type (stack test, CEM, etc.)	Non-resettable hour meter
Monitoring Device Location	104

Describe all parameters being monitored along with the frequency and duration of monitoring each parameter.
Hours of operation, when running

How will data be reported? NA

SECTION C. TESTING

Reference Test Method Description	NA
Reference Test Method Citation	NA

SECTION D. RECORD KEEPING

Describe what parameters will be recorded and the frequency of recording.
Hours of operation/purpose of operation; each time engine operates

SECTION E. REPORTING

Describe what is to be reported and the frequency of reporting.
NA

Reporting Start Date NA

SECTION F. WORK PRACTICE STANDARD

Describe any work practice standard(s).

Operate and maintain engine in accordance with manufacturer's specifications

Operation limited to 100 hrs/yr for maintenance and testing and emergency demand response (50 hr/yr can be used for non-emergency situations)

No operation limit for emergency situations

COMMONWEALTH OF PENSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

ADDENDUM 1
METHOD OF COMPLIANCE WORKSHEET

SECTION A. APPLICABLE REQUIREMENT

Federal Tax ID	26-4286063
Firm Name	Tenaska Pennsylvania Partners, LLC
Plant Code	26-4286063-1
Plant Name	Tenaska Westmoreland Generating Station

Applicable Requirement for: (check only one)

☐	Entire Site		
☐	Group of Sources	Group ID	
☒	Single Source	Unit ID	105
☐	Alternative Operating Scenario	Scenario Name	

Citation No. 25 Pa. Code 127.12b / 65-00990C 105 D#001, #002, #003, #006

Compliance Method Based Upon ☒ Applicable Requirement ☐ CAM ☐ Other

Method of Compliance Type: [check all that apply and complete all appropriate section(s)]

☒	Monitoring	☐	Testing	☒	Reporting
☒	Record Keeping	☒	Work Practice Standard		

SECTION B. MONITORING

Monitoring Device Type (stack test, CEM, etc.) Lab sample / flow meter

Monitoring Device Location NA / cooling tower

Describe all parameters being monitored along with the frequency and duration of monitoring each parameter.

Circulating water TDS content; monthly / circulating water and make-up water flow rates, continuously

How will data be reported? Used to calculate emissions

SECTION C. TESTING

Reference Test Method Description NA

Reference Test Method Citation NA

SECTION D. RECORD KEEPING

Describe what parameters will be recorded and the frequency of recording.

Monthly circulating water TDS content, daily circulating water and make-up water flow rates, PM/PM10/PM2.5 emissions on a 12-month rolling basis

SECTION E. REPORTING

Describe what is to be reported and the frequency of reporting.

Emissions; Annual Emission Report

Reporting Start Date 2018

SECTION F. WORK PRACTICE STANDARD

Describe any work practice standard(s).

Install and maintain drift eliminators with a manufacturer's guaranteed drift rate < 0.0005% of circulating water flow rate

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

ADDENDUM 3
CAM APPLICABILITY WORKSHEET FOR SOURCES

SECTION A. GENERAL INFORMATION

Federal Tax ID	26-4286063				
Firm Name	Tenaska Pennsylvania Partners, LLC				
Plant Code	26-4286063-1		Source I.D. 101		
Control Type	Oxidation Catalyst	AIRS Code No.	NA	Pollutant	VOC
Control Make	Johnson Matthey	Control Model No.	SC47	Control Efficiency	41-49%
Control I.D.	C101B	Source or Emission Unit Name		Combined Cycle Unit #1	

SECTION B. MONITORING

The emissions unit is exempted from CAM because the emission limitations or standards are:

Yes	No	
☐	☒	Proposed by the EPA Administrator after November 15, 1990 pursuant to Sections 111 or 112 of the Clean Air Act.
☐	☒	Stratospheric ozone protection requirements under Title VI of the Act.
☐	☒	Acid Rain Program requirements pursuant to sections 404-407(b) or 410 of the Clean Air Act
☐	☒	Approved under an emissions trading program.
☐	☒	An emissions cap that meets the requirements specified in 40 CFR § 70.4(b)(12).
☐	☒	Determined by a continuous compliance method that does not use an assumed control factor
☐	☒	Requirements for a backup utility power emissions unit as defined in § 72.2 which:

Yes	No	
☐	☒	Is owned by a municipality and
☐	☒	Is exempt from all Part 75 monitoring requirements
☐	☒	Is operated solely for providing power during peak electrical demand or emergency situations
☐	☒	Has annual average emissions (for previous 3 years) of less than 50% of the major source cut off and emissions are expected to remain below 50 %

SECTION C. CAM STATUS

Yes	No	
☒	☐	CAM applies (be sure to include appropriate citation numbers under Source Applicable Requirements section of the application)
☒	☐	CAM Plan is attached or has been submitted
☐	☒	An Implementation Plan is attached

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

ADDENDUM 3
CAM APPLICABILITY WORKSHEET FOR SOURCES

SECTION A. GENERAL INFORMATION

Federal Tax ID	26-4286063				
Firm Name	Tenaska Pennsylvania Partners, LLC				
Plant Code	26-4286063-1		Source I.D. 102		
Control Type	Oxidation Catalyst	AIRS Code No.	NA	Pollutant	VOC
Control Make	Johnson Matthey	Control Model No.	SC47	Control Efficiency	41-49%
Control I.D.	C102B	Source or Emission Unit Name		Combined Cycle Unit #2	

SECTION B. MONITORING

The emissions unit is exempted from CAM because the emission limitations or standards are:

Yes	No	
☐	☒	Proposed by the EPA Administrator after November 15, 1990 pursuant to Sections 111 or 112 of the Clean Air Act.
☐	☒	Stratospheric ozone protection requirements under Title VI of the Act.
☐	☒	Acid Rain Program requirements pursuant to sections 404-407(b) or 410 of the Clean Air Act
☐	☒	Approved under an emissions trading program.
☐	☒	An emissions cap that meets the requirements specified in 40 CFR § 70.4(b)(12).
☐	☒	Determined by a continuous compliance method that does not use an assumed control factor
☐	☒	Requirements for a backup utility power emissions unit as defined in § 72.2 which:

Yes	No	
☐	☒	Is owned by a municipality and
☐	☒	Is exempt from all Part 75 monitoring requirements
☐	☒	Is operated solely for providing power during peak electrical demand or emergency situations
☐	☒	Has annual average emissions (for previous 3 years) of less than 50% of the major source cut off and emissions are expected to remain below 50 %

SECTION C. CAM STATUS

Yes	No	
☒	☐	CAM applies (be sure to include appropriate citation numbers under Source Applicable Requirements section of the application)
☒	☐	CAM Plan is attached or has been submitted
☐	☒	An Implementation Plan is attached

Appendix B

Compliance Review Form

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

AIR POLLUTION CONTROL ACT COMPLIANCE REVIEW FORM

Fully and accurately provide the following information, as specified. Attach additional sheets as necessary.

Type of Compliance Review Form Submittal (check all that apply)

☐ Original Filing
☒ Amended Filing

Date of Last Compliance Review Form Filing: 01/23/2024

Type of Submittal

☐ New Plan Approval ☒ New Operating Permit ☐ Renewal of Operating Permit
☐ Extension of Plan Approval ☐ Change of Ownership ☐ Periodic Submission (@ 6 mos)
☐ Other: _____

SECTION A. GENERAL APPLICATION INFORMATION

Name of Applicant/Permittee/("applicant")
(non-corporations-attach documentation of legal name)
Tenaska Pennsylvania Partners, LLC

Address 14302 FNB Parkway
Omaha, NE 68154-5212

Telephone 402-691-9500 **Taxpayer ID#** 26-4286063

Permit, Plan Approval or Application ID# 65-00990C

Identify the form of management under which the applicant conducts its business (check appropriate box)

☐ Individual ☐ Syndicate ☐ Government Agency
☐ Municipality ☐ Municipal Authority ☐ Joint Venture
☐ Proprietorship ☐ Fictitious Name ☐ Association
☐ Public Corporation ☐ Partnership ☒ Other Type of Business, specify below:
☐ Private Corporation ☐ Limited Partnership Limited Liability Company

Describe below the type(s) of business activities performed.
Electric Generation

SECTION B. GENERAL INFORMATION REGARDING "APPLICANT"

If applicant is a corporation or a division or other unit of a corporation, provide the names, principal places of business, state of incorporation, and taxpayer ID numbers of all domestic and foreign parent corporations (including the ultimate parent corporation), and all domestic and foreign subsidiary corporations of the ultimate parent corporation with operations in Pennsylvania. Please include all corporate divisions or units, (whether incorporated or unincorporated) and privately held corporations. (A diagram of corporate relationships may be provided to illustrate corporate relationships.) Attach additional sheets as necessary.

Unit Name	Principal Places of Business	State of Incorporation	Taxpayer ID	Relationship to Applicant
None				

SECTION C. SPECIFIC INFORMATION REGARDING APPLICANT AND ITS "RELATED PARTIES"

Pennsylvania Facilities. List the name and location (mailing address, municipality, county), telephone number, and relationship to applicant (parent, subsidiary or general partner) of applicant and all Related Parties' places of business, and facilities in Pennsylvania. Attach additional sheets as necessary.

Unit Name	Street Address	County and Municipality	Telephone No.	Relationship to Applicant
None				

Provide the names and business addresses of all general partners of the applicant and parent and subsidiary corporations, if any.

Name	Business Address
None	

List the names and business address of persons with overall management responsibility for the process being permitted (i.e. plant manager).

Name	Business Address
Buck Hunt, Vice President, Operations	14302 FNB Parkway, Omaha, NE 68154

Plan Approvals or Operating Permits. List all plan approvals or operating permits issued by the Department or an approved local air pollution control agency under the APCA to the applicant or related parties that are currently in effect or have been in effect at any time 5 years prior to the date on which this form is notarized. This list shall include the plan approval and operating permit numbers, locations, issuance and expiration dates. Attach additional sheets as necessary.

Air Contamination Source	Plan Approval/ Operating Permit#	Location	Issuance Date	Expiration Date
Tenaska Westmoreland Generating Station	PA 65-00990C	Westmoreland County	04/01/2015	11/28/2024
Tenaska Westmoreland Generating Station	PA 65-00990F	Westmoreland County	11/28/2023	08/28/2024

Compliance Background. (Note: Copies of specific documents, if applicable, must be made available to the Department upon its request.) List all documented conduct of violations or enforcement actions identified by the Department pursuant to the APCA, regulations, terms and conditions of an operating permit or plan approval or order by applicant or any related party, using the following format grouped by source and location in reverse chronological order. Attach additional sheets as necessary. See the definition of "documented conduct" for further clarification. Unless specifically directed by the Department, deviations which have been previously reported to the Department in writing, relating to monitoring and reporting, need not be reported.

Date	Location	Plan Approval/ Operating Permit#	Nature of Documented Conduct	Type of Department Action	Status: Litigation Existing/Continuing or Corrected/Date	Dollar Amount Penalty
Q4 2018 - Q1 2022	Westmoreland County	65-00990C	various	CACP	Final CACP 09/16/22	$14,997
						$
						$
						$
						$
						$
						$
						$
						$
						$

List all incidents of deviations of the APCA, regulations, terms and conditions of an operating permit or plan approval or order by applicant or any related party, using the following format grouped by source and location in reverse chronological order. This list must include items both currently known and unknown to the Department. Attach additional sheets as necessary. See the definition of "deviations" for further clarification.

Date	Location	Plan Approval/ Operating Permit#	Nature of Deviation	Incident Status: Litigation Existing/Continuing Or Corrected/Date
None				

<u>CONTINUING OBLIGATION</u>. Applicant is under a continuing obligation to update this form using the Compliance Review Supplemental Form if any additional deviations occur between the date of submission and Department action on the application.

VERIFICATION STATEMENT
Subject to the penalties of Title 18 Pa.C.S. Section 4904 and 35 P.S. Section 4009(b)(2), I verify under penalty of law that I am authorized to make this verification on behalf of the Applicant/Permittee. I further verify that the information contained in this Compliance Review Form is true and complete to the best of my belief formed after reasonable inquiry. I further verify that reasonable procedures are in place to ensure that "documented conduct" and "deviations" as defined in 25 Pa Code Section 121.1 are identified and included in the information set forth in this Compliance Review Form.
Signature — Date: 07-10-2024
Buck Hunt
Name (Print or Type)
Vice President, Operations
Title

Appendix C

County/Municipal Notifications

TENASKA PENNSYLVANIA PARTNERS, LLC

14302 FNB Parkway
Omaha, Nebraska 68154-5212
402-691-9500 | FAX: 402-691-9727

July 8, 2024

South Huntingdon Township Office
Mr. Matthew Jennewine, Chairman, Board of Township Supervisors
75 Supervisor Drive
West Newton, PA 15089

Via Overnight Courier

Re: Notification of Initial Title V Operating Permit Application
Tenaska Westmoreland Generating Station
Plan Approval 65-00990C

Mr. Jennewine:

In accordance with 25 Pa. Code 127.413, Tenaska Pennsylvania Partners, LLC (Tenaska) is hereby providing notification of its intent to submit the initial Title V Operating Permit Application for the Tenaska Westmoreland Generating Station (Facility) located in South Huntingdon Township, Westmoreland County. The application will be submitted to the Pennsylvania Department of Environmental Protection (PADEP) Southwest Regional Office not later than July 13, 2024.

The Facility consists of two (2) natural gas-fired combined cycle combustion turbines, each equipped with a heat recovery steam generator and supplemental natural gas-fired duct burners, collectively serving a single steam turbine generator for electric power generation. Several ancillary sources of air emission sources are also located at the Facility. The Facility currently operates under Plan Approval 65-00990C.

A 30-day comment period begins upon your receipt of this notification. If you have any comments or concerns regarding the application, please contact Mark Gorog, Air Quality Program Manager, PADEP - Southwest Regional Office at (412) 442-5215 or at the address below, within 30 days after the receipt of this notification.

PADEP Southwest Regional Office
Air Quality Program
400 Waterfront Drive
Pittsburgh, PA 15222

Should you have any questions or require additional information, please contact Larry Carlson at (402) 938-1661 or lcarlson@tenaska.com.

Sincerely,

TENASKA PENNSYLVANIA PARTNERS, LLC
By: Tenaska Pennsylvania I, LLC, Its Managing Member

Austin Zigler
Senior Analyst, Environmental Programs

Zigler, Austin

From: TrackingUpdates@fedex.com
Sent: Tuesday, July 9, 2024 10:02 AM
To: Zigler, Austin
Subject: FedEx Shipment 777268049838: Your package has been delivered

Hi. Your package was delivered Tue, 07/09/2024 at 10:54am.

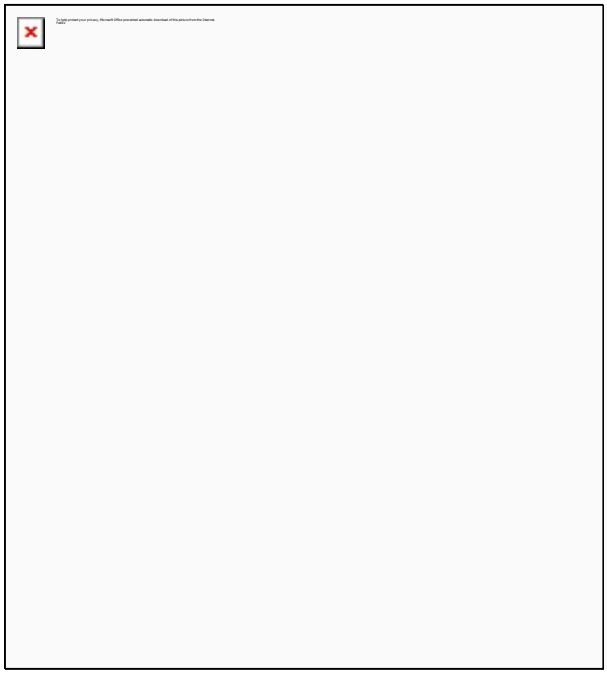
Delivered to 75 SUPERVISOR DR, WEST NEWTON, PA 15089
Received by M.HRIBER

OBTAIN PROOF OF DELIVERY

How was your delivery ?

TRACKING NUMBER 777268049838

FROM	Tenaska Inc 14302 FNB Parkway OMAHA, NE, US, 68154
TO	South Huntingdon Township Matthew Jennewine 75 Supervisor Drive WEST NEWTON, PA, US, 15089
REFERENCE	8263
SHIPPER REFERENCE	8263
SHIP DATE	Mon 7/08/2024 06:01 PM
DELIVERED TO	Receptionist/Front Desk
PACKAGING TYPE	FedEx Envelope
ORIGIN	OMAHA, NE, US, 68154
DESTINATION	WEST NEWTON, PA, US, 15089
SPECIAL HANDLING	Deliver Weekday
NUMBER OF PIECES	1
TOTAL SHIPMENT WEIGHT	0.50 LB
SERVICE TYPE	FedEx Priority Overnight



TENASKA PENNSYLVANIA PARTNERS, LLC

14302 FNB Parkway
Omaha, Nebraska 68154-5212
402-691-9500 | FAX: 402-691-9727

July 8, 2024

Westmoreland County Planning Commission
Mr. Jason Rigone, Executive Director
40 N. Pennsylvania Ave
Fifth Floor, Ste. 520
Greensburg, PA 15601

Via Overnight Courier

Re: Notification of Initial Title V Operating Permit Application
Tenaska Westmoreland Generating Station
Plan Approval 65-00990C

Mr. Rigone:

In accordance with 25 Pa. Code 127.413, Tenaska Pennsylvania Partners, LLC (Tenaska) is hereby providing notification of its intent to submit the initial Title V Operating Permit Application for the Tenaska Westmoreland Generating Station (Facility) located in South Huntingdon Township, Westmoreland County. The application will be submitted to the Pennsylvania Department of Environmental Protection (PADEP) Southwest Regional Office not later than July 13, 2024.

The Facility consists of two (2) natural gas-fired combined cycle combustion turbines, each equipped with a heat recovery steam generator and supplemental natural gas-fired duct burners, collectively serving a single steam turbine generator for electric power generation. Several ancillary sources of air emission sources are also located at the Facility. The Facility currently operates under Plan Approval 65-00990C.

A 30-day comment period begins upon your receipt of this notification. If you have any comments or concerns regarding the application, please contact Mark Gorog, Air Quality Program Manager, PADEP - Southwest Regional Office at (412) 442-5215 or at the address below, within 30 days after the receipt of this notification.

PADEP Southwest Regional Office
Air Quality Program
400 Waterfront Drive
Pittsburgh, PA 15222

Should you have any questions or require additional information, please contact Larry Carlson at (402) 938-1661 or lcarlson@tenaska.com.

Sincerely,

TENASKA PENNSYLVANIA PARTNERS, LLC
By: Tenaska Pennsylvania I, LLC, Its Managing Member

Austin Zigler
Senior Analyst, Environmental Programs

Zigler, Austin

From: TrackingUpdates@fedex.com
Sent: Tuesday, July 9, 2024 9:32 AM
To: Zigler, Austin
Subject: FedEx Shipment 777268106996: Your package has been delivered

Hi. Your package was delivered Tue, 07/09/2024 at 10:26am.

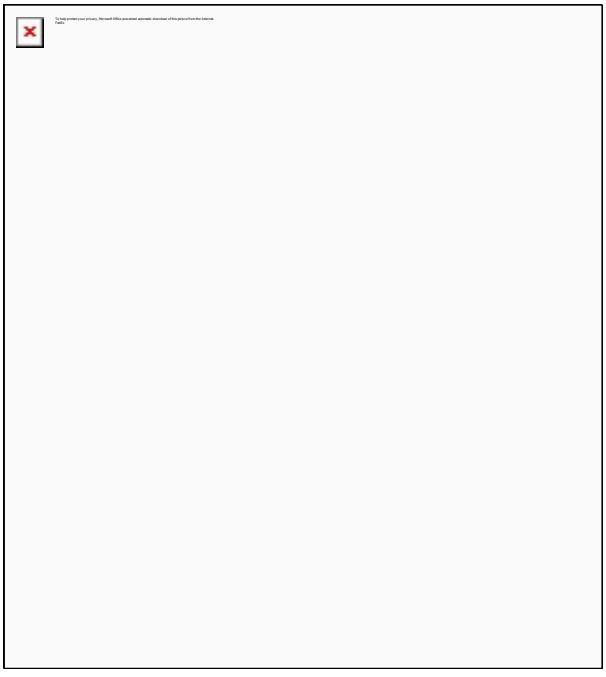
Delivered to 40 N PENNSYLVANIA AVE, GREENSBURG, PA 15601
Received by M.MLLER

OBTAIN PROOF OF DELIVERY

How was your delivery ?

TRACKING NUMBER 777268106996

FROM	Tenaska Inc 14302 FNB Parkway OMAHA, NE, US, 68154
TO	Westmoreland County Planning Com Mr. Jason Rigone 40 N Pennsylvania Ave Fifth Floor, Suite 520 GREENSBURG, PA, US, 15601
REFERENCE	8263
SHIPPER REFERENCE	8263
SHIP DATE	Mon 7/08/2024 06:01 PM
DELIVERED TO	Receptionist/Front Desk
PACKAGING TYPE	FedEx Envelope
ORIGIN	OMAHA, NE, US, 68154
DESTINATION	GREENSBURG, PA, US, 15601
SPECIAL HANDLING	Deliver Weekday
NUMBER OF PIECES	1
TOTAL SHIPMENT WEIGHT	0.50 LB
SERVICE TYPE	FedEx Priority Overnight



Appendix D

Application Fee

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

AIR QUALITY FEES FOR TITLE V OPERATING PERMIT

Company Information	
Federal Tax ID: 26-4286063	Firm Name: Tenaska Pennsylvania Partners, LLC
Permit # (If any): PA 65-00990C	Facility Name: Tenaska Westmoreland Generating Station
Municipality: South Huntington Township	County: Westmoreland
Contact Person Name: Larry Carlson	Telephone Number: 402-938-1661
E-mail: lcarlson@tenaska.com	

Title V Operating Permit

Line #	Check the appropriate box below	Type of Authorization	Fee 2021 - 2025	Total Fees
1	☒	New Application, Subchapter G	$5,000	$5,000
2	☐	Renewal	$4,000	
3	☐	Minor Modification	$1,500	
4	☐	Significant Modification	$4,000	
5	☐	Administrative Amendment / Change of Ownership	$1,500	
6	☐	Plantwide Applicability Limit (PAL) for NSR regulated pollutants or PAL for PSD regulated pollutants or both	$10,000	

Pay maximum amount of fee when one or more authorizations are requested. For example, when a renewal application and a change of ownership forms are submitted, please pay only the highest amount of fee ($4,000).

Appendix E

Potential-to-Emit Calculations

Tenaska Pennsylvania Partners, LLC
Westmoreland County, PA

Facility-Wide Potential to Emit

Pollutant	Combined Cycle Unit #1/#2[1] [ID 101/102]				Auxiliary Boiler [ID 031]	Emergency Fire Pump Engine [ID 104]	Cooling Tower [ID 105]	Total
	Normal Operation (8760 hrs)[2] (tpy)	Normal Operation (8370 hrs)[3] (tpy)	Startup/ Shutdown (390 hrs)[4] (tpy)	Facility Maximum[5] (tpy)	(tpy)	(tpy)	(tpy)	(tpy)
NO_x	224.0	214.5	82.3	**296.8**	5.76	0.52	--	**303.07**
CO	135.0	129.3	508.0	**637.2**	20	0.08	--	**657.16**
SO_2	22.5	21.5	--	**22.5**	0.32	1.06E-03	--	**22.79**
VOC	69.9	67.6	151.7	**219.3**	2.89	0.01	--	**222.19**
PM	84.9	82.3	--	**84.9**	4.00	0.01	6.57	**95.44**
PM_{10}	84.9	82.3	--	**84.9**	4.00	0.01	3.29	**92.15**
$PM_{2.5}$	84.9	82.3	--	**84.9**	4.00	0.01	0.01	**88.88**
Sulfuric Acid Mist	15.2	14.5	--	**15.2**	4.94E-03	2.28E-05	--	**15.19**
NH_3	193.8	185.7	--	**193.8**	--	--	--	**193.84**
HCHO	8.6		--	**8.6**	3.95E-02	6.88E-06	--	**8.67**
Total HAPs	21.1	20.3	--	**21.1**	9.93E-01	3.08E-03	--	**22.07**
CO_2	3,630,836	3,478,323	--	**3,630,836**	62,713	95	--	**3,693,644**
CH_4[6]	434	418	749	**1,167**	1.18E+00	3.86E-03	--	**1,168.13**
N_2O	7	6	--	**7**	1.18E-01	7.72E-04	--	**6.64**
CO_2e	3,643,638	--	--	**3,661,953**	62,778	95	--	**3,724,827**

[1] Power block consists of two (2) "J" class combined cycle combustion turbines serving one (1) steam turbine generator.

[2] Accounts for maximum hours of operation of duct burners (5200 hours per year). Remaining time calculated as normal operation without duct burners (8760 - 5200 = 3560 hours per year).

[3] Accounts for maximum hours of operation of duct burners (5200 hours per year). Remaining time calculated as normal operation without duct burners minus the annual hours of startup/shutdown for

[4] Accounts for maximum number of annual startup/shutdown events for each turbine (390 hours per year).

[5] Maximum emissions for turbines, accounting for emissions from startup/shutdown. For each pollutant, the maximum emissions from either year-round normal operation, or normal operation and startup/shutdown combined, are listed. Facility maximum CO_2e emissions calculated from maximum CO_2, CH_4 and N_2O emissions.

[6] CH_4 data shown is UHC which also includes minor amounts of C2+ species (some of which are considered VOCs)

Tenaska Pennsylvania Partners, LLC
Westmoreland County, PA

Combine Cycle Unit #1 and #2 (Source ID 101 and 102)
Normal Operation Potential to Emit

Operating Parameters

Parameter	Value	Units
Annual Hours of Operation	8,760	hr/yr
Annual Duct Burner Throughput Limit	2,039	MMscf/yr
Turbine Capacity[1]	3,147	mmBtu/hr
Duct Burner Capacity[1]	400	mmBtu/hr
Number of Turbines	2	--

Potential Emissions

Pollutant	Hourly Emissions per Turbine[2] With Duct Burner (lb/hr)	Hourly Emissions per Turbine[2] Without Duct Burner (lb/hr)	Annual Emissions per Turbine[4] (tpy)	Total Annual Emissions (tpy)
NO_x (controlled)	26.5	24.2	112.0	224.0
CO	15.9	14.7	67.5	135.0
SO_2	2.7	2.4	11.2	22.5
VOC	9.4	5.9	34.9	69.9
$PM/PM_{10}/PM_{2.5}$	11.8	6.6	42.4	84.9
Sulfuric Acid Mist	1.8	1.7	7.6	15.2
NH_3	22.9	21.0	96.9	193.8
CO_2	430,512	391,060	1,815,418	3,630,836
CH_4[11]	54.7	42.1	217.2	434.3
N_2O[10]	0.8	0.7	3.3	6.5
CO_2e[5]	432,112	392,319	1,821,819	3,643,638

Tenaska Pennsylvania Partners, LLC
Westmoreland County, PA

Combine Cycle Unit #1 and #2 (Source ID 101 and 102)
Normal Operation Potential to Emit

Pollutant	Emissions Factors[6,7]			Hourly Emissions per Turbine[8,9]		Annual Emissions Per Turbine[4]	Total Annual Emissions
	Turbine (lb/mmBtu)	Duct Burner (lb/mmscf)	Duct Burner (lb/mmBtu)	Without Duct Burner (lb/hr)	With Duct Burner (lb/hr)	(tpy)	(tpy)
HAPs:							
3-Methylchloranthrene		1.80E-06	1.93E-10	0	7.06E-07	1.84E-06	3.67E-06
7,12-Dimethylbenz(a) anthracene		1.60E-05	1.72E-09	0	6.27E-06	1.63E-05	3.26E-05
Acenaphthene		1.80E-06	1.93E-10	0	7.06E-07	1.84E-06	3.67E-06
Acenaphthylene		1.80E-06	1.93E-10	0	7.06E-07	1.84E-06	3.67E-06
Acetaldehyde	4.00E-05		3.55E-05	1.26E-01	1.26E-01	5.51E-01	1.10E+00
Acrolein	6.40E-06		5.68E-06	2.01E-02	2.01E-02	8.82E-02	1.76E-01
Anthracene		2.40E-06	2.58E-10	0	9.41E-07	2.45E-06	4.89E-06
Benz(a)anthracene		1.80E-06	1.93E-10	0	7.06E-07	1.84E-06	3.67E-06
Benzene	1.20E-05	2.10E-03	1.09E-05	3.78E-02	3.86E-02	1.68E-01	3.35E-01
Benzo(a)pyrene		1.20E-06	1.29E-10	0	4.71E-07	1.22E-06	2.45E-06
Benzo(b)fluoranthene		1.80E-06	1.93E-10	0	7.06E-07	1.84E-06	3.67E-06
Benzo(g,h,i)perylene		1.20E-06	1.29E-10	0	4.71E-07	1.22E-06	2.45E-06
Benzo(k)fluoranthene		1.80E-06	1.93E-10	0	7.06E-07	1.84E-06	3.67E-06
1,3-Butadiene	4.30E-07		3.82E-07	1.35E-03	1.35E-03	5.93E-03	1.19E-02
Chrysene		1.80E-06	1.93E-10	0	7.06E-07	1.84E-06	3.67E-06
Dibenzo(a,h) anthracene		1.20E-06	1.29E-10	0	4.71E-07	1.22E-06	2.45E-06
Dichlorobenzene		1.20E-03	1.29E-07	0	4.71E-04	1.22E-03	2.45E-03
Ethylbenzene	3.20E-05		2.84E-05	1.01E-01	1.01E-01	4.41E-01	8.82E-01
Fluoranthene		3.00E-06	3.22E-10	0	1.18E-06	3.06E-06	6.12E-06
Fluorene		2.80E-06	3.01E-10	0	1.10E-06	2.85E-06	5.71E-06
Formaldehyde[3]	3.13E-04			9.85E-01	9.85E-01	4.31E+00	8.63E+00
Hexane		1.80E+00	1.92E-04	0	7.06E-01	1.84E+00	3.67E+00
Indo(1,2,3-cd)pyrene		1.80E-06	1.93E-10	0	7.06E-07	1.84E-06	3.67E-06
Phenanthrene		1.70E-05	1.83E-09	0	6.67E-06	1.73E-05	3.47E-05
Propylene Oxide	2.90E-05		2.57E-05	9.13E-02	9.13E-02	4.00E-01	8.00E-01
Pyrene		5.00E-06	5.37E-10	0	1.96E-06	5.10E-06	1.02E-05
Toluene	1.30E-04	3.40E-03	1.16E-04	4.09E-01	4.10E-01	1.80E+00	3.59E+00
Xylene	6.40E-05		5.68E-05	2.01E-01	2.01E-01	8.82E-01	1.76E+00
Arsenic		2.00E-04	2.15E-08	0	7.84E-05	2.04E-04	4.08E-04
Beryllium		1.20E-05	1.29E-09	0	4.71E-06	1.22E-05	2.45E-05
Cadmium		1.10E-03	1.18E-07	0	4.31E-04	1.12E-03	2.24E-03
Chromium		1.40E-03	1.50E-07	0	5.49E-04	1.43E-03	2.85E-03
Cobalt		8.40E-05	9.02E-09	0	3.29E-05	8.56E-05	1.71E-04
Lead		5.00E-04	5.37E-08	0	1.96E-04	5.10E-04	1.02E-03
Manganese		3.80E-04	4.08E-08	0	1.49E-04	3.87E-04	7.75E-04
Mercury		2.60E-04	2.79E-08	0	1.02E-04	2.65E-04	5.30E-04
Nickel		2.10E-03	2.26E-07	0	8.24E-04	2.14E-03	4.28E-03
Selenium		2.40E-05	2.58E-09	0	9.41E-06	2.45E-05	4.89E-05
Polycyclic Organic Matter:							
Methylnaphthalene (2-)		2.40E-05	2.58E-09	0	9.41E-06	2.45E-05	4.89E-05
Naphthalene	1.30E-06	6.10E-04	1.22E-06	4.09E-03	4.33E-03	1.85E-02	3.71E-02
PAH	2.20E-06		1.95E-06	6.92E-03	6.92E-03	3.03E-02	6.07E-02
Total HAP	**6.30E-04**	**1.78E-03**	**4.76E-04**	1.98	2.69	10.54	21.08

Tenaska Pennsylvania Partners, LLC
Westmoreland County, PA

Combine Cycle Unit #1 and #2 (Source ID 101 and 102)
Normal Operation Potential to Emit

[1] Turbine and duct burner capacity is maximum heat input from Mitsubishi 501J test operational scenarios

[2] Hourly emissions based on worst-case parameter from Mitsubishi 501J test operational scenarios. Emissions for CO and VOC are based on the worst-case parameter including reduction from oxidation catalyst. Natural gas sulfur content of 0.25 gr/SCF was used.

[3] Formaldehyde emission factor based on stack test data from sites using similar turbines to units proposed in this configuration design. 3 times average of stack test data from 2003.

[4] Annual emissions are calculated for the worst-case operating scenario of 5,200 hours with duct burner (2,039 MMscf/yr equivalent) and 8,760 hours total operation.

[5] CO_2e calculated using Global Warming Potentials from Table A-1 of 40 CFR 98:

CO_2	1
CH_4	25
N_2O	298

[6] Emission factors are from AP-42 Chapter 3.1 for Stationary Gas Turbines, Table 3.1-3 (4/2000)

[7] Emission factors are from AP-42 Chapter 1.4 for Natural Gas Fired External Combustion Sources, Table 1.4-3 (07/1998).

[8] Hourly emissions per turbines calculated by multiplying the maximum turbine capacity (for turbine without duct burner calculation) or maximum turbine and duct burner capacity (for turbine with duct burner calculation) in MMBTU/hr by the AP-42 emission factors for HAPs.

[9] Conversion factor: 1020 (Btu/scf)

[10] N_2O emission factor from EPA's Greenhouse Gas Mandatory Reporting Rule, 40 CFR 98 Subpart C, Table C-2

N_2O EF	1.00E-04	kg/MMTBU
Turbine + DH	0.78	lbm/hr
Turbine Only	0.69	lbm/hr

[11] CH_4 data shown is UHC which also includes minor amounts of C2+ species (some of which are considered VOCs)

Tenaska Pennsylvania Partners, LLC
Westmoreland County, PA

Combine Cycle Unit #1 and #2 (Source ID 101 and 102)
Startup/Shutdown Potential to Emit

Operating Data[1]

Parameter	Units	Hot Start	Warm Start	Cold Start	Amount Per Turbine	Total
Maximum Annual Block Starts[2]	events/yr	205	48	7	260	520
Startup Duration Limit	hr/startup	1.5	1.5	1.5	--	--
Shutdown Duration Limit	hr/shutdown	0.5	0.5	0.5	--	--
Annual SU/SD/Tuning Limit[3]	hr/yr	--	--	--	390	780

Emissions

Pollutant	Units	Hot Start	Warm Start	Cold Start	Emissions Per Turbine	Emissions Total
NOx	lb/event	345	210	210	--	--
	tpy	35	5	1	41	82
CO	lb/event	1,905	2,135	2,135	--	--
	tpy	195	51	7	254	508
VOC	lb/event	575	615	615	--	--
	tpy	59	15	2	76	152
CH_4[4]	lb/event	2,845	3,015	3,015	--	--
	tpy	292	72	11	375	749

[1] Values shown are for each turbine.

[2] Estimate for calculation purposes, actual number of each type of event may vary.

[3] Tuning hours are counted towards the annual 390 hr SUSD/tuning limit. No separate limit per tuning event applies.

Tenaska Pennsylvania Partners, LLC
Westmoreland County, PA

Auxiliary Boiler (Source ID 031)
Potential to Emit

Operating Data

Parameter	Value	Units
Heat Input Capacity	245	mmBtu/hr
Fuel Usage Limit	1052	mmscf/yr
Fuel	Natural Gas	--

Potential Emissions

Pollutant	Emission Factor	Units	Reference	Potential to Emit (lb/hr)	Potential to Emit (tpy)
NO_X	0.011	lb/mmBtu	BACT limit based on the use of ultra low-NO_X burners[1]	2.63	5.76
CO	0.037	lb/mmBtu	BACT limit in current construction permit based on use of good combustion practices	9.07	19.85
$PM/PM_{10}/PM_{2.5}$	0.0075	lb/mmBtu	AP-42 Chapter 1.4, Table 1.4-2 (7/98)	1.83	4.00
VOC	0.0054	lb/mmBtu	AP-42 Chapter 1.4, Table 1.4-2 (7/98)	1.32	2.89
SO_2	0.0006	lb/mmBtu	AP-42 Chapter 1.4, Table 1.4-2 (7/98)[2]	0.15	0.32
H_2SO_4	9.20E-06	lb/mmBtu	Calculated assuming 1% SO_2 to SO_3 conversion and 100% conversion of SO_3 to H_2SO_4	2.25E-03	4.94E-03
CO_2	53.02	kg/mmBtu	40 CFR 98 Subpart C, Tables C-1 and C-2	28,638	62,713
CH_4	1.00E-03	kg/mmBtu	40 CFR 98 Subpart C, Tables C-1 and C-2	0.54	1.18
N_2O	1.00E-04	kg/mmBtu	40 CFR 98 Subpart C, Tables C-1 and C-2	0.05	0.12
CO_2e	--	--	Table A-1 of 40 CFR 98[3]	28,667	62,778

Tenaska Pennsylvania Partners, LLC
Westmoreland County, PA

Auxiliary Boiler (Source ID 031)
Potential to Emit

Pollutant	Emission Factor	Units	Reference	Potential to Emit (lb/hr)	Potential to Emit (tpy)
HAPs:					
3-Methylchloranthrene	1.80E-06	lb/mmscf	AP-42 Chapter 1.4, Table 1.4-2, 1.4-3, 1.4-4 (7/98)	4.32E-07	9.47E-07
7,12- Dimethylbenz(a)anthracene	1.60E-05	lb/mmscf	AP-42 Chapter 1.4, Table 1.4-2, 1.4-3, 1.4-4 (7/98)	3.84E-06	8.42E-06
Acenaphthene	1.80E-06	lb/mmscf	AP-42 Chapter 1.4, Table 1.4-2, 1.4-3, 1.4-4 (7/98)	4.32E-07	9.47E-07
Acenaphthylene	1.80E-06	lb/mmscf	AP-42 Chapter 1.4, Table 1.4-2, 1.4-3, 1.4-4 (7/98)	4.32E-07	9.47E-07
Anthracene	2.40E-06	lb/mmscf	AP-42 Chapter 1.4, Table 1.4-2, 1.4-3, 1.4-4 (7/98)	5.76E-07	1.26E-06
Benz(a)anthracene	1.80E-06	lb/mmscf	AP-42 Chapter 1.4, Table 1.4-2, 1.4-3, 1.4-4 (7/98)	4.32E-07	9.47E-07
Benzene	2.10E-03	lb/mmscf	AP-42 Chapter 1.4, Table 1.4-2, 1.4-3, 1.4-4 (7/98)	5.04E-04	1.10E-03
Benzo(a)pyrene	1.20E-06	lb/mmscf	AP-42 Chapter 1.4, Table 1.4-2, 1.4-3, 1.4-4 (7/98)	2.88E-07	6.31E-07
Benzo(b)fluoranthene	1.80E-06	lb/mmscf	AP-42 Chapter 1.4, Table 1.4-2, 1.4-3, 1.4-4 (7/98)	4.32E-07	9.47E-07
Benzo(g,h,i)perylene	1.20E-06	lb/mmscf	AP-42 Chapter 1.4, Table 1.4-2, 1.4-3, 1.4-4 (7/98)	2.88E-07	6.31E-07
Benzo(k)fluoranthene	1.80E-06	lb/mmscf	AP-42 Chapter 1.4, Table 1.4-2, 1.4-3, 1.4-4 (7/98)	4.32E-07	9.47E-07
Chrysene	1.80E-06	lb/mmscf	AP-42 Chapter 1.4, Table 1.4-2, 1.4-3, 1.4-4 (7/98)	4.32E-07	9.47E-07
Dibenzo(a,h) anthracene	1.20E-06	lb/mmscf	AP-42 Chapter 1.4, Table 1.4-2, 1.4-3, 1.4-4 (7/98)	2.88E-07	6.31E-07
Dichlorobenzene	1.20E-03	lb/mmscf	AP-42 Chapter 1.4, Table 1.4-2, 1.4-3, 1.4-4 (7/98)	2.88E-04	6.31E-04
Fluoranthene	3.00E-06	lb/mmscf	AP-42 Chapter 1.4, Table 1.4-2, 1.4-3, 1.4-4 (7/98)	7.21E-07	1.58E-06
Fluorene	2.80E-06	lb/mmscf	AP-42 Chapter 1.4, Table 1.4-2, 1.4-3, 1.4-4 (7/98)	6.73E-07	1.47E-06
Formaldehyde	7.50E-02	lb/mmscf	AP-42 Chapter 1.4, Table 1.4-2, 1.4-3, 1.4-4 (7/98)	1.80E-02	3.95E-02
Hexane	1.80E+00	lb/mmscf	AP-42 Chapter 1.4, Table 1.4-2, 1.4-3, 1.4-4 (7/98)	4.32E-01	9.47E-01
Indo(1,2,3-cd)pyrene	1.80E-06	lb/mmscf	AP-42 Chapter 1.4, Table 1.4-2, 1.4-3, 1.4-4 (7/98)	4.32E-07	9.47E-07
Phenanthrene	1.70E-05	lb/mmscf	AP-42 Chapter 1.4, Table 1.4-2, 1.4-3, 1.4-4 (7/98)	4.08E-06	8.94E-06
Pyrene	5.00E-06	lb/mmscf	AP-42 Chapter 1.4, Table 1.4-2, 1.4-3, 1.4-4 (7/98)	1.20E-06	2.63E-06
Toluene	3.40E-03	lb/mmscf	AP-42 Chapter 1.4, Table 1.4-2, 1.4-3, 1.4-4 (7/98)	8.17E-04	1.79E-03
Arsenic	2.00E-04	lb/mmscf	AP-42 Chapter 1.4, Table 1.4-2, 1.4-3, 1.4-4 (7/98)	4.80E-05	1.05E-04
Beryllium	1.20E-05	lb/mmscf	AP-42 Chapter 1.4, Table 1.4-2, 1.4-3, 1.4-4 (7/98)	2.88E-06	6.31E-06
Cadmium	1.10E-03	lb/mmscf	AP-42 Chapter 1.4, Table 1.4-2, 1.4-3, 1.4-4 (7/98)	2.64E-04	5.79E-04
Chromium	1.40E-03	lb/mmscf	AP-42 Chapter 1.4, Table 1.4-2, 1.4-3, 1.4-4 (7/98)	3.36E-04	7.36E-04
Cobalt	8.40E-05	lb/mmscf	AP-42 Chapter 1.4, Table 1.4-2, 1.4-3, 1.4-4 (7/98)	2.02E-05	4.42E-05
Lead	5.00E-04	lb/mmscf	AP-42 Chapter 1.4, Table 1.4-2, 1.4-3, 1.4-4 (7/98)	1.20E-04	2.63E-04
Manganese	3.80E-04	lb/mmscf	AP-42 Chapter 1.4, Table 1.4-2, 1.4-3, 1.4-4 (7/98)	9.13E-05	2.00E-04
Mercury	2.60E-04	lb/mmscf	AP-42 Chapter 1.4, Table 1.4-2, 1.4-3, 1.4-4 (7/98)	6.25E-05	1.37E-04
Nickel	2.10E-03	lb/mmscf	AP-42 Chapter 1.4, Table 1.4-2, 1.4-3, 1.4-4 (7/98)	5.04E-04	1.10E-03
Selenium	2.40E-05	lb/mmscf	AP-42 Chapter 1.4, Table 1.4-2, 1.4-3, 1.4-4 (7/98)	5.76E-06	1.26E-05
Polycyclic Organic Matter:					
Methylnaphthalene (2-)	2.40E-05	lb/mmscf	AP-42 Chapter 1.4, Table 1.4-2, 1.4-3, 1.4-4 (7/98)	5.76E-06	1.26E-05
Naphthalene	6.10E-04	lb/mmscf	AP-42 Chapter 1.4, Table 1.4-2, 1.4-3, 1.4-4 (7/98)	1.47E-04	3.21E-04
Total HAP				4.54E-01	9.93E-01

Tenaska Pennsylvania Partners, LLC
Westmoreland County, PA

Auxiliary Boiler (Source ID 031)
Potential to Emit

[1] **NO_X Emission Factor**

C_{dNOX} (lb/dscf) = $[(P_o \times MW_{NOX}) / (R \times T_o)] \times C_{vNOX}$

EFNOX (lb/mmBtu) = Cdi x FNG x (20.9/(20.9-%O2d))

where,

C_{dNOX} = NO_X concentration, dry basis (lb/dscf)

P_o = standard pressure (atm)

MW_{NOX} = NO_X molecular weight (lb/lbmol)

C_{vNOX} = NO_X exhaust concentration (ppmvd @ 3% O2)

R = ideal gas law constant [(ft^3-atm)/(lbmol-^oR)]

T_o = standard temperature (^oR)

EFNOX = NOX emission factor (lb/mmBtu)

F_{NG} = volume of combustion components per unit of heat content natural gas (dscf/Btu)

$\%O_{2d}$ = oxygen concentration on a dry basis (% vol.)

Constants Used in NO_X Emission Factor Derivation

Parameter	Value	Units	Reference
P	1.0	atm	
MW_{NOX}	46.006	lb/lbmol	Assumes all NO_X is NO_2
T	537	^oR	Equal to 77 ^oF
R	0.7302	ft^3-atm/lbmol-^oR	Standard value
C_{VNOX}	9	ppmvd @ 3% O_2	Ultra-LNB vendor quote
F_{NG}	8,710	dscf/mmBtu	Table 19-2 "F-Factors for Various Fuels" from EPA 40 CFR Part 60 Appendix A, Reference Method 19, F-factor for natural gas.
$\%O_{2d}$	3	%	

[2] **SO_X Emission Factor**

EF (lb/mmBtu) = C (gr/100 scf) x (1 lb / 7000 gr) x (MWSO2 / MWS) x [1 / (HHVNG x 100 scf / hundred scf)] x (1,000,000 Btu/mmBtu)

where,

C = sulfur content of pipeline quality natural gas (gr S/100 scf natural gas)

MW_{SO2} = molecular weight of sulfur dioxide (lb/lbmol)

MW_S = molecular weight of sulfur (lb/lbmol)

HHVNG = minimum higher heating value of natural gas (mmBtu/mmscf)

Constants Used in SO_2 Emission Factor Derivation

Parameter	Value	Units	Reference
C	0.2	gr/100 scf	Sulfur content of natural gas from AP-42.
MW_{SO2}	64.066	lb/lbmol	
MW_S	32.066	lb/lbmol	
HHV_{NG}	950.0	mmBtu/mmscf	Minimum anticipated HHV for natural gas

[3] CO_2e calculated using Global Warming Potentials from Table A-1 of 40 CFR 98:

CO_2	1
CH_4	25
N_2O	298

Tenaska Pennsylvania Partners, LLC
Westmoreland County, PA

Emergency Fire Pump Engine (Source ID 104)
Potential to Emit

Operating Data

Parameter	Value	Units
Engine Output	351	hp
Brake Specific Fuel Consumption (BSFC)	6647	Btu/hp-hr
Heat Input Capacity	2.33	mmBtu/hr
Annual Hours of Operation Limit	500	hrs/yr
Fuel Heating Value	137000	Btu/gal
Fuel Density	7.31	lb/gal
Fuel	Diesel	--

Potential Emissions

Pollutant	Emission Factor	Units	Reference	Potential to Emit (lb/hr)	Potential to Emit (tpy)
NO_X	2.710	g/hp-hr	Vendor guarantee[1]	2.10	0.52
CO	0.4	g/hp-hr	Vendor guarantee[1]	0.31	0.08
PM	7.00E-02	g/hp-hr	Filterable PM emission guarantee from vendor plus condensable PM emission factor from AP-42 Chapter 3.4 for Large Stationary Diesel Engines, Table 3.4-2 (10/96).	0.05	0.01
PM_{10}	7.00E-02	g/hp-hr	Filterable PM emission guarantee from vendor plus condensable PM emission factor from AP-42 Chapter 3.4 for Large Stationary Diesel Engines, Table 3.4-2 (10/96).	0.05	0.01
$PM_{2.5}$	7.00E-02	g/hp-hr	Filterable PM emission guarantee from vendor plus condensable PM emission factor from AP-42 Chapter 3.4 for Large Stationary Diesel Engines, Table 3.4-2 (10/96).	0.05	0.01
VOC	0.0700	g/hp-hr	Vendor guarantee[1]	0.05	0.01
SO_2	1.21E-05	lb/hp-hr	AP-42 Chapter 3.4 for Large Stationary Diesel engines, Table 3.4-1 (10/96).[2]	4.26E-03	1.06E-03
H_2SO_4	2.60E-07	lb/hp-hr	Calculated assuming 1% SO_2 to SO_3 conversion and 100% conversion of SO_3 to H_2SO_4	9.13E-05	2.28E-05
CO_2	73.96	kg/mmBtu	40 CFR 98 Subpart C, Tables C-1 and C-2	380	95.10
CH_4	3.00E-03	kg/mmBtu	40 CFR 98 Subpart C, Tables C-1 and C-2	1.54E-02	3.86E-03
N_2O	6.00E-04	kg/mmBtu	40 CFR 98 Subpart C, Tables C-1 and C-2	3.09E-03	7.72E-04
CO_2e	--	--	Global Warming Potentials from Table A-1 of 40 CFR 98[3]	382	95

Tenaska Pennsylvania Partners, LLC
Westmoreland County, PA

Emergency Fire Pump Engine (Source ID 104)
Potential to Emit

Pollutant	Emission Factor (lb/mmBtu)	Reference	Potential to Emit (lb/hr)	Potential to Emit (tpy)
HAPs:				
Acetaldehyde	7.67E-04	AP-42 Chapter 3.3 for Stationary Diesel Engines, Table 3.3-2 (10/96).	1.79E-03	4.47E-04
Acrolein	9.25E-05	AP-42 Chapter 3.3 for Stationary Diesel Engines, Table 3.3-2 (10/96).	2.16E-04	5.40E-05
Acenaphthene	1.42E-06	AP-42 Chapter 3.3 for Stationary Diesel Engines, Table 3.3-2 (10/96).	3.31E-06	8.28E-07
Acenaphthylene	5.06E-06	AP-42 Chapter 3.3 for Stationary Diesel Engines, Table 3.3-2 (10/96).	1.18E-05	2.95E-06
Anthracene	1.87E-06	AP-42 Chapter 3.3 for Stationary Diesel Engines, Table 3.3-2 (10/96).	4.36E-06	1.09E-06
Benz(a)anthracene	1.68E-06	AP-42 Chapter 3.3 for Stationary Diesel Engines, Table 3.3-2 (10/96).	3.92E-06	9.80E-07
Benzene	9.33E-04	AP-42 Chapter 3.3 for Stationary Diesel Engines, Table 3.3-2 (10/96).	2.18E-03	5.44E-04
Benzo(a)pyrene	1.88E-07	AP-42 Chapter 3.3 for Stationary Diesel Engines, Table 3.3-2 (10/96).	4.39E-07	1.10E-07
Benzo(b)fluoranthene	9.91E-08	AP-42 Chapter 3.3 for Stationary Diesel Engines, Table 3.3-2 (10/96).	2.31E-07	5.78E-08
Benzo(g,h,i)perylene	4.89E-07	AP-42 Chapter 3.3 for Stationary Diesel Engines, Table 3.3-2 (10/96).	1.14E-06	2.85E-07
Benzo(k)fluoranthene	1.55E-07	AP-42 Chapter 3.3 for Stationary Diesel Engines, Table 3.3-2 (10/96).	3.62E-07	9.04E-08
Chrysene	3.53E-07	AP-42 Chapter 3.3 for Stationary Diesel Engines, Table 3.3-2 (10/96).	8.24E-07	2.06E-07
Dibenzo(a,h) anthracene	5.83E-07	AP-42 Chapter 3.3 for Stationary Diesel Engines, Table 3.3-2 (10/96).	1.36E-06	3.40E-07
Fluoranthene	7.61E-06	AP-42 Chapter 3.3 for Stationary Diesel Engines, Table 3.3-2 (10/96).	1.78E-05	4.44E-06
Fluorene	2.92E-05	AP-42 Chapter 3.3 for Stationary Diesel Engines, Table 3.3-2 (10/96).	6.81E-05	1.70E-05
Formaldehyde	1.18E-05	AP-42 Chapter 3.3 for Stationary Diesel Engines, Table 3.3-2 (10/96).	2.75E-05	6.88E-06
Indo(1,2,3-cd)pyrene	3.75E-07	AP-42 Chapter 3.3 for Stationary Diesel Engines, Table 3.3-2 (10/96).	8.75E-07	2.19E-07
Phenanthrene	2.94E-05	AP-42 Chapter 3.3 for Stationary Diesel Engines, Table 3.3-2 (10/96).	6.86E-05	1.71E-05
Pyrene	4.78E-06	AP-42 Chapter 3.3 for Stationary Diesel Engines, Table 3.3-2 (10/96).	1.12E-05	2.79E-06
Toluene	4.09E-04	AP-42 Chapter 3.3 for Stationary Diesel Engines, Table 3.3-2 (10/96).	9.54E-04	2.39E-04
Xylenes	2.85E-04	AP-42 Chapter 3.3 for Stationary Diesel Engines, Table 3.3-2 (10/96).	6.65E-04	1.66E-04
Propylene	2.58E-03	AP-42 Chapter 3.3 for Stationary Diesel Engines, Table 3.3-2 (10/96).	6.02E-03	1.50E-03
1,3-Butadiene	3.91E-05	AP-42 Chapter 3.3 for Stationary Diesel Engines, Table 3.3-2 (10/96).	9.12E-05	2.28E-05
Polycyclic Organic Matter:				
Naphthalene	8.48E-05	AP-42 Chapter 3.3 for Stationary Diesel Engines, Table 3.3-2 (10/96).	1.98E-04	4.95E-05
Total HAP			1.23E-02	3.08E-03

[1] NO_X, CO, PM-filterable and VOM Emission Factors from engine specification sheet for a 351 hp John Deere / Clarke model JW6H-UFADD0 fire pump engine.

[2] Maximum fuel oil sulfur based on EPA required sulfur content for non-road diesel fuel, 40 CFR 80.510(b).

Maximum fuel oil sulfur: 0.0015 %

[3] CO_2e calculated using Global Warming Potentials from Table A-1 of 40 CFR 98:

CO_2	1
CH_4	25
N_2O	298

Tenaska Pennsylvania Partners, LLC
Westmoreland County, PA

Cooling Tower (Source ID 105)
Potential to Emit

Parameter	Specifications
Performance Data	
Circulating Water Flow Rate (CWFR), gal/min	300,000
Hours of operation	8,760
Emission Data	
Drift Rate[1] (DR), percent	0.0005
Total Dissolved Solids (TDS) Concentration[2],maximum ppm	2,000
Solution Drift[3] (SD), lb/hr	751
Pollutant	**Potential to Emit**
PM Drift[4] , lb/hr	1.50
tons/year	6.57
PM_{10} Drift	
PM_{10} Portion (percent) of PM Drift	50
PM_{10} Emissions, lb/hr	0.75
tons/year	3.29
$PM_{2.5}$ Drift	
$PM_{2.5}$ Portion (percent) of PM Drift	0.15
$PM_{2.5}$ Emissions, lb/hr	0.002
tons/year	0.009

[1] Drift rate is the percent of circulating water

[2] TDS assumed for modeling

[3] Includes water and based on circulating water flow rate and drift rate (CWFR x DR x 8.34 lb/gal x 60 min/hr)

[4] PM calculated based on total dissolved solids and solution drift (TDS x SD)

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	Westmoreland Fire Pump Tank
City:	Pittsburgh
State:	Pennsylvania
Company:	
Type of Tank:	Horizontal Tank
Description:	

Tank Dimensions

Shell Length (ft):	6.10
Diameter (ft):	4.25
Volume (gallons):	509.39
Turnovers:	16.69
Net Throughput(gal/yr):	8,500.00
Is Tank Heated (y/n):	N
Is Tank Underground (y/n):	N

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good

Breather Vent Settings

Vacuum Settings (psig):	-0.03
Pressure Settings (psig)	0.03

Meterological Data used in Emissions Calculations: Pittsburgh, Pennsylvania (Avg Atmospheric Pressure = 14.11 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Westmoreland Fire Pump Tank - Horizontal Tank
Pittsburgh, Pennsylvania

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Distillate fuel oil no. 2	All	51.94	47.06	56.81	50.33	0.0049	0.0041	0.0059	130.0000			188.00	Option 1: VP50 = .0045 VP60 = .0065

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

Westmoreland Fire Pump Tank - Horizontal Tank
Pittsburgh, Pennsylvania

Annual Emission Calcaulations	
Standing Losses (lb):	0.0791
Vapor Space Volume (cu ft):	55.1186
Vapor Density (lb/cu ft):	0.0001
Vapor Space Expansion Factor:	0.0340
Vented Vapor Saturation Factor:	0.9994
Tank Vapor Space Volume:	
Vapor Space Volume (cu ft):	55.1186
Tank Diameter (ft):	4.2500
Effective Diameter (ft):	5.7468
Vapor Space Outage (ft):	2.1250
Tank Shell Length (ft):	6.1000
Vapor Density	
Vapor Density (lb/cu ft):	0.0001
Vapor Molecular Weight (lb/lb-mole):	130.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0049
Daily Avg. Liquid Surface Temp. (deg. R):	511.6051
Daily Average Ambient Temp. (deg. F):	50.3083
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731
Liquid Bulk Temperature (deg. R):	509.9983
Tank Paint Solar Absorptance (Shell):	0.1700
Daily Total Solar Insulation Factor (Btu/sqft day):	1,202.9556
Vapor Space Expansion Factor	
Vapor Space Expansion Factor:	0.0340
Daily Vapor Temperature Range (deg. R):	19.5141
Daily Vapor Pressure Range (psia):	0.0018
Breather Vent Press. Setting Range(psia):	0.0600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0049
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.0041
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	0.0059
Daily Avg. Liquid Surface Temp. (deg R):	511.6051
Daily Min. Liquid Surface Temp. (deg R):	506.7266
Daily Max. Liquid Surface Temp. (deg R):	516.4836
Daily Ambient Temp. Range (deg. R):	19.1500
Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor:	0.9994
Vapor Pressure at Daily Average Liquid: Surface Temperature (psia):	0.0049
Vapor Space Outage (ft):	2.1250
Working Losses (lb):	0.1286
Vapor Molecular Weight (lb/lb-mole):	130.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0049
Annual Net Throughput (gal/yr.):	8,500.0000
Annual Turnovers:	16.6866
Turnover Factor:	1.0000
Tank Diameter (ft):	4.2500
Working Loss Product Factor:	1.0000
Total Losses (lb):	0.2077

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: Annual

Westmoreland Fire Pump Tank - Horizontal Tank
Pittsburgh, Pennsylvania

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Distillate fuel oil no. 2	0.13	0.08	0.21

Appendix F

Combined Cycle Units #1 and #2 CAM Plan

Compliance Assurance Monitoring (CAM) Plan
Combined Cycle Units #1 and #2 (Source ID 101 and 102)

1.0 Background

1.1 Emissions Unit

Description:	Combined Cycle Combustion Turbine
Source Name:	Combined Cycle Units #1 and #2
Source ID:	101 and 102

1.2 Applicable Regulation, Emission Limits, and Monitoring Requirements

Regulation No.:	25 Pa. Code 127.12b 25 Pa. Code 129.112(g)(2)(iii)(B), Presumptive RACT III
Permit Condition:	PA 65-00990C, Section E, Group G001, Condition #002(c) PA 65-00990C, Section E, Group G001, Condition #007
Pollutant:	VOC
Emission Limit[1]:	2.4 ppmvd @ 15% O_2 (with duct burners) 1.4 ppmvd @ 15% O_2 (without duct burners) 9.4 lb/hr 2 ppmvd @ 15% O_2, Presumptive RACT III
Monitoring Requirements:	Periodic EPA-method compliance testing
Control Technology:	Oxidation Catalyst (41-49% VOC control)

[1] VOC ppmvd limits are expressed as propane.

2.0 Monitoring Approach

The elements of the monitoring approach for VOC emission are presented below.

	Indicator No. 1	**Indicator No. 2**	**Indicator No. 3**
Indicator:	Oxidation Catalyst Average Outlet Temperature	Catalyst Management Program	VOC emissions
Measurement Approach:	The oxidation catalyst outlet temperature is measured via four thermocouples.	Routine inspection and sampling.	VOC concentration is measured via stack test.
Indicator Range:	500-750°F (does not apply during startup, shutdown, or tuning events)	N/A	See Emission Limits in Section 1.2
Performance Criteria:			
Data Representativeness:	The average oxidation catalyst outlet temperature is measured via four thermocouples installed in each HRSG, immediately downstream of the catalyst. The thermocouples are scaled 0-875°F and the standard tolerance is +/- 1°C or 0.75% (whichever is greater).	Routine inspection and sampling to verify catalyst integrity and activity.	Compliance stack tests are completed in accordance with EPA approved methods and the PADEP Source Testing Manual.
Verification of Operational Status:	The thermocouples are installed in accordance with manufacturer specifications and calibration checks are completed after failure or repair. Signal monitoring will be completed by the DCS to detect quality failure and reduce the occurrence of invalid data.	N/A	N/A
Quality Assurance and Control Practices:	Signal monitoring will be completed by the DCS to detect quality failure and reduce the occurrence of invalid data. Calibration checks are completed after failure or repair.	N/A	QA/QC is completed in accordance with the selected EPA-approved method.
Monitoring Frequency:	Outlet temperature is measured continuously.	Inspections and sampling completed on a routine basis in accordance with OEM recommendations.	Stack tests are completed once per permit term.
Data Collection Procedures:	Data is collected and recorded continuously by the DCS.	N/A	Data is collected via stack test vendor as prescribed in PADEP approved protocol.
Averaging Period:	3-hour rolling average	N/A	3-hour average of 3, 1-hour test runs

3.0 Monitoring Approach Justification

3.1 Background

The pollutant specific emissions units (PSEU) consist of two, natural gas-fired combined cycle combustion turbines (CCCT), each equipped with a heat recovery steam generator (HRSG) and supplemental natural gas-fired duct burners, collectively serving a single steam turbine generator.

Each CCCT is equipped with Dry Low-NOx (DLN) burners and emissions from each CCCT/HRSG are controlled by selective catalytic reduction (SCR) and oxidation catalysts prior to being released to the atmosphere. The SCRs control NOx emissions and the oxidation catalysts control CO and VOC emissions.

Combined Cycle Units #1 and #2 uncontrolled potential emissions exceed major source thresholds for NO_x, CO, and VOC. The units are also subject to emission limitations or standards for each of the pollutants identified via PA 65-00990C, NSPS Subpart KKKK, the Acid Rain Program, and the Cross-State Air Pollution Rule (CSAPR). Compliance with the emission limitations or standards is met via control by oxidation catalyst, for CO and VOC, and SCR, for NO_x.

However, per 40 CFR 64.2(b)(1)(i), (iii), (iv), and (vi), CAM requirements do not apply to emissions limitations or standards:

- Proposed after November 15, 1990 (i.e., Subpart KKKK),
- Associated with Acid Rain Program requirements
- That apply under an emissions trading program (i.e., CSAPR)
- For which a CEMS is installed to determine compliance (i.e., NOx and CO)

Therefore, both NOx and CO are exempt from CAM requirements.

3.2 Rationale for Selection of Performance Indicators

The control efficiency achieved by the oxidation catalyst is a function of temperature. A level of control efficiency can be expected by maintaining catalyst temperature within the manufacturer-specified range. Attachment 1 includes manufacturer data on temperature and expected VOC control efficiency.

Catalyst integrity and activity, via routine inspection and sampling, will be used to provide an indication of how much of the catalyst useful life remains.

Periodic compliance testing will also be continued to further demonstrate compliance with VOC limits.

3.3 Rationale for Selection of Indicator Range

3.3.1 Oxidation Catalyst Average Outlet Temperature

The selected indicator range for catalyst temperature was provided by the catalyst manufacturer to ensure design control efficiencies are met as well as ensure the catalyst is not damaged by high

temperatures. Aside from startup, shutdown and tuning events, the catalyst temperature is maintained within the specified range.

During the most recent stack tests in October 2022, which demonstrated compliance with VOC limits, catalyst temperatures were within the manufacturer specified range.

If the average catalyst outlet temperature is outside of the manufacturer specified range during normal operations, the cause will be investigated, and appropriate action taken.

3.3.2 Catalyst Management Program

Catalyst integrity and activity will be monitored via routine inspections and sampling. Results will be used to determine the remaining catalyst useful life and ensure compliance with permit limits.

3.3.3 VOC Concentration

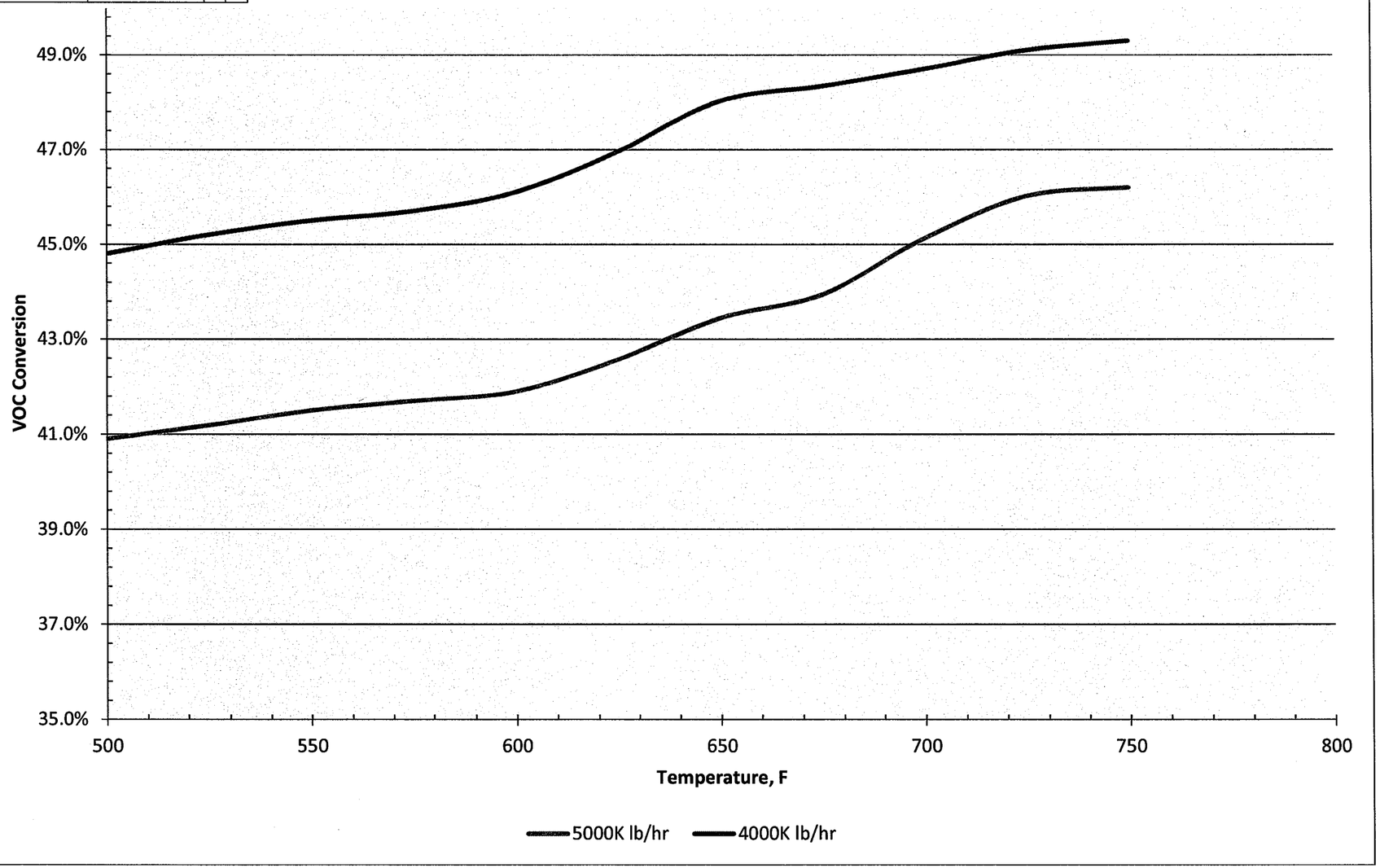
Compliance stack testing will be completed once per permit term, in accordance with EPA-approved methods, to demonstrate compliance with VOC emission limits.

Attachment 1

Oxidation Catalyst Manufacturer Data

WELD SYMBOLS ARE PER AWS A2.4 LATEST EDITION					
NOOTER ERIKSEN INC. SUPPLIER SUBMITTAL REVIEW					
REVIEW OF SUPPLIER DRAWINGS DOES NOT RELIEVE THE SUPPLIER OF RESPONSIBILITIES FOR ACCURACY OF DIMENSIONS AND CONFORMANCE TO CODES, NOOTER ERIKSEN SPECIFICATIONS AND P.O. REQUIREMENTS.					
	A REVIEWED AND ACCEPTED				
	B REVIEWED WITH COMMENTS (WORK MAY PROCEED)				
	C REVISE AND RESUBMIT (WORK MAY NOT PROCEED)				
	D REVIEWED FOR INFORMATION ONLY (WORK MAY PROCEED)				
RELEASE DATE	REVIEWERS INITIALS				
PROJECT: Westmoreland	JOB NO	CODE	SHT	REV	FE
DRAWING NO.	160223	CO	701	C	X

Nooter/Eriksen 160223 Westmoreland
VOC Conversion vs. Temperature
Note: VOCs are assumed to be 50% unsaturated



Appendix G

Acid Rain Permit Renewal Application

United States
Environmental Protection Agency
Acid Rain Program

OMB No. 2060-0258
Approval expires 12/31/2021

Acid Rain Permit Application

For more information, see instructions and 40 CFR 72.30 and 72.31.

This submission is: ☐ **new** ☐ **revised** ☑ **for ARP permit renewal**

STEP 1

Identify the facility name, State, and plant (ORIS) code.

Facility (Source) Name	State	Plant Code
Tenaska Westmoreland Generating Station	PA	60464

STEP 2

Enter the unit ID# for every affected unit at the affected source in column "a."

a	b
Unit ID#	Unit Will Hold Allowances in Accordance with 40 CFR 72.9(c)(1)
101	Yes
102	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes
	Yes

Tenaska Westmoreland Generating Station
Facility (Source) Name (from STEP 1)

STEP 3

Read the standard requirements.

Permit Requirements

(1) The designated representative of each affected source and each affected unit at the source shall:
  (i) Submit a complete Acid Rain permit application (including a compliance plan) under 40 CFR part 72 in accordance with the deadlines specified in 40 CFR 72.30; and
  (ii) Submit in a timely manner any supplemental information that the permitting authority determines is necessary in order to review an Acid Rain permit application and issue or deny an Acid Rain permit;

(2) The owners and operators of each affected source and each affected unit at the source shall:
  (i) Operate the unit in compliance with a complete Acid Rain permit application or a superseding Acid Rain permit issued by the permitting authority; and
  (ii) Have an Acid Rain Permit.

Monitoring Requirements

(1) The owners and operators and, to the extent applicable, designated representative of each affected source and each affected unit at the source shall comply with the monitoring requirements as provided in 40 CFR part 75.

(2) The emissions measurements recorded and reported in accordance with 40 CFR part 75 shall be used to determine compliance by the source or unit, as appropriate, with the Acid Rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program.

(3) The requirements of 40 CFR part 75 shall not affect the responsibility of the owners and operators to monitor emissions of other pollutants or other emissions characteristics at the unit under other applicable requirements of the Act and other provisions of the operating permit for the source.

Sulfur Dioxide Requirements

(1) The owners and operators of each source and each affected unit at the source shall:
  (i) Hold allowances, as of the allowance transfer deadline, in the source's compliance account (after deductions under 40 CFR 73.34(c)), not less than the total annual emissions of sulfur dioxide for the previous calendar year from the affected units at the source; and
  (ii) Comply with the applicable Acid Rain emissions limitations for sulfur dioxide.

(2) Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Act.

(3) An affected unit shall be subject to the requirements under paragraph (1) of the sulfur dioxide requirements as follows:
  (i) Starting January 1, 2000, an affected unit under 40 CFR 72.6(a)(2); or
  (ii) Starting on the later of January 1, 2000 or the deadline for monitor certification under 40 CFR part 75, an affected unit under 40 CFR 72.6(a)(3).

(4) Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program.

(5) An allowance shall not be deducted in order to comply with the requirements under paragraph (1) of the sulfur dioxide requirements prior to the calendar year for which the allowance was allocated.

(6) An allowance allocated by the Administrator under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain permit application, the Acid Rain permit, or an exemption under 40 CFR 72.7 or 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization.

(7) An allowance allocated by the Administrator under the Acid Rain Program does not constitute a property right.

Nitrogen Oxides Requirements

The owners and operators of the source and each affected unit at the source shall comply with the applicable Acid Rain emissions limitation for nitrogen oxides.

Tenaska Westmoreland Generating Station
Facility (Source) Name (from STEP 1)

STEP 3, Cont'd.

Excess Emissions Requirements

(1) The designated representative of an affected source that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR part 77.
(2) The owners and operators of an affected source that has excess emissions in any calendar year shall:
   (i) Pay without demand the penalty required, and pay upon demand the interest on that penalty, as required by 40 CFR part 77; and
   (ii) Comply with the terms of an approved offset plan, as required by 40 CFR part 77.

Recordkeeping and Reporting Requirements

(1) Unless otherwise provided, the owners and operators of the source and each affected unit at the source shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time prior to the end of 5 years, in writing by the Administrator or permitting authority:
   (i) The certificate of representation for the designated representative for the source and each affected unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with 40 CFR 72.24; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such documents are superseded because of the submission of a new certificate of representation changing the designated representative;
   (ii) All emissions monitoring information, in accordance with 40 CFR part 75, provided that to the extent that 40 CFR part 75 provides for a 3-year period for recordkeeping, the 3-year period shall apply.
   (iii) Copies of all reports, compliance certifications, and other submissions and all records made or required under the Acid Rain Program; and,
   (iv) Copies of all documents used to complete an Acid Rain permit application and any other submission under the Acid Rain Program or to demonstrate compliance with the requirements of the Acid Rain Program.
(2) The designated representative of an affected source and each affected unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR part 72 subpart I and 40 CFR part 75.

Liability

(1) Any person who knowingly violates any requirement or prohibition of the Acid Rain Program, a complete Acid Rain permit application, an Acid Rain permit, or an exemption under 40 CFR 72.7 or 72.8, including any requirement for the payment of any penalty owed to the United States, shall be subject to enforcement pursuant to section 113(c) of the Act.
(2) Any person who knowingly makes a false, material statement in any record, submission, or report under the Acid Rain Program shall be subject to criminal enforcement pursuant to section 113(c) of the Act and 18 U.S.C. 1001.
(3) No permit revision shall excuse any violation of the requirements of the Acid Rain Program that occurs prior to the date that the revision takes effect.
(4) Each affected source and each affected unit shall meet the requirements of the Acid Rain Program.
(5) Any provision of the Acid Rain Program that applies to an affected source (including a provision applicable to the designated representative of an affected source) shall also apply to the owners and operators of such source and of the affected units at the source.
(6) Any provision of the Acid Rain Program that applies to an affected unit (including a provision applicable to the designated representative of an affected unit) shall also apply to the owners and operators of such unit.
(7) Each violation of a provision of 40 CFR parts 72, 73, 74, 75, 76, 77, and 78 by an affected source or affected unit, or by an owner or operator or designated representative of such source or unit, shall be a separate violation of the Act.

Tenaska Westmoreland Generating Station
Facility (Source) Name (from STEP 1)

STEP 3, Cont'd.

Effect on Other Authorities

No provision of the Acid Rain Program, an Acid Rain permit application, an Acid Rain permit, or an exemption under 40 CFR 72.7 or 72.8 shall be construed as:

(1) Except as expressly provided in title IV of the Act, exempting or excluding the owners and operators and, to the extent applicable, the designated representative of an affected source or affected unit from compliance with any other provision of the Act, including the provisions of title I of the Act relating to applicable National Ambient Air Quality Standards or State Implementation Plans;

(2) Limiting the number of allowances a source can hold; provided, that the number of allowances held by the source shall not affect the source's obligation to comply with any other provisions of the Act;

(3) Requiring a change of any kind in any State law regulating electric utility rates and charges, affecting any State law regarding such State regulation, or limiting such State regulation, including any prudence review requirements under such State law;

(4) Modifying the Federal Power Act or affecting the authority of the Federal Energy Regulatory Commission under the Federal Power Act; or,

(5) Interfering with or impairing any program for competitive bidding for power supply in a State in which such program is established.

STEP 4

Certification

Read the certification statement, sign, and date.

I am authorized to make this submission on behalf of the owners and operators of the affected source or affected units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment.

Name Buck Hunt

Signature 

Date 05-10-2024