



June 30, 2016

**BY: U.S. CERTIFIED MAIL, RETURN RECEIPT REQUESTED**

9590 9401 0037 5168 3778 75

William F. Durham  
Director, Division of Air Quality  
WVDEP  
601 57<sup>th</sup> Street  
Charleston, WV 25304

**RE: Dominion Transmission, Inc. – Title V Renewal Application**  
**Loup Creek Compressor Station – R30-10900019-2012**

Dear Mr. Durham:

Enclosed please find the Title V Renewal Application for Dominion Transmission, Inc.'s (DTI) Loup Creek Compressor Station, Permit No. R30-10900019-2012. The enclosure consists of one hard copy and two cd copies of the application that includes all attachments.

As part of the Title V renewal application, the equipment list has been updated based on recent updates to the Loup Creek Station:

- Equipment removed from the facility:
  - TK01 – 563 gal Horizontal Aboveground Storage Tank (Ethylene Glycol)
  - TK05 – 4,200 gal Storage Tank (Pipeline Fluids)
  - TK07 – 1,000 gal Storage Tank (Engine Oil)
  - TK09 – 2,100 gal Storage Tank (Use Triethylene Glycol)
- Equipment added to the facility:
  - TK11 – 1,066 gal Horizontal Aboveground Storage Tank (Lube Oil)
  - TK12 – 500 gal Horizontal Aboveground Storage Tank (Triethylene Glycol)
  - TK13 – 1,260 gal Vertical Aboveground Storage Tank (Used Triethylene Glycol)
  - TK14 – 4,200 gal Storage Tank (Pipeline Fluids)
- Correction to equipment at the facility:
  - TK06 – This tank was previously listed as an engine oil tank, but the correct description is a lube oil tank.

- TK08 – This tank was previously listed as being installed in 2002, but the correct year is 2003.
- EN04 – This engine was previously listed with a rating of 1,085 hp, but the correct rating is 1,150 hp. During a recent internal review, it was discovered that the nameplate on EN04 listed the engine as having a rating of 1,150 hp. After reviewing historic documentation and contacting the manufacturer (Caterpillar), it was confirmed that this engine is rated at 1,150 hp.

A separate R13 Class II Administrative Update application to correct the rating was submitted to WVDEP on June 30, 2016. This Title V renewal application incorporates the correct rating of 1,150 hp.

In addition, as part of the renewal application, we request the following change to the Title V permit:

- Section 3.0

Permit Conditions 3.1.9, 3.1.10, 3.2.2, and 3.2.3 should be removed from the facility-wide section (Section 3) and moved to the source-specific section (Section 5) of the permit because they are source-specific requirements.

- Section 9.0 – Engine 4 (EN04)

We request to delete the reference to "Table 2b" in Condition 9.1.2 as it does not apply to engine EN04. EN04 is a SI RICE located at an area source of HAPs and Table 2b has requirements for engines located at major sources of HAPs or for CI RICE. EN04 is subject to Table 5 (item 13) and we request these conditions be placed in Condition 9.1.2 of the Title V permit.

If you require any additional information, please contact Rebekah Remick at (804) 273-3536 or via email at [Rebekah.J.Remick@dom.com](mailto:Rebekah.J.Remick@dom.com).

Sincerely,



Amanda B. Tornabene  
Director, Energy Infrastructure Environmental Services

**LOUP CREEK COMPRESSOR STATION  
DOMINION TRANSMISSION, INC.  
APPLICATION FOR TITLE V OPERATING PERMIT RENEWAL  
TITLE V OPERATING PERMIT NO: R30-10900019-2012**

**Dominion Transmission, Inc.**  
Loup Creek Compressor Station  
Route 85  
Kopperston, WV

**JUNE 2016**

**DOMINION TRANSMISSION, INC.  
LOUP CREEK COMPRESSOR STATION**

**TITLE V OPERATING PERMIT RENEWAL APPLICATION**

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**ATTACHMENTS**

Attachment A: Area Map

Attachment B: Plot Plan

Attachment C: Process Flow Diagrams

Attachment D: Title V Equipment Table

Attachment E: Emission Unit Forms

Attachment G: Air Pollution Control Device Form

**\*\*Note:** There are no Attachments F and H for this permit application.

## TITLE V PERMIT APPLICATION CHECKLIST FOR ADMINISTRATIVE COMPLETENESS

Requirement	Application
One signed copy of the application (per WVDEP email correspondence 4/16/15)	Enclosed – Section 2
Correct number of copies of the application on separate CDs or diskettes, (i.e. at least one disc per copy)	Enclosed – 2 CDs
*Table of Contents (needs to be included but not for administrative completeness)	Table of Contents
Facility Information	Section 1/Section 2
Description of process and products, including NAICS and SIC codes, and including alternative operating scenarios	Section 1 / Section 2: TV Renewal Application Form Section #14
Area map showing plant location	Attachment A
Plot plan showing buildings and process areas	Attachment B
Process flow diagram(s), showing all emission units, control equipment, emission points, and their relationships	Attachment C
Identification of all applicable requirements with a description of the compliance status, the methods used for demonstrating compliance, and a Schedule of Compliance Form (ATTACHMENT F) for all requirements for which the source is not in compliance	Not Applicable
Listing of all active permits and consent orders (if applicable)	Section 2: TV Renewal Application Form Section #21

Facility-wide emissions summary	Section 2: TV Renewal Application Form Section #23
Identification of Insignificant Activities	Section 2: TV Renewal Application Form Section #24
ATTACHMENT D – Title V Equipment Table completed for all emission units at the facility except those designated as insignificant activities	Attachment D
ATTACHMENT E – Emission Unit Form completed for each emission unit listed in the Title V Equipment Table (ATTACHMENT D) and a Schedule of Compliance Form (ATTACHMENT F) for all requirements for which the emission unit is not in compliance	Attachment E Attachment F not applicable
ATTACHMENT G – Air Pollution Control Device Form completed for each control device listed in the Title V Equipment Table (ATTACHMENT D)	Attachment G
ATTACHMENT H – Compliance Assurance Monitoring (CAM) Plan Form completed for each new control device for which the “Is the device subject to CAM?” question is answered “Yes” on the Air Pollution Control Device Form (ATTACHMENT G)	Attachment H not applicable
General Application Forms signed by a Responsible Official	Enclosed – Section 2
Confidential Information submitted in accordance with 45CSR31	Not Applicable

## **SECTION 1**

### Introduction

## **INTRODUCTION:**

Loup Creek Station is a natural gas compressor station used to compress natural gas collected from gathering lines for conveyance to a downstream processing facility and ultimately for transportation on Dominion Transmission, Inc.'s transmission pipeline system in West Virginia. Loup Creek Station is located in Kopperston, Wyoming County, WV.

Loup Creek Station has the potential to emit in excess of 100 tons per year of nitrogen oxides (NO<sub>x</sub>). The station is classified as a major stationary source under West Virginia Department of Environmental Protection (WVDEP) Regulation (45 CSR Part 30) and is subject to the Title V Operating Permit provisions of Part 30. Loup Creek Station is an area source of hazardous air pollutants (HAPs) since the potential to emit is less than 10 tons per year for individual HAPs and less than 25 tons per year of combined HAPs.

The last Title V Operating Permit renewal application was submitted in December 2010, and the renewed Title V Operating Permit was issued on January 10, 2012, with an expiration date of January 10, 2017. Loup Creek Station is also subject to the underlying State Operating Permit (Rule 13 Permit No: R13-2839B). The Title V operating permit is for the operation of three (3) 880 hp natural gas fired reciprocating engines (EN01 – EN03), one (1) 1,150 hp natural gas fired reciprocating engine (EN04), one (1) glycol dehydrator system (DEHY01) with a flare (F1), one (1) dehydration unit reboiler (RBR01), one (1) 367 hp emergency generator (EG-01), and eight (8) above ground storage tanks of various sizes (TK04, TK06, TK08, and TK10 – TK14).

## **PROCESS DESCRIPTION**

Loup Creek Station is a compressor facility that services a natural gas pipeline system. The compressor engines (EN01 – EN04) at the facility receive natural gas, flowing through a valve on the pipeline, and recompresses that natural gas in order to further transport the natural gas through the pipeline system. Prior to exiting the facility through the pipeline, the compressed natural gas is processed by the dehydration unit (DEHY01). The dehydration unit removes moisture and impurities from the gas stream. Emergency backup power is supplied by the emergency generator (EG-01).

The dehydration process begins with the compressed natural gas entering the unit and then being passed through a triethylene glycol dehydration system consisting of a contactor bed, a reboiler (RBR01), and associated equipment. As a result of this process, the natural gas is stripped of moisture and impurities, along with a small amount of hydrocarbons. The wet gas enters the contactor where moisture and some hydrocarbons are absorbed into the lean glycol. The glycol, which has become rich with absorbed moisture and some hydrocarbons, is regenerated in the still column (DEHY01) using the heat generated from the natural gas-fired reboiler (RBR01) to liberate the moisture and hydrocarbon vapors. The regenerator vapors are vented to the flare (F1) to combust the hydrocarbons; thereby, reducing overall emissions and odor. The compressed, dehydrated gas then enters the pipeline.



Listed below is a description of the equipment located at the Loup Creek Station:

Three (3) 880 hp Cooper GMV-8TF natural gas-fired reciprocating engines/integral compressors

- Emission unit ID: 001-01 – 001-03
- Emission point ID: EN01 – EN03

One (1) 1,150 hp Caterpillar G3516 natural gas-fired reciprocating engine/integral compressor

- Emission unit ID: 001-04
- Emission point ID: EN04

One (1) 367 hp Caterpillar G3406 emergency generator

- Emission unit ID: 002-02
- Emission point ID: EG-01

One (1) 1.5 MMBtu/hr natural gas-fired dehydration unit reboiler

- Emission unit ID: RBR01
- Emission point ID: RBR01

One (1) 35 MMscf wet gas/day glycol dehydration system

- Emission unit ID: DEHY01
- Emission point ID: DEHY01

One (1) 0.2 MMBtu/hr controlled flare

- Emission unit ID: F1
- Emission point ID: F1

One (1) 4,200 gallon vertical aboveground ethylene glycol storage tank

- Emission unit ID: TK04
- Emission point ID: TK04

One (1) 5,000 gallon horizontal aboveground lube oil storage tank

- Emission unit ID: TK06
- Emission point ID: TK06

One (1) 1,000 gallon horizontal aboveground used oil storage tank

- Emission unit ID: TK08
- Emission point ID: TK08

One (1) 1,000 gallon horizontal aboveground ethylene glycol storage tank

- Emission unit ID: TK10
- Emission point ID: TK10

One (1) 1,066 gallon horizontal aboveground lube oil storage tank

- Emission unit ID: TK11
- Emission point ID: TK11

One (1) 500 gallon horizontal aboveground triethylene glycol storage tank

- Emission unit ID: TK12
- Emission point ID: TK12

One (1) 1,260 gallon vertical aboveground used triethylene glycol storage tank

- Emission unit ID: TK13
- Emission point ID: TK13

One (1) 4,200 gallon vertical aboveground pipeline fluids storage tank

- Emission unit ID: TK14
- Emission point ID: TK14

## **SECTION 2**

Title V Operating Permit  
Renewal Application –  
General Forms



**WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL  
PROTECTION**

**DIVISION OF AIR QUALITY**

601 57<sup>th</sup> Street SE

Charleston, WV 25304

Phone: (304) 926-0475

[www.dep.wv.gov/daq](http://www.dep.wv.gov/daq)

**INITIAL/RENEWAL TITLE V PERMIT APPLICATION - GENERAL FORMS**

**Section 1: General Information**

<b>1. Name of Applicant (As registered with the WV Secretary of State's Office):</b> Dominion Transmission, Inc.	<b>2. Facility Name or Location:</b> Loup Creek Station
<b>3. DAQ Plant ID No.:</b>  1 0 9 — 0 0 0 1 9	<b>4. Federal Employer ID No. (FEIN):</b>  5 5 0 6 2 9 2 0 3
<b>5. Permit Application Type:</b>  <input type="checkbox"/> Initial Permit <input checked="" type="checkbox"/> Permit Renewal <input type="checkbox"/> Update to Initial/Renewal Permit Application  When did operations commence? 1947 What is the expiration date of the existing permit? 1/10/2017	
<b>6. Type of Business Entity:</b>  <input checked="" type="checkbox"/> Corporation <input type="checkbox"/> Governmental Agency <input type="checkbox"/> LLC <input type="checkbox"/> Partnership <input type="checkbox"/> Limited Partnership	<b>7. Is the Applicant the:</b>  <input type="checkbox"/> Owner <input type="checkbox"/> Operator <input checked="" type="checkbox"/> Both  If the Applicant is not both the owner and operator, please provide the name and address of the other party.  _____  _____  _____
<b>8. Number of onsite employees:</b>  4	
<b>9. Governmental Code:</b>  <input checked="" type="checkbox"/> Privately owned and operated; 0 <input type="checkbox"/> County government owned and operated; 3 <input type="checkbox"/> Federally owned and operated; 1 <input type="checkbox"/> Municipality government owned and operated; 4 <input type="checkbox"/> State government owned and operated; 2 <input type="checkbox"/> District government owned and operated; 5	
<b>10. Business Confidentiality Claims</b>  Does this application include confidential information (per 45CSR31)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  If yes, identify each segment of information on each page that is submitted as confidential, and provide justification for each segment claimed confidential, including the criteria under 45CSR§31-4.1, and in accordance with the DAQ's "PRECAUTIONARY NOTICE-CLAIMS OF CONFIDENTIALITY" guidance.	

<b>11. Mailing Address</b>		
<b>Street or P.O. Box:</b> 925 White Oaks Blvd.		
<b>City:</b> Bridgeport	<b>State:</b> WV	<b>Zip:</b> 26330
<b>Telephone Number:</b> (681) 842-3000	<b>Fax Number:</b> (681) 842-3323	

<b>12. Facility Location</b>		
<b>Street:</b> Route 85	<b>City:</b> Kopperston	<b>County:</b> Wyoming
<b>UTM Easting:</b> 449.31 km	<b>UTM Northing:</b> 4,176.86 km	<b>Zone:</b> <input checked="" type="checkbox"/> 17 or <input type="checkbox"/> 18
<b>Directions:</b> From I-77 at Harper Road, turn onto Route 3 North for 10.4 miles. Turn onto Route 99 West for 14.3 miles. Turn left onto Route 85 and travel 4 miles to Kopperston Grade School. Turn left onto private road to station.		
<b>Portable Source?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
<b>Is facility located within a nonattainment area?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<b>If yes, for what air pollutants?</b>
<b>Is facility located within 50 miles of another state?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		<b>If yes, name the affected state(s).</b> Virginia Kentucky
<b>Is facility located within 100 km of a Class I Area<sup>1</sup>?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<b>If yes, name the area(s).</b>
<b>If no, do emissions impact a Class I Area<sup>1</sup>?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
<sup>1</sup> Class I areas include Dolly Sods and Otter Creek Wilderness Areas in West Virginia, and Shenandoah National Park and James River Face Wilderness Area in Virginia.		

<b>13. Contact Information</b>		
<b>Responsible Official:</b> Brian C Sheppard		<b>Title:</b> Vice President, Pipeline Operations
<b>Street or P.O. Box:</b> 925 White Oaks Blvd.		
<b>City:</b> Bridgeport	<b>State:</b> WV	<b>Zip:</b> 26330
<b>Telephone Number:</b> (681) 842-3733	<b>Fax Number:</b> (681) 842-3323	
<b>E-mail address:</b> Brian.C.Sheppard@dom.com		
<b>Environmental Contact:</b> Rebekah Remick		<b>Title:</b> Environmental Consultant
<b>Street or P.O. Box:</b> 5000 Dominion Blvd.		
<b>City:</b> Glen Allen	<b>State:</b> VA	<b>Zip:</b> 23060
<b>Telephone Number:</b> (804) 273-3536	<b>Fax Number:</b> (804) 273-2964	
<b>E-mail address:</b> Rebekah.J.Remick@dom.com		
<b>Application Preparer:</b> Rebekah Remick		<b>Title:</b> Environmental Consultant
<b>Company:</b> Dominion Resources, Inc.		
<b>Street or P.O. Box:</b> 5000 Dominion Blvd.		
<b>City:</b> Glen Allen	<b>State:</b> VA	<b>Zip:</b> 23060
<b>Telephone Number:</b> (804) 273-3536	<b>Fax Number:</b> (804) 273-2964	
<b>E-mail address:</b> Rebekah.J.Remick@dom.com		

**14. Facility Description**

List all processes, products, NAICS and SIC codes for normal operation, in order of priority. Also list any process, products, NAICS and SIC codes associated with any alternative operating scenarios if different from those listed for normal operation.

Process	Products	NAICS	SIC
Natural Gas Compressor Station	N/A	486120	4922

**Provide a general description of operations.**

Loup Creek Station is a compressor facility that services a natural gas pipeline system. The compressor engines (EN01-EN04) at the facility receive natural gas flowing through a valve on the pipeline and recompress the natural gas in order to further transport the natural gas through the pipeline system. Prior to exiting the facility through the pipeline, the compressed natural gas is processed by the dehydration unit (DEHY01). The dehydration unit removes moisture and impurities from the gas stream.

15. Provide an **Area Map** showing plant location as **ATTACHMENT A**.

16. Provide a **Plot Plan(s)**, e.g. scaled map(s) and/or sketch(es) showing the location of the property on which the stationary source(s) is located as **ATTACHMENT B**. For instructions, refer to "Plot Plan - Guidelines."

17. Provide a detailed **Process Flow Diagram(s)** showing each process or emissions unit as **ATTACHMENT C**. Process Flow Diagrams should show all emission units, control equipment, emission points, and their relationships.

## Section 2: Applicable Requirements

18. Applicable Requirements Summary	
Instructions: Mark all applicable requirements.	
<input type="checkbox"/> SIP	<input type="checkbox"/> FIP
<input checked="" type="checkbox"/> Minor source NSR (45CSR13)	<input type="checkbox"/> PSD (45CSR14)
<input checked="" type="checkbox"/> NESHAP (45CSR34)	<input type="checkbox"/> Nonattainment NSR (45CSR19)
<input checked="" type="checkbox"/> Section 111 NSPS	<input checked="" type="checkbox"/> Section 112(d) MACT standards
<input type="checkbox"/> Section 112(g) Case-by-case MACT	<input type="checkbox"/> 112(r) RMP
<input type="checkbox"/> Section 112(i) Early reduction of HAP	<input type="checkbox"/> Consumer/commercial prod. reqts., section 183(e)
<input type="checkbox"/> Section 129 Standards/Reqts.	<input type="checkbox"/> Stratospheric ozone (Title VI)
<input type="checkbox"/> Tank vessel reqt., section 183(f)	<input type="checkbox"/> Emissions cap 45CSR§30-2.6.1
<input type="checkbox"/> NAAQS, increments or visibility (temp. sources)	<input type="checkbox"/> 45CSR27 State enforceable only rule
<input checked="" type="checkbox"/> 45CSR4 State enforceable only rule	<input type="checkbox"/> Acid Rain (Title IV, 45CSR33)
<input type="checkbox"/> Emissions Trading and Banking (45CSR28)	<input type="checkbox"/> Compliance Assurance Monitoring (40CFR64)
<input type="checkbox"/> CAIR NO <sub>x</sub> Annual Trading Program (45CSR39)	<input type="checkbox"/> CAIR NO <sub>x</sub> Ozone Season Trading Program (45CSR40)
<input type="checkbox"/> CAIR SO <sub>2</sub> Trading Program (45CSR41)	
19. Non Applicability Determinations	
<p><b>List all requirements which the source has determined not applicable and for which a permit shield is requested. The listing shall also include the rule citation and the reason why the shield applies.</b></p> <p>45 CSR 10 – Compressor engines (EN01 – EN04) have been excluded from the applicability of SO<sub>2</sub> and H<sub>2</sub>S limits. WVDAQ determined that 45 CSR 10 is not applicable to compressor engines.</p> <p>40 CFR 60 Subpart JJJJ – The compressor engines (EN01 – EN04) are not subject to this subpart since they were manufactured before the applicability date.</p> <p>40 CFR 60 Subpart OOOO – This subpart does not apply to the facility since the facility is a gathering facility that does not have gas wells, centrifugal compressors, reciprocating compressors, tanks, and/or pneumatic controllers constructed, modified, or reconstructed after August 23, 2011. None of the newly installed tanks onsite meet the applicability requirements in 40 CFR 60.5365(e).</p> <p>40 CFR 63 Subpart HHH – This subpart does not apply to the facility since the facility is not a transmission or storage station and is not a major source of HAPs.</p> <p>40 CFR 63 Subpart DDDDD – The reboiler (RBR01) is not subject to this subpart since it is exempt by §63.7491(h) and facility is not major source of HAPs.</p> <p>40 CFR 63 Subpart JJJJJ – The reboiler (RBR01) is not applicable to this subpart since it is considered a “process heater,” which is excluded from the definition of “boiler” in §63.11237.</p> <p>40 CFR 64 – The dehy unit (DEHY01) is not subject to CAM since the unit is subject to NESHAP Subpart HH, which has provisions for compliance monitoring established after 1990 (exemption per 64.2(b)(1)(i)). In addition, since the R13-2839B permit specifies a “continuous compliance determination method” condition (e.g. continuously monitoring the flare using a thermocouple to detect the presence of a flame) which was included in the Title V permit, CAM does not apply (exemption per 64.2(b)(1)(vi)).</p>	



☒ Permit Shield

## 20. Facility-Wide Applicable Requirements

**List all facility-wide applicable requirements. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements).**

45 CSR 6-3.1 – Open burning prohibited (TV 3.1.1)  
45 CSR 6-3.2 – Open burning exemption (TV 3.1.2)  
40 CFR Part 61 and 45 CSR 15 – Asbestos inspection and removal (TV 3.1.3)  
45 CSR 4-3.1 – No objectionable odors (TV 3.1.4)  
45 CSR 11-5.2 – Standby plans for emergency episodes (TV 3.1.5)  
WV Code 22-5-4 (a) (14) – Annual emission inventory reporting (TV 3.1.6)  
40 CFR Part 82 Subpart F – Ozone depleting substances (TV 3.1.7)  
40 CFR Part 68 – Risk Management Plan (TV 3.1.8)  
45 CSR 17-3.1 – Fugitive Particulate Matter (TV 3.1.11)  
45 CSR 13 – Minor source of HAPs (TV 3.1.13; R13-2839B 4.1.2)  
45 CSR 13-5.11 and 13 – Operation and maintenance of air pollution control equipment (TV 3.1.14; R13-2839B 4.1.3)

☐ Permit Shield

**For all facility-wide applicable requirements listed above, provide monitoring/testing / recordkeeping / reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number and/or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)**

45 CSR 6-3.1 – The permittee shall prohibit open burning (TV 3.1.1)  
45 CSR 6-3.2 – The permittee shall notify if open burning occurs (TV 3.1.2)  
40 CFR Part 61 and 45 CSR 15 – Prior to demolition/construction buildings will be inspected for asbestos (TV 3.1.3)  
45 CSR 11 – Upon request by the Secretary, the permittee shall prepare a standby plan (TV 3.1.5)  
40 CFR Part 82 Subpart F – The permittee will prohibit maintenance, service, or repair of appliances containing ozone depleting substances (TV 3.1.7)  
40 CFR Part 68 – Should the permittee become subject to 40 CFR Part 68, a RMP shall be submitted (TV 3.1.8)  
45 CSR 17 – The permittee will limit fugitive particulate matter emissions from the facility by burning only pipeline quality natural gas (TV 3.1.9)  
45 CSR 13 and WV Code 22-5-4 (a) (14-15) – Testing Requirements (TV 3.3.1)  
45 CSR 30 – Recordkeeping Requirements (TV 3.4)  
45 CSR 30-5.1.c.2.A and 13 – The permittee shall keep records of monitoring information (TV 3.4.1; R13-2839B 4.1.1)  
45 CSR 4-3.1 – Permittee shall maintain records of all odor complaints received (TV 3.4.3)  
45 CSR 13 – Records of malfunctions of air pollution control equipment (TV 3.4.4; R13-2839B 4.1.4)  
45 CSR 30 – Reporting Requirements (TV 3.5)  
45 CSR 30-8 – The permittee shall submit a certified emissions statement and pay fees on an annual basis (TV 3.5.3)  
45 CSR 30-5.3.e – The permittee shall submit annual compliance certifications (TV 3.5.4)  
45 CSR 30-5.1.c.3.A – The permittee shall submit semi-annual monitoring reports (TV 3.5.5)

**Are you in compliance with all facility-wide applicable requirements?** ☒ Yes ☐ No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

<b>21. Active Permits/Consent Orders</b>		
Permit or Consent Order Number	Date of Issuance MM/DD/YYYY	List any Permit Determinations that Affect the Permit ( <i>if any</i> )
R13-2839B	9/17/2012	N/A

<b>22. Inactive Permits/Obsolete Permit Conditions</b>		
Permit Number	Date of Issuance	Permit Condition Number
N/A		

**Section 3: Facility-Wide Emissions**

<b>23. Facility-Wide Emissions Summary [Tons per Year]</b>	
Criteria Pollutants	Potential Emissions
Carbon Monoxide (CO)	72.60
Nitrogen Oxides (NO <sub>x</sub> )	405.23
Lead (Pb)	N/A
Particulate Matter (PM <sub>2.5</sub> ) <sup>1</sup>	3.75
Particulate Matter (PM <sub>10</sub> ) <sup>1</sup>	3.75
Total Particulate Matter (TSP)	5.13
Sulfur Dioxide (SO <sub>2</sub> )	0.08
Volatile Organic Compounds (VOC)	94.73
Hazardous Air Pollutants <sup>2</sup>	Potential Emissions
Acetaldehyde	1.07
Acrolein	0.95
Benzene	0.62
Ethylbenzene	0.99
Formaldehyde	7.35
Hexane	0.21
Toluene	0.78
Xylene	1.77
Regulated Pollutants other than Criteria and HAP	Potential Emissions
<sup>1</sup> PM <sub>2.5</sub> and PM <sub>10</sub> are components of TSP. <sup>2</sup> For HAPs that are also considered PM or VOCs, emissions should be included in both the HAPs section and the Criteria Pollutants section.	

**Section 4: Insignificant Activities**

<b>24. Insignificant Activities (Check all that apply)</b>	
<input checked="" type="checkbox"/>	1. Air compressors and pneumatically operated equipment, including hand tools.
<input type="checkbox"/>	2. Air contaminant detectors or recorders, combustion controllers or shutoffs.
<input checked="" type="checkbox"/>	3. Any consumer product used in the same manner as in normal consumer use, provided the use results in a duration and frequency of exposure which are not greater than those experienced by consumer, and which may include, but not be limited to, personal use items; janitorial cleaning supplies, office supplies and supplies to maintain copying equipment.
<input checked="" type="checkbox"/>	4. Bathroom/toilet vent emissions.
<input type="checkbox"/>	5. Batteries and battery charging stations, except at battery manufacturing plants.
<input type="checkbox"/>	6. Bench-scale laboratory equipment used for physical or chemical analysis, but not lab fume hoods or vents. Many lab fume hoods or vents might qualify for treatment as insignificant (depending on the applicable SIP) or be grouped together for purposes of description.
<input type="checkbox"/>	7. Blacksmith forges.
<input checked="" type="checkbox"/>	8. Boiler water treatment operations, not including cooling towers.
<input type="checkbox"/>	9. Brazing, soldering or welding equipment used as an auxiliary to the principal equipment at the source.
<input type="checkbox"/>	10. CO <sub>2</sub> lasers, used only on metals and other materials which do not emit HAP in the process.
<input type="checkbox"/>	11. Combustion emissions from propulsion of mobile sources, except for vessel emissions from Outer Continental Shelf sources.
<input checked="" type="checkbox"/>	12. Combustion units designed and used exclusively for comfort heating that use liquid petroleum gas or natural gas as fuel.
<input checked="" type="checkbox"/>	13. Comfort air conditioning or ventilation systems not used to remove air contaminants generated by or released from specific units of equipment.
<input type="checkbox"/>	14. Demineralized water tanks and demineralizer vents.
<input type="checkbox"/>	15. Drop hammers or hydraulic presses for forging or metalworking.
<input type="checkbox"/>	16. Electric or steam-heated drying ovens and autoclaves, but not the emissions from the articles or substances being processed in the ovens or autoclaves or the boilers delivering the steam.
<input type="checkbox"/>	17. Emergency (backup) electrical generators at residential locations.
<input type="checkbox"/>	18. Emergency road flares.
<input type="checkbox"/>	<p>19. Emission units which do not have any applicable requirements and which emit criteria pollutants (CO, NO<sub>x</sub>, SO<sub>2</sub>, VOC and PM) into the atmosphere at a rate of less than 1 pound per hour and less than 10,000 pounds per year aggregate total for each criteria pollutant from all emission units.</p> <p>Please specify all emission units for which this exemption applies along with the quantity of criteria pollutants emitted on an hourly and annual basis:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>

24. Insignificant Activities (Check all that apply)	
<input type="checkbox"/>	<p>20. Emission units which do not have any applicable requirements and which emit hazardous air pollutants into the atmosphere at a rate of less than 0.1 pounds per hour and less than 1,000 pounds per year aggregate total for all HAPs from all emission sources. This limitation cannot be used for any source which emits dioxin/furans nor for toxic air pollutants as per 45CSR27.</p> <p>Please specify all emission units for which this exemption applies along with the quantity of hazardous air pollutants emitted on an hourly and annual basis:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>
<input type="checkbox"/>	21. Environmental chambers not using hazardous air pollutant (HAP) gases.
<input checked="" type="checkbox"/>	22. Equipment on the premises of industrial and manufacturing operations used solely for the purpose of preparing food for human consumption.
<input type="checkbox"/>	23. Equipment used exclusively to slaughter animals, but not including other equipment at slaughterhouses, such as rendering cookers, boilers, heating plants, incinerators, and electrical power generating equipment.
<input type="checkbox"/>	24. Equipment used for quality control/assurance or inspection purposes, including sampling equipment used to withdraw materials for analysis.
<input type="checkbox"/>	25. Equipment used for surface coating, painting, dipping or spray operations, except those that will emit VOC or HAP.
<input type="checkbox"/>	26. Fire suppression systems.
<input checked="" type="checkbox"/>	27. Firefighting equipment and the equipment used to train firefighters.
<input type="checkbox"/>	28. Flares used solely to indicate danger to the public.
<input checked="" type="checkbox"/>	29. Fugitive emission related to movement of passenger vehicle provided the emissions are not counted for applicability purposes and any required fugitive dust control plan or its equivalent is submitted.
<input type="checkbox"/>	30. Hand-held applicator equipment for hot melt adhesives with no VOC in the adhesive formulation.
<input checked="" type="checkbox"/>	31. Hand-held equipment for buffing, polishing, cutting, drilling, sawing, grinding, turning or machining wood, metal or plastic.
<input type="checkbox"/>	32. Humidity chambers.
<input type="checkbox"/>	33. Hydraulic and hydrostatic testing equipment.
<input type="checkbox"/>	34. Indoor or outdoor kerosene heaters.
<input checked="" type="checkbox"/>	35. Internal combustion engines used for landscaping purposes.
<input type="checkbox"/>	36. Laser trimmers using dust collection to prevent fugitive emissions.
<input type="checkbox"/>	37. Laundry activities, except for dry-cleaning and steam boilers.
<input type="checkbox"/>	38. Natural gas pressure regulator vents, excluding venting at oil and gas production facilities.
<input type="checkbox"/>	39. Oxygen scavenging (de-aeration) of water.
<input type="checkbox"/>	40. Ozone generators.

24. Insignificant Activities (Check all that apply)	
<input checked="" type="checkbox"/>	41. Plant maintenance and upkeep activities (e.g., grounds-keeping, general repairs, cleaning, painting, welding, plumbing, re-tarring roofs, installing insulation, and paving parking lots) provided these activities are not conducted as part of a manufacturing process, are not related to the source's primary business activity, and not otherwise triggering a permit modification. (Cleaning and painting activities qualify if they are not subject to VOC or HAP control requirements. Asphalt batch plant owners/operators must still get a permit if otherwise requested.)
<input type="checkbox"/>	42. Portable electrical generators that can be moved by hand from one location to another. "Moved by Hand" means that it can be moved without the assistance of any motorized or non-motorized vehicle, conveyance, or device.
<input type="checkbox"/>	43. Process water filtration systems and demineralizers.
<input checked="" type="checkbox"/>	44. Repair or maintenance shop activities not related to the source's primary business activity, not including emissions from surface coating or de-greasing (solvent metal cleaning) activities, and not otherwise triggering a permit modification.
<input type="checkbox"/>	45. Repairs or maintenance where no structural repairs are made and where no new air pollutant emitting facilities are installed or modified.
<input type="checkbox"/>	46. Routing calibration and maintenance of laboratory equipment or other analytical instruments.
<input type="checkbox"/>	47. Salt baths using nonvolatile salts that do not result in emissions of any regulated air pollutants. Shock chambers.
<input type="checkbox"/>	48. Shock chambers.
<input type="checkbox"/>	49. Solar simulators.
<input type="checkbox"/>	50. Space heaters operating by direct heat transfer.
<input type="checkbox"/>	51. Steam cleaning operations.
<input type="checkbox"/>	52. Steam leaks.
<input type="checkbox"/>	53. Steam sterilizers.
<input type="checkbox"/>	54. Steam vents and safety relief valves.
<input type="checkbox"/>	55. Storage tanks, reservoirs, and pumping and handling equipment of any size containing soaps, vegetable oil, grease, animal fat, and nonvolatile aqueous salt solutions, provided appropriate lids and covers are utilized.
<input type="checkbox"/>	56. Storage tanks, vessels, and containers holding or storing liquid substances that will not emit any VOC or HAP. Exemptions for storage tanks containing petroleum liquids or other volatile organic liquids should be based on size limits such as storage tank capacity and vapor pressure of liquids stored and are not appropriate for this list.
<input type="checkbox"/>	57. Such other sources or activities as the Director may determine.
<input type="checkbox"/>	58. Tobacco smoking rooms and areas.
<input type="checkbox"/>	59. Vents from continuous emissions monitors and other analyzers.

**Section 5: Emission Units, Control Devices, and Emission Points**

<b>25. Equipment Table</b>
Fill out the <b>Title V Equipment Table</b> and provide it as <b>ATTACHMENT D</b> .
<b>26. Emission Units</b>
For each emission unit listed in the <b>Title V Equipment Table</b> , fill out and provide an <b>Emission Unit Form</b> as <b>ATTACHMENT E</b> .
For each emission unit not in compliance with an applicable requirement, fill out a <b>Schedule of Compliance Form</b> as <b>ATTACHMENT F</b> .
<b>27. Control Devices</b>
For each control device listed in the <b>Title V Equipment Table</b> , fill out and provide an <b>Air Pollution Control Device Form</b> as <b>ATTACHMENT G</b> .
For any control device that is required on an emission unit in order to meet a standard or limitation for which the potential pre-control device emissions of an applicable regulated air pollutant is greater than or equal to the Title V Major Source Threshold Level, refer to the <b>Compliance Assurance Monitoring (CAM) Form(s)</b> for CAM applicability. Fill out and provide these forms, if applicable, for each Pollutant Specific Emission Unit (PSEU) as <b>ATTACHMENT H</b> .

**Section 6: Certification of Information**

**28. Certification of Truth, Accuracy and Completeness and Certification of Compliance**

*Note: This Certification must be signed by a responsible official. The **original**, signed in **blue ink**, must be submitted with the application. Applications without an **original** signed certification will be considered as incomplete.*

**a. Certification of Truth, Accuracy and Completeness**

I certify that I am a responsible official (as defined at 45CSR§30-2.38) and am accordingly authorized to make this submission on behalf of the owners or operators of the source described in this document and its attachments. 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 and/or imprisonment.

**b. Compliance Certification**

Except for requirements identified in the Title V Application for which compliance is not achieved, I, the undersigned hereby certify that, based on information and belief formed after reasonable inquiry, all air contaminant sources identified in this application are in compliance with all applicable requirements.

**Responsible official (type or print)**

Name: Brian C. Sheppard

Title: Vice President, Pipeline Operations

**Responsible official's signature:**

Signature:   
(Must be signed and dated in blue ink)

Signature Date: 06-27-16

**Note: Please check all applicable attachments included with this permit application:**

☒ ATTACHMENT A: Area Map

☒ ATTACHMENT B: Plot Plan(s)

☒ ATTACHMENT C: Process Flow Diagram(s)

☒ ATTACHMENT D: Equipment Table

☒ ATTACHMENT E: Emission Unit Form(s)

☐ ATTACHMENT F: Schedule of Compliance Form(s)

☒ ATTACHMENT G: Air Pollution Control Device Form(s)

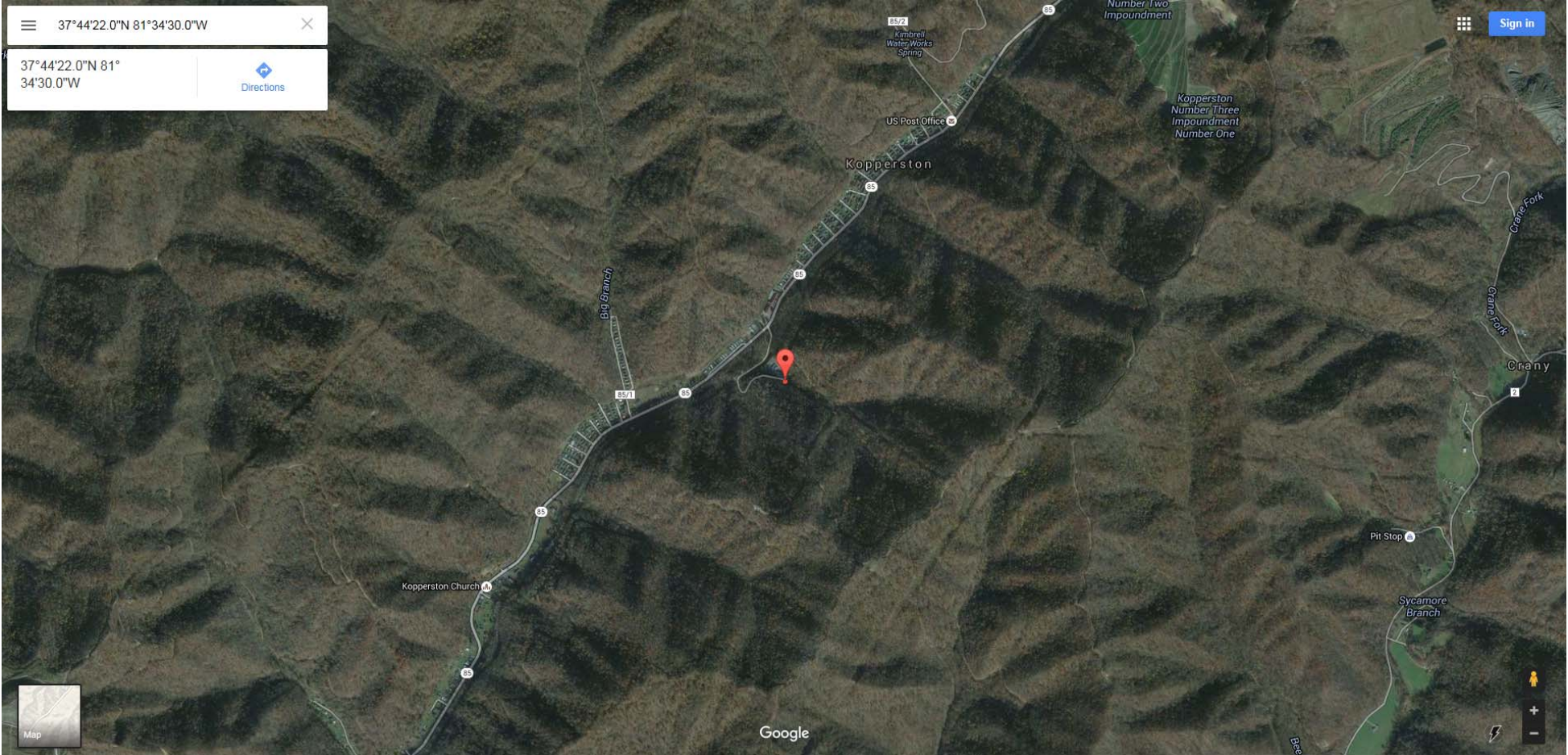
☐ ATTACHMENT H: Compliance Assurance Monitoring (CAM) Form(s)

*All of the required forms and additional information can be found and downloaded from, the DEP website at [www.dep.wv.gov/dag](http://www.dep.wv.gov/dag), requested by phone (304) 926-0475, and/or obtained through the mail.*



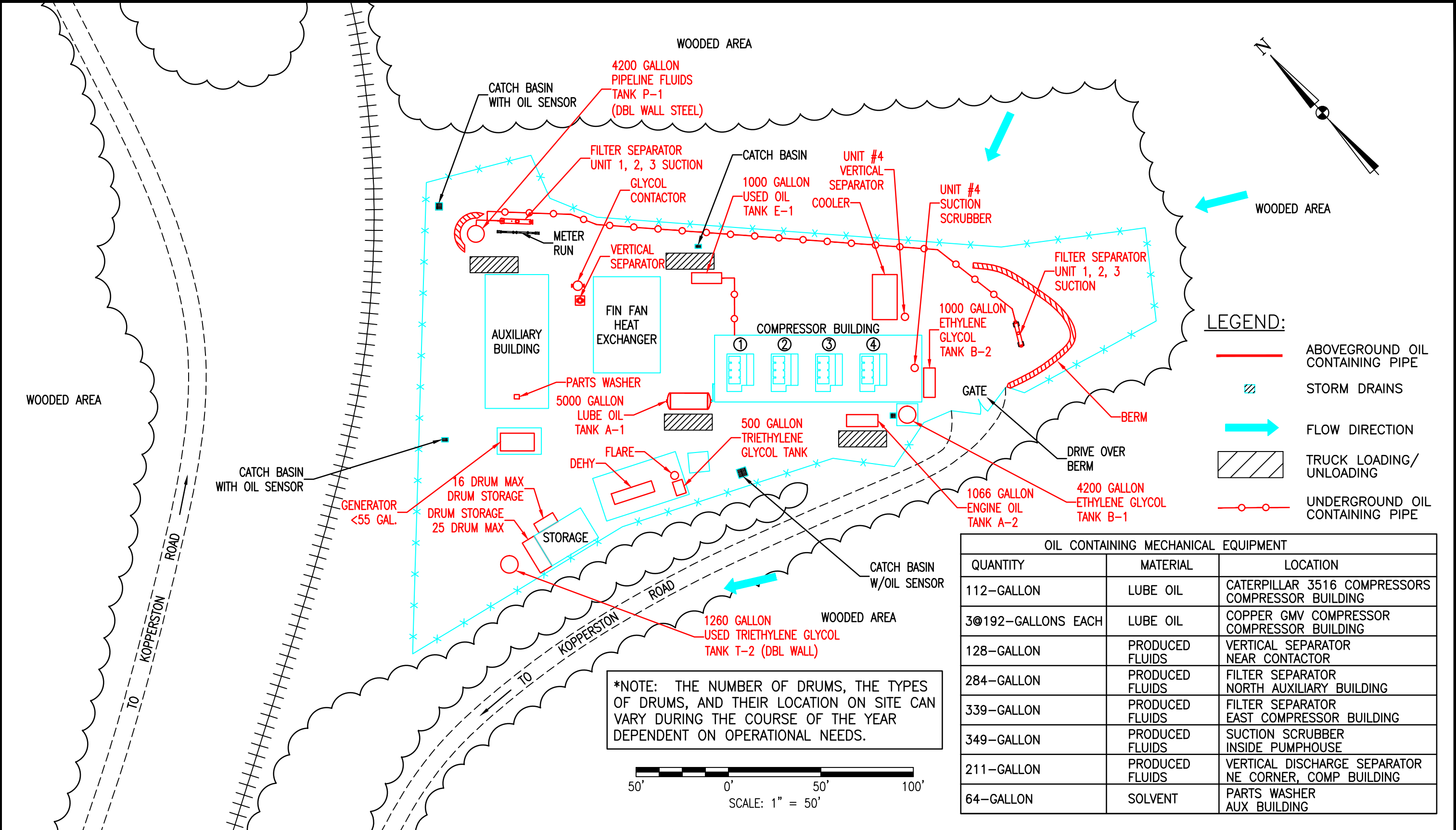
## **Attachment A**

Area Map



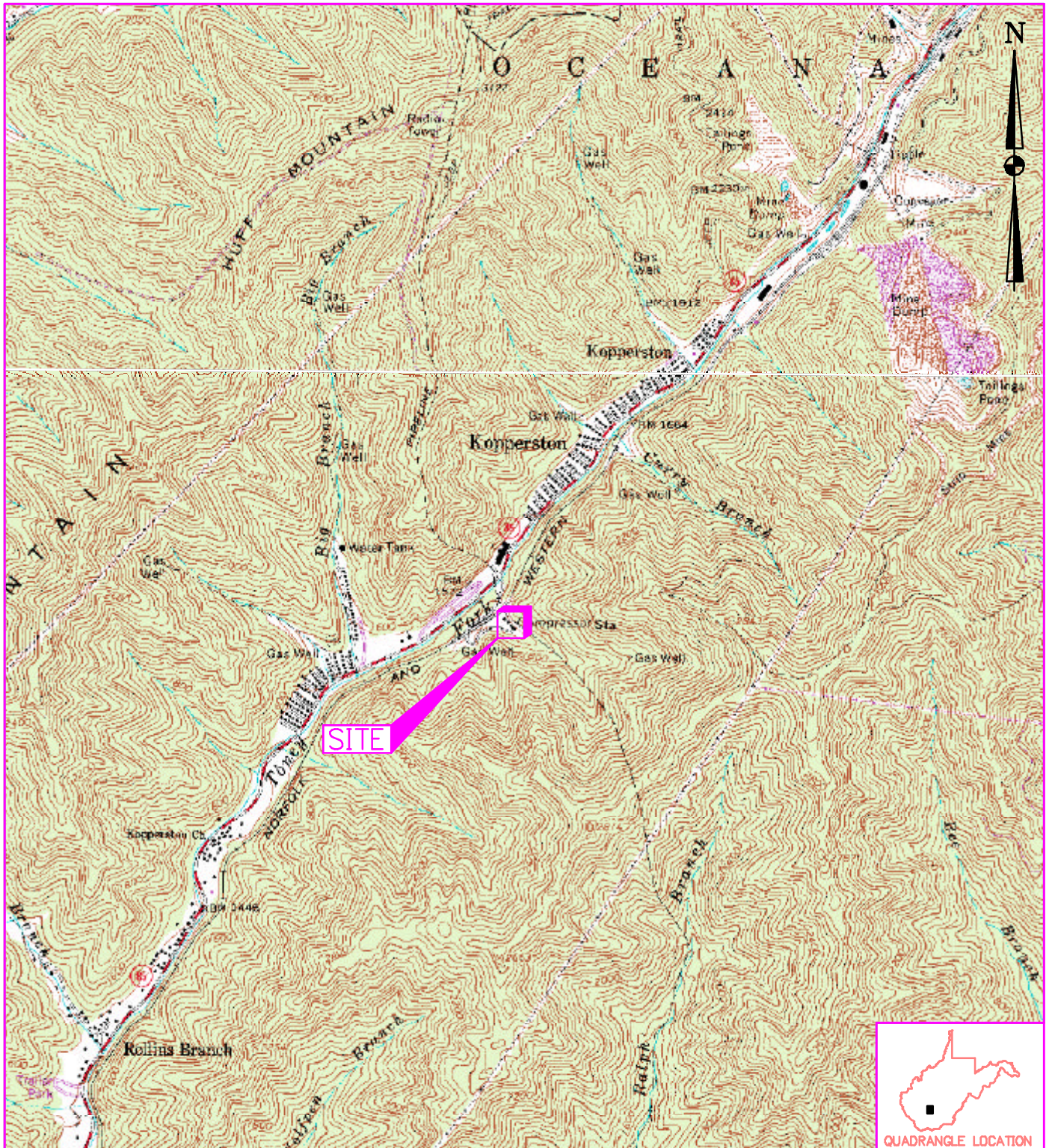
## **Attachment B**

Plot Plan



SYM.	DATE	BY	REVISION DESCRIPTION	PRJ/TSK	APP.	SCALE	1" = 50'	DATE	Dominion Transmission, Inc.			
5	10/14/15	TBB	UPDATED PER TIM JACKSONS MARK UPS			DRAWN	DJF		445 West Main St. Clarksburg, West Virginia 26301 / Phone: (304) 623-8000			
4	11/04/14	TBB	SCALED, ADDED BAR SCALE, ADDED ADJACENT PROPERTIES, & REVISED NORTH ARROW			CHECKED			FOR: LOUP CREEK COMPRESSOR STATION			
3	06/09/14	MPB	UPDATED PER TIM JACKSONS MARK UPS			APP. FOR BID			TITLE: ENVIRONMENTAL EMERGENCY SITE PLAN			
2	05/05/14	MPB	UPDATED PER TIM JACKSONS MARK UPS			APP. FOR CONST.			DIR: DOCUMENTUM	GROUP	DWG. NO.	REV.
1	03/15/10	JDB	UPDATED PER RUSS EVANS MARK UPS			TOWN: OCEANA, WV	COUNTY: WYOMING		FILE: PRJ/TSK:	PD	X9782	5





REFERENCE: USGS 7.5' QUADRANGLE MAPS OF: PILOT NOB, WEST VIRGINIA; DATED 1968, PHOTOREVISED 1989, AND MATHENY, WEST VIRGINIA; DATED 1967, PHOTOREVISED 1976.

DRAWN BY	DJF
DATE	
CHECKED BY	
SET JOB NO.	204046
SET DWG FILE	LOUP_CREEKm01.dwg
DRAWING SCALE	1"=2000'



98 Vanadium Road Bridgeville, PA 15017 (412) 221-1180

DOMINION TRANSMISSION	
LOUP CREEK COMPRESSOR STATION WYOMING COUNTY, WEST VIRGINIA SITE LOCATION MAP	
DRAWING NO.	FIGURE 1
REV.	0

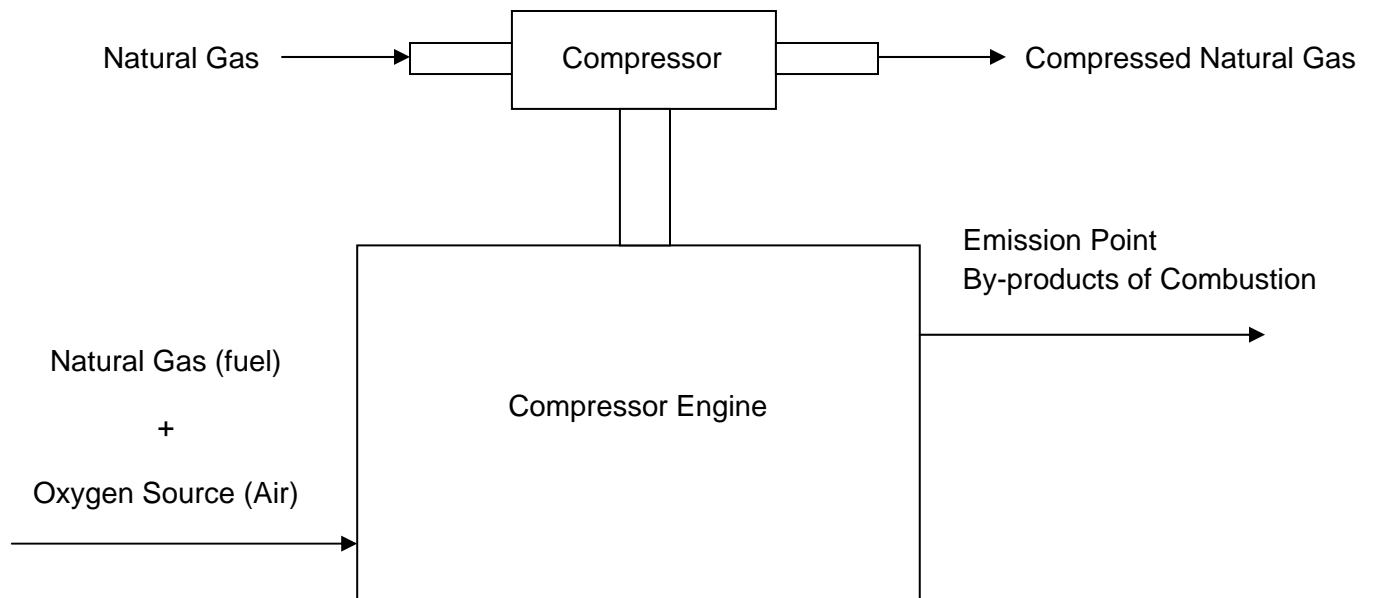


## **Attachment C**

### Process Flow Diagrams

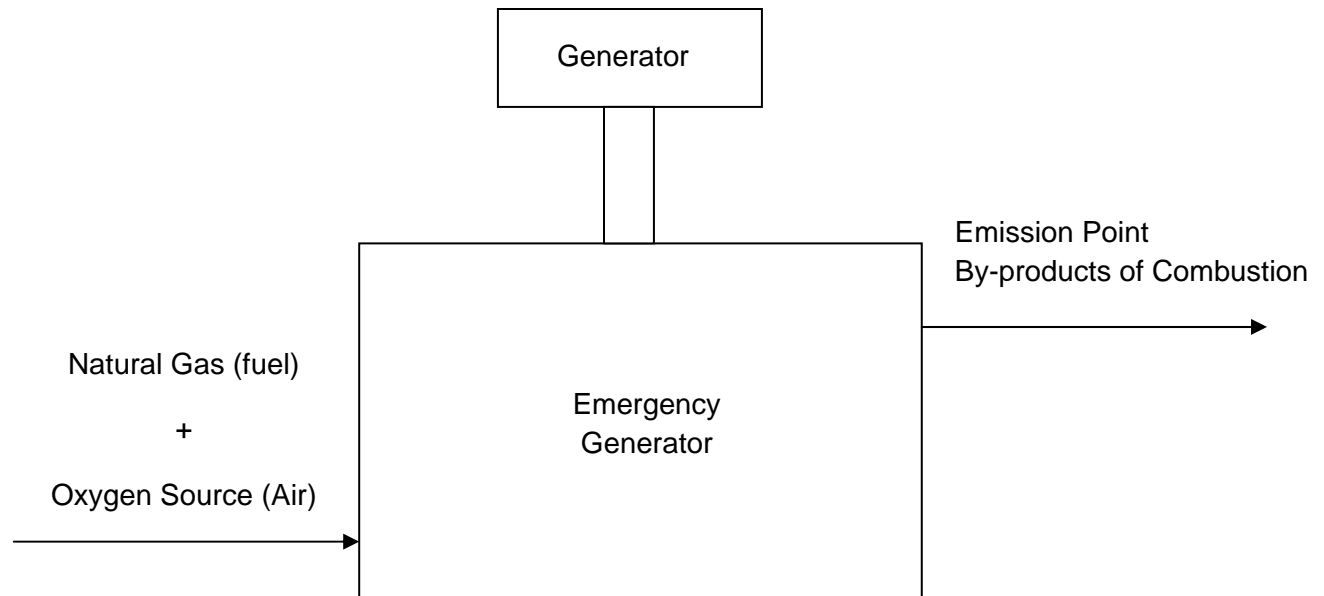
**Dominion Transmission, Inc.**  
**Loup Creek Compressor Station**

**Compressor Engines (EN01 – EN04) Process Flow Diagram**



**Dominion Transmission, Inc.**  
**Loup Creek Compressor Station**

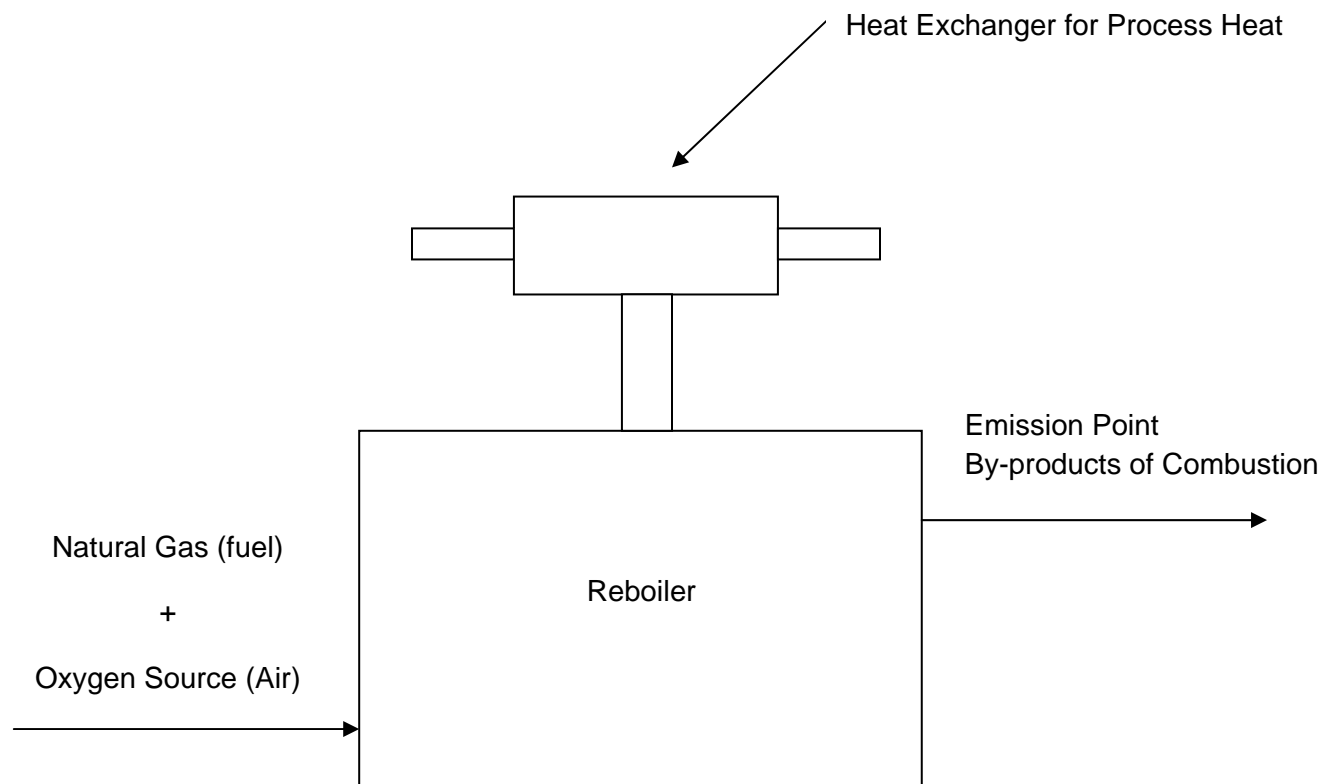
**Emergency Generator (EG-01) Process Flow Diagram**





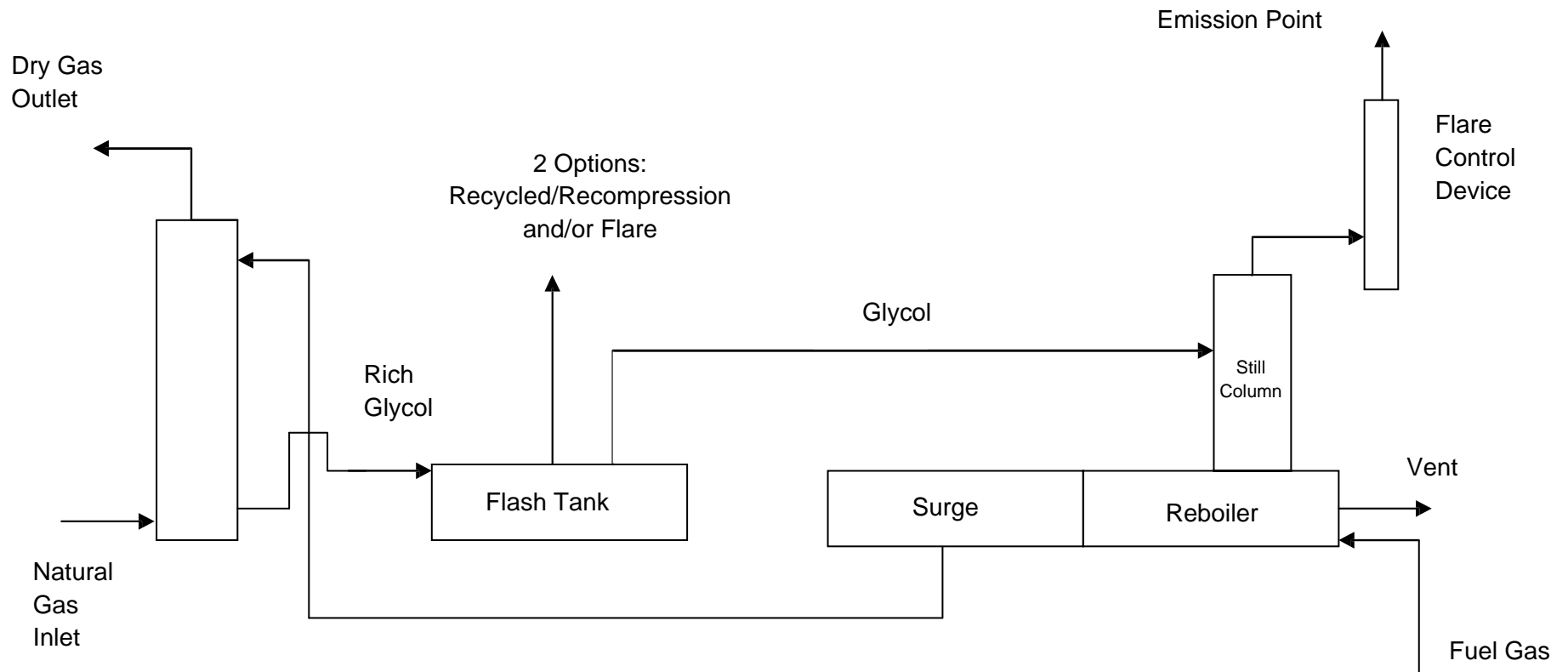
**Dominion Transmission, Inc.**  
**Loup Creek Compressor Station**

**Reboiler (RBR01) Process Flow Diagram**



**Dominion Transmission, Inc.**  
**Loup Creek Compressor Station**

**Dehydration Unit (F1, DEHY01, and RBR01) Process Flow Diagram**



## **Attachment D**

Title V Equipment Table

**ATTACHMENT D - Title V Equipment Table**  
**(includes all emission units at the facility except those designated as**  
**insignificant activities in Section 4, Item 24 of the General Forms)**

Emission Point ID <sup>1</sup>	Control Device <sup>1</sup>	Emission Unit ID <sup>1</sup>	Emission Unit Description	Design Capacity	Year Installed/Modified
EN01	N/A	001-01	Reciprocating Engine/Integral Compressor; Cooper GMV-8TF	880 hp	1947
EN02	N/A	001-02	Reciprocating Engine/Integral Compressor; Cooper GMV-8TF	880 hp	1947
EN03	N/A	001-03	Reciprocating Engine/Integral Compressor; Cooper GMV-8TF	880 hp	1947
EG-01	1C	002-02	Caterpillar G3406 Emergency Generator	367 hp	2011
DEHY01	F1	DEHY01	Dehydration Unit/Still Column	35 MMcf/day	2010
RBR01	N/A	RBR01	Dehydration Unit Reboiler	1.5 MMBtu/hr	2010
F1	N/A	F1	Dehydration Unit Controlled Flare	0.2 MMBtu/hr	2010
TK04	N/A	TK04	Vertical Aboveground Ethylene Glycol Tank	4,200 Gallons	1989
TK06	N/A	TK06	Horizontal Aboveground Lube Oil Tank	5,000 Gallons	2002
TK08	N/A	TK08	Horizontal Aboveground Used Oil Tank	1,000 Gallons	2003
TK10	N/A	TK10	Horizontal Aboveground Ethylene Glycol Tank	1,000 Gallons	2006

New units (and updates) to equipment list:

EN04	2C	001-04	Reciprocating Engine/Integral Compressor; Caterpillar G3516	1,150 hp	2001
TK11	N/A	TK11	Horizontal Aboveground Lube Oil Tank	1,066 Gallons	2003
TK12	N/A	TK12	Horizontal Aboveground Triethylene Glycol Tank	500 Gallons	2010
TK13	N/A	TK13	Vertical Aboveground Used Triethylene Glycol Tank	1,260 Gallons	2015
TK14	N/A	TK14	Vertical Aboveground Pipeline Fluids Tank	4,200 Gallons	2012

Units that have been removed:

TK01	N/A	TK01	Horizontal Aboveground Ethylene Glycol Tank	563 Gallons	1950
TK05	N/A	TK05	Vertical Aboveground Pipeline Fluids Tank	4,200 Gallons	2002
TK07	N/A	TK07	XXX Engine Oil Tank	1,000 Gallons	2002
TK09	N/A	TK09	Used Triethylene Glycol Tank	2,100 Gallons	2002

<sup>1</sup>For 45CSR13 permitted sources, the numbering system used for the emission points, control devices, and emission units should be consistent with the numbering system used in the 45CSR13 permit. For grandfathered sources, the numbering system should be consistent with registrations or emissions inventory previously submitted to DAQ. For emission points, control devices, and emissions units which have not been previously labeled, use the following 45CSR13 numbering system: 1S, 2S, 3S,... or other appropriate description for emission units; 1C, 2C, 3C,... or other appropriate designation for control devices; 1E, 2E, 3E, ... or other appropriate designation for emission points.

## **Attachment E**

### Emission Unit Forms

## ATTACHMENT E - Emission Unit Form

### *Emission Unit Description*

<b>Emission unit ID number:</b> DEHY01	<b>Emission unit name:</b> DEHY01 Glycol Dehydration Unit	<b>List any control devices associated with this emission unit:</b> F1 Flare
---	---	--

**Provide a description of the emission unit (type, method of operation, design parameters, etc.):**

Dehydration unit still column

<b>Manufacturer:</b> NATCO	<b>Model number:</b>	<b>Serial number:</b>
<b>Construction date:</b>	<b>Installation date:</b> 2010	<b>Modification date(s):</b> N/A

**Design Capacity (examples: furnaces - tons/hr, tanks - gallons):**  
35 MMscf/day

<b>Maximum Hourly Throughput:</b> 35 MMscf/day (daily)	<b>Maximum Annual Throughput:</b> 12,775 MMscf/yr	<b>Maximum Operating Schedule:</b> 8,760 hrs/yr
---	--	--

### *Fuel Usage Data (fill out all applicable fields)*

<b>Does this emission unit combust fuel?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<b>If yes, is it?</b>  <input type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired
--	--

<b>Maximum design heat input and/or maximum horsepower rating:</b>	<b>Type and Btu/hr rating of burners:</b>
--	---

**List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.**

Natural gas  
     - Maximum daily wet gas throughput = 35 MMscf/day  
     - Maximum annual wet gas throughput = 12,775 MMscf/yr

**Describe each fuel expected to be used during the term of the permit.**

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
N/A	N/A	N/A	N/A

<b>Emissions Data</b>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	N/A	N/A
Nitrogen Oxides (NO <sub>x</sub> )	N/A	N/A
Lead (Pb)	N/A	N/A
Particulate Matter (PM <sub>2.5</sub> )	N/A	N/A
Particulate Matter (PM <sub>10</sub> )	N/A	N/A
Total Particulate Matter (TSP)	N/A	N/A
Sulfur Dioxide (SO <sub>2</sub> )	N/A	N/A
Volatile Organic Compounds (VOC)	4.44	19.44
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Benzene	0.10	0.42
Ethylbenzene	0.22	0.98
n-Hexane	0.03	0.11
Toluene	0.15	0.67
Xylenes	0.40	1.74
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
<p><b>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</b></p> <p>Emission rates for the dehydration unit were obtained from GRI GLYCalc 4.0 with a 95% destruction efficiency from the flare.</p>		

***Applicable Requirements***

**List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.**

45 CSR 13 – The maximum wet natural gas throughput shall not exceed 35 MMscf/day using a 12 month rolling total (TV 5.1.3; R13-2839B 6.1.1)  
45 CSR 13 – Maximum emission limits (TV 5.1.4; R13-2839B 6.1.2)  
45 CSR 13 – Determine potential HAP emissions by using the methods in 40 CFR 63 Subpart HH (TV 5.1.5; R13-2839B 6.1.3)  
45 CSR 34 and 40 CFR 63.10(b)(3) – The facility is an area source of HAPs for NESHAP purposes (TV 5.1.11)  
40 CFR Part 63 Subpart HH – Compliance with the applicable requirements of NESHAP Subpart HH is required upon initial start-up (TV 5.1.12)  
40 CFR Part 63 Subpart HH – NESHAP general provisions (TV 5.1.13(a))  
45 CSR 13 and 40 CFR Part 63 Subpart HH – NESHAP Subpart HH benzene exemption requirements (TV 5.1.13(e); R13-2839B 7.1.1 and 7.1.2)

\_\_\_\_ Permit Shield

**For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)**

45 CSR 30-5.1.c - Compliance with area source status and the benzene exemption will be demonstrated by using GLYCalc V3 or higher and monitoring actual operating parameters (TV 5.2.1)  
45 CSR 13 – Wet gas throughput shall be monitored on a monthly basis (TV 5.2.3; R13-2839B 6.2.2)  
45 CSR 30-5.1.c – Perform a BTEX wet gas analysis sample within the 3<sup>rd</sup> year of the Title V permit term (TV 5.3.1)  
45 CSR 13 and 40 CFR Part 63 Subpart HH – Compliance with Condition 5.1.5 shall be determined based on GRI-GYLCalc 3.0 or higher (TV 5.3.4 and 5.3.5; R13-2839B 6.3.3)  
45 CSR 13 and 45 CSR 30-5.1.c – Maintain records of all monitoring data, wet gas sampling, and annual GLYCalc emission estimates (TV 5.4.1 and 5.4.5; R13-2839B 6.4.4)  
45 CSR 13 – Maintain monthly records of the wet gas throughput (TV 5.4.7; R13-2839B 6.4.6)  
45 CSR 30-5.1.c – Submit by March 31<sup>st</sup> of the following year, an emission summary for the dehydration unit, which incorporates the BTEX wet gas analysis sample (TV 5.5.2)

**Are you in compliance with all applicable requirements for this emission unit?** ☒ Yes ☐ No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.



## ATTACHMENT E - Emission Unit Form

### *Emission Unit Description*

<b>Emission unit ID number:</b> 002-02	<b>Emission unit name:</b> EG-01 Emergency Generator	<b>List any control devices associated with this emission unit:</b> 1C Oxidation Catalyst
---	--	---

**Provide a description of the emission unit (type, method of operation, design parameters, etc.):**

Natural gas-fired emergency auxiliary generator

<b>Manufacturer:</b> Caterpillar	<b>Model number:</b> G3406	<b>Serial number:</b> CTS00724
<b>Construction date:</b> 11/2010	<b>Installation date:</b> 2011	<b>Modification date(s):</b> N/A

**Design Capacity (examples: furnaces - tons/hr, tanks - gallons):**

367 hp

<b>Maximum Hourly Throughput:</b> 3,032 scf/hr	<b>Maximum Annual Throughput:</b> 1.52 MMscf/yr	<b>Maximum Operating Schedule:</b> 500 hrs/yr
---	--	--

**Fuel Usage Data (fill out all applicable fields)**

<b>Does this emission unit combust fuel?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<b>If yes, is it?</b>  <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired
--	---

<b>Maximum design heat input and/or maximum horsepower rating:</b> 367 hp	<b>Type and Btu/hr rating of burners:</b> 3.09 MMBtu/hr
--	--

**List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.**

Pipeline quality natural gas  
 - Maximum hourly fuel usage = 3,032 scf/hr  
 - Maximum annual fuel usage = 1.52 MMscf/yr

**Describe each fuel expected to be used during the term of the permit.**

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Pipeline quality natural gas	20 gr sulfur/100 cf	N/A	1,000 Btu/cf

<b><i>Emissions Data</i></b>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.09	0.02
Nitrogen Oxides (NO <sub>x</sub> )	1.42	0.35
Lead (Pb)	N/A	N/A
Particulate Matter (PM <sub>2.5</sub> )	0.03	0.01
Particulate Matter (PM <sub>10</sub> )	0.03	0.01
Total Particulate Matter (TSP)	0.06	0.01
Sulfur Dioxide (SO <sub>2</sub> )	< 0.01	< 0.01
Volatile Organic Compounds (VOC)	0.32	0.08
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Acetaldehyde	0.01	< 0.01
Acrolein	0.01	< 0.01
Benzene	< 0.01	< 0.01
Ethylbenzene	< 0.01	< 0.01
Formaldehyde	0.06	0.02
Toluene	< 0.01	< 0.01
Xylene	< 0.01	< 0.01
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
<p><b>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</b></p> <ul style="list-style-type: none"> <li>- CO, NO<sub>x</sub>, and VOC emission rates based on manufacturer specs.  **Note: The CO, NO<sub>x</sub>, and VOC emission rates are based off of a 90% control efficiency from the catalyst provided by the manufacturer.</li> <li>- PM, SO<sub>2</sub>, and HAP emissions calculated from AP-42, Section 3.2, Natural Gas-Fired Reciprocating Engines, Table 3.2-1, 7/00</li> </ul>		

### ***Applicable Requirements***

**List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.**

45 CSR 13 – Maximum fuel consumption (TV 6.1.1; R13-2839B 8.1.1)  
45 CSR 13 – Emission limits (TV 6.1.2; R13-2839B 8.1.2)  
45 CSR 13 – Requirements for use of a catalytic reduction device (TV 6.1.3; R13-2839B 8.1.3)  
45 CSR 13 and 40 CFR Part 60 Subpart JJJJ – NSPS emission limits (TV 7.2.1; R13-2839B 9.2.1)  
45 CSR 13 and 40 CFR Part 60 Subpart JJJJ – Maintain the NSPS emission standards over the entire life of the engine. (TV 7.2.3; R13-2839B 9.2.3)  
45 CSR 13 and 40 CFR Part 60 Subpart JJJJ – NSPS emergency definition; limitation on maintenance and readiness testing to 100 hrs/yr (TV 7.4.2; R13-2839B 9.4.2)  
45 CSR 13 and 40 CFR Part 60 Subpart JJJJ – May operate the engine using propane for 100 hr/yr during emergency operations (TV 7.4.3; R13-2839B 9.4.3)  
40 CFR Part 63 Subpart ZZZZ – RICE NESHAP as a new, emergency, spark ignition engine at an area source (40 CFR 63 Subpart ZZZZ)

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**For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)**

45 CSR 13 – The NSCR shall be fitted with a closed-loop, automatic air/fuel ratio controller (TV 6.1.3.a; R13-2839B 8.1.3.a)  
45 CSR 213 – Maintain proper operation of the air/fuel ratio controller (or automatic feedback controller) and follow operating and maintenance recommendations of the oxidation catalyst manufacturer (TV 6.2.1 and 7.4.5; R13-2839B 8.2.1 and 9.4.5)  
45 CSR 13 – Record hours of operation and fuel consumption on a monthly basis; keep records for 5 years (TV 6.4.1; R13-2839B 8.4.1)  
45 CSR 13 and 40 CFR Part 60 Subpart JJJJ – Install non-resettable hour meter (TV 7.3.4; R13-2839B 9.3.4)  
45 CSR 13 and 40 CFR Part 60 Subpart JJJJ – Purchased a non-certified engine to meet NSPS emission limits. Keep a maintenance plan and records of conducted maintenance. Conduct an initial performance test to demonstrate compliance (TV 7.4.1 and 7.4.4; R13-2839B 9.4.1 and 9.4.4)  
45 CSR 13 and 40 CFR Part 60 Subpart JJJJ – If using propane, keep records (TV 7.4.3; R13-2839B 9.4.3)  
40 CFR Part 60 Subpart JJJJ – Comply with all applicable monitoring, reports, and recordkeeping requirements (TV 7.6.1; R13-2839B 9.6.1)  
40 CFR Part 63 Subpart ZZZZ – Compliance with NSPS Subpart JJJJ shows compliance with NESHAP Subpart ZZZZ

**Are you in compliance with all applicable requirements for this emission unit?** ☒ Yes ☐ No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

## ATTACHMENT E - Emission Unit Form

### *Emission Unit Description*

<b>Emission unit ID number:</b> 001-01	<b>Emission unit name:</b> EN01 Reciprocating Engine/Integral Compressor	<b>List any control devices associated with this emission unit:</b> N/A
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**Provide a description of the emission unit (type, method of operation, design parameters, etc.):**

Natural gas fired reciprocating engine/integral compressor

<b>Manufacturer:</b> Cooper	<b>Model number:</b> GMV-8TF	<b>Serial number:</b> 41545
<b>Construction date:</b>	<b>Installation date:</b> 1947	<b>Modification date(s):</b> N/A

**Design Capacity (examples: furnaces - tons/hr, tanks - gallons):**  
880 hp

<b>Maximum Hourly Throughput:</b> 0.0074 MMscf/hr	<b>Maximum Annual Throughput:</b> 64.75 MMscf/yr	<b>Maximum Operating Schedule:</b> 8,760 hrs/yr
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### *Fuel Usage Data (fill out all applicable fields)*

<b>Does this emission unit combust fuel?</b> <input checked="" type="checkbox"/> _X_ Yes <input type="checkbox"/> _ No	<b>If yes, is it?</b>  <input type="checkbox"/> _ Indirect Fired <input checked="" type="checkbox"/> _X_ Direct Fired
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<b>Maximum design heat input and/or maximum horsepower rating:</b> 880 hp	<b>Type and Btu/hr rating of burners:</b> 8,400 Btu/hp-hr 0.0074 MMscf/hr
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**List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.**

Pipeline quality natural gas  
 - Maximum hourly fuel usage = 0.0074 MMscf/hr  
 - Maximum annual fuel usage = 64.75 MMscf/yr

**Describe each fuel expected to be used during the term of the permit.**

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Pipeline quality natural gas	20 gr sulfur/100 cf	N/A	1,000 Btu/cf

<b>Emissions Data</b>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	5.29	23.17
Nitrogen Oxides (NO <sub>x</sub> )	29.49	129.17
Lead (Pb)	N/A	N/A
Particulate Matter (PM <sub>2.5</sub> )	0.28	1.24
Particulate Matter (PM <sub>10</sub> )	0.28	1.24
Total Particulate Matter (TSP)	0.36	0.156
Sulfur Dioxide (SO <sub>2</sub> )	< 0.01	0.02
Volatile Organic Compounds (VOC)	4.06	17.78
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Acetaldehyde	0.06	0.25
Acrolein	0.06	0.25
Benzene	0.01	0.06
Ethylbenzene	< 0.01	< 0.01
Formaldehyde	0.41	1.79
Hexane	< 0.01	0.01
Toluene	0.01	0.03
Xylene	< 0.01	0.01
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
<b>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</b> <ul style="list-style-type: none"> <li>- CO, NO<sub>x</sub>, and VOC emission rates based on manufacturer specs.</li> <li>- PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, and HAP emission factors based on AP-42 Section 3.2, Table 3.2-1, 8/00.</li> </ul>		

***Applicable Requirements***

**List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.**

40 CFR Part 63 Subpart ZZZZ – NESHAP initial compliance date (TV 8.1.1)  
40 CFR Part 63 Subpart ZZZZ – NESHAP maintenance requirements (TV 8.1.2)  
40 CFR Part 63 Subpart ZZZZ – NESHAP operating requirements (TV 8.1.3)  
40 CFR Part 63 Subpart ZZZZ – NESHAP continuous compliance requirements (TV 8.1.4)  
40 CFR Part 63 Subpart ZZZZ – NESHAP general requirements/provisions (TV 8.1.5)

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**For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)**

40 CFR Part 63 Subpart ZZZZ – Change oil and filter, inspect spark plugs, and inspect all hoses and belts every 4,320 hours of operation or annually, whichever one first, or utilize an oil analysis program (TV 8.1.2 and 8.2.1(c))  
40 CFR Part 63 Subpart ZZZZ – Operate and maintain the RICE according to the manufacturer's instructions OR develop and follow your own maintenance plan (TV 8.1.4 and 8.2.1 (a))  
40 CFR Part 63 Subpart ZZZZ – Minimize the engine's time spent at idling during startup, not to exceed 30 minutes (TV 8.2.1 (b))  
40 CFR Part 63 Subpart ZZZZ - Comply with all applicable recordkeeping requirements (TV 8.4.1)  
40 CFR Part 63 Subpart ZZZZ – Keep records of maintenance on the stationary RICE (TV 8.4.2 and 8.4.3)  
40 CFR Part 63 Subpart ZZZZ – Permit deviation reporting (TV 8.5.1)

**Are you in compliance with all applicable requirements for this emission unit?** ☒ Yes ☐ No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

## ATTACHMENT E - Emission Unit Form

### *Emission Unit Description*

<b>Emission unit ID number:</b> 001-02	<b>Emission unit name:</b> EN02 Reciprocating Engine/Integral Compressor	<b>List any control devices associated with this emission unit:</b> N/A
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**Provide a description of the emission unit (type, method of operation, design parameters, etc.):**

Natural gas fired reciprocating engine/integral compressor

<b>Manufacturer:</b> Cooper	<b>Model number:</b> GMV-8TF	<b>Serial number:</b> 41553
<b>Construction date:</b>	<b>Installation date:</b> 1947	<b>Modification date(s):</b> N/A

**Design Capacity (examples: furnaces - tons/hr, tanks - gallons):**  
880 hp

<b>Maximum Hourly Throughput:</b> 0.0074 MMscf/hr	<b>Maximum Annual Throughput:</b> 64.75 MMscf/yr	<b>Maximum Operating Schedule:</b> 8,760 hrs/yr
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### *Fuel Usage Data (fill out all applicable fields)*

<b>Does this emission unit combust fuel?</b> <input checked="" type="checkbox"/> _X_ Yes <input type="checkbox"/> _ No	<b>If yes, is it?</b>  <input type="checkbox"/> _ Indirect Fired <input checked="" type="checkbox"/> _X_ Direct Fired
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<b>Maximum design heat input and/or maximum horsepower rating:</b> 880 hp	<b>Type and Btu/hr rating of burners:</b> 8,400 Btu/hp-hr 0.0074 MMscf/hr
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**List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.**

Pipeline quality natural gas  
 - Maximum hourly fuel usage = 0.0074 MMscf/hr  
 - Maximum annual fuel usage = 64.75 MMscf/yr

**Describe each fuel expected to be used during the term of the permit.**

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Pipeline quality natural gas	20 gr sulfur/100 cf	N/A	1,000 Btu/cf

<b>Emissions Data</b>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	5.29	23.17
Nitrogen Oxides (NO <sub>x</sub> )	29.49	129.17
Lead (Pb)	N/A	N/A
Particulate Matter (PM <sub>2.5</sub> )	0.28	1.24
Particulate Matter (PM <sub>10</sub> )	0.28	1.24
Total Particulate Matter (TSP)	0.36	0.156
Sulfur Dioxide (SO <sub>2</sub> )	< 0.01	0.02
Volatile Organic Compounds (VOC)	4.06	17.78
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Acetaldehyde	0.06	0.25
Acrolein	0.06	0.25
Benzene	0.01	0.06
Ethylbenzene	< 0.01	< 0.01
Formaldehyde	0.41	1.79
Hexane	< 0.01	0.01
Toluene	0.01	0.03
Xylene	< 0.01	0.01
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
<b>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</b> <ul style="list-style-type: none"> <li>- CO, NO<sub>x</sub>, and VOC emission rates based on manufacturer specs.</li> <li>- PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, and HAP emission factors based on AP-42 Section 3.2, Table 3.2-1, 8/00.</li> </ul>		



***Applicable Requirements***

**List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.**

40 CFR Part 63 Subpart ZZZZ – NESHAP initial compliance date (TV 8.1.1)  
40 CFR Part 63 Subpart ZZZZ – NESHAP maintenance requirements (TV 8.1.2)  
40 CFR Part 63 Subpart ZZZZ – NESHAP operating requirements (TV 8.1.3)  
40 CFR Part 63 Subpart ZZZZ – NESHAP continuous compliance requirements (TV 8.1.4)  
40 CFR Part 63 Subpart ZZZZ – NESHAP general requirements/provisions (TV 8.1.5)

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**For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)**

40 CFR Part 63 Subpart ZZZZ – Change oil and filter, inspect spark plugs, and inspect all hoses and belts every 4,320 hours of operation or annually, whichever one first, or utilize an oil analysis program (TV 8.1.2 and 8.2.1(c))  
40 CFR Part 63 Subpart ZZZZ – Operate and maintain the RICE according to the manufacturer's instructions OR develop and follow your own maintenance plan (TV 8.1.4 and 8.2.1 (a))  
40 CFR Part 63 Subpart ZZZZ – Minimize the engine's time spent at idling during startup, not to exceed 30 minutes (TV 8.2.1 (b))  
40 CFR Part 63 Subpart ZZZZ - Comply with all applicable recordkeeping requirements (TV 8.4.1)  
40 CFR Part 63 Subpart ZZZZ – Keep records of maintenance on the stationary RICE (TV 8.4.2 and 8.4.3)  
40 CFR Part 63 Subpart ZZZZ – Permit deviation reporting (TV 8.5.1)

**Are you in compliance with all applicable requirements for this emission unit?** ☒ Yes ☐ No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

## ATTACHMENT E - Emission Unit Form

### *Emission Unit Description*

<b>Emission unit ID number:</b> 001-03	<b>Emission unit name:</b> EN03 Reciprocating Engine/Integral Compressor	<b>List any control devices associated with this emission unit:</b> N/A
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**Provide a description of the emission unit (type, method of operation, design parameters, etc.):**

Natural gas fired reciprocating engine/integral compressor

<b>Manufacturer:</b> Cooper	<b>Model number:</b> GMV-8TF	<b>Serial number:</b> 41552
<b>Construction date:</b>	<b>Installation date:</b> 1947	<b>Modification date(s):</b> N/A

**Design Capacity (examples: furnaces - tons/hr, tanks - gallons):**  
880 hp

<b>Maximum Hourly Throughput:</b> 0.0074 MMscf/hr	<b>Maximum Annual Throughput:</b> 64.75 MMscf/yr	<b>Maximum Operating Schedule:</b> 8,760 hrs/yr
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### *Fuel Usage Data (fill out all applicable fields)*

<b>Does this emission unit combust fuel?</b> <input checked="" type="checkbox"/> _X_ Yes <input type="checkbox"/> No	<b>If yes, is it?</b>  <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> _X_ Direct Fired
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<b>Maximum design heat input and/or maximum horsepower rating:</b> 880 hp	<b>Type and Btu/hr rating of burners:</b> 8,400 Btu/hp-hr 0.0074 MMscf/hr
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**List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.**

Pipeline quality natural gas  
 - Maximum hourly fuel usage = 0.0074 MMscf/hr  
 - Maximum annual fuel usage = 64.75 MMscf/yr

**Describe each fuel expected to be used during the term of the permit.**

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Pipeline quality natural gas	20 gr sulfur/100 cf	N/A	1,000 Btu/cf

<b><i>Emissions Data</i></b>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	5.29	23.17
Nitrogen Oxides (NO <sub>x</sub> )	29.49	129.17
Lead (Pb)	N/A	N/A
Particulate Matter (PM <sub>2.5</sub> )	0.28	1.24
Particulate Matter (PM <sub>10</sub> )	0.28	1.24
Total Particulate Matter (TSP)	0.36	0.156
Sulfur Dioxide (SO <sub>2</sub> )	< 0.01	0.02
Volatile Organic Compounds (VOC)	4.06	17.78
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Acetaldehyde	0.06	0.25
Acrolein	0.06	0.25
Benzene	0.01	0.06
Ethylbenzene	< 0.01	< 0.01
Formaldehyde	0.41	1.79
Hexane	< 0.01	0.01
Toluene	0.01	0.03
Xylene	< 0.01	0.01
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
<b>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</b> <ul style="list-style-type: none"> <li>- CO, NO<sub>x</sub>, and VOC emission rates based on manufacturer specs.</li> <li>- PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, and HAP emission factors based on AP-42 Section 3.2, Table 3.2-1, 8/00.</li> </ul>		

***Applicable Requirements***

**List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.**

40 CFR Part 63 Subpart ZZZZ – NESHAP initial compliance date (TV 8.1.1)  
40 CFR Part 63 Subpart ZZZZ – NESHAP maintenance requirements (TV 8.1.2)  
40 CFR Part 63 Subpart ZZZZ – NESHAP operating requirements (TV 8.1.3)  
40 CFR Part 63 Subpart ZZZZ – NESHAP continuous compliance requirements (TV 8.1.4)  
40 CFR Part 63 Subpart ZZZZ – NESHAP general requirements/provisions (TV 8.1.5)

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**For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)**

40 CFR Part 63 Subpart ZZZZ – Change oil and filter, inspect spark plugs, and inspect all hoses and belts every 4,320 hours of operation or annually, whichever one first, or utilize an oil analysis program (TV 8.1.2 and 8.2.1(c))  
40 CFR Part 63 Subpart ZZZZ – Operate and maintain the RICE according to the manufacturer's instructions OR develop and follow your own maintenance plan (TV 8.1.4 and 8.2.1 (a))  
40 CFR Part 63 Subpart ZZZZ – Minimize the engine's time spent at idling during startup, not to exceed 30 minutes (TV 8.2.1 (b))  
40 CFR Part 63 Subpart ZZZZ - Comply with all applicable recordkeeping requirements (TV 8.4.1)  
40 CFR Part 63 Subpart ZZZZ – Keep records of maintenance on the stationary RICE (TV 8.4.2 and 8.4.3)  
40 CFR Part 63 Subpart ZZZZ – Permit deviation reporting (TV 8.5.1)

**Are you in compliance with all applicable requirements for this emission unit?** ☒ Yes ☐ No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

## ATTACHMENT E - Emission Unit Form

### *Emission Unit Description*

<b>Emission unit ID number:</b> 001-04	<b>Emission unit name:</b> EN04 Reciprocating Engine/Integral Compressor	<b>List any control devices associated with this emission unit:</b> 2C Oxidation Catalyst
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**Provide a description of the emission unit (type, method of operation, design parameters, etc.):**

Natural gas fired reciprocating engine/integral compressor

<b>Manufacturer:</b> Caterpillar	<b>Model number:</b> G3516	<b>Serial number:</b> 4EK03449
<b>Construction date:</b> 6/2001	<b>Installation date:</b> 2001	<b>Modification date(s):</b> N/A

**Design Capacity (examples: furnaces - tons/hr, tanks - gallons):**  
1,150 hp

<b>Maximum Hourly Throughput:</b> 0.0085 MMscf/hr	<b>Maximum Annual Throughput:</b> 74.70 MMscf/yr	<b>Maximum Operating Schedule:</b> 8,760 hrs/yr
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### *Fuel Usage Data (fill out all applicable fields)*

<b>Does this emission unit combust fuel?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<b>If yes, is it?</b>  <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired
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<b>Maximum design heat input and/or maximum horsepower rating:</b> 1,150 hp	<b>Type and Btu/hr rating of burners:</b> 7,415 Btu/hp-hr 0.0085 MMscf/hr
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**List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.**

Pipeline quality natural gas  
 - Maximum hourly fuel usage = 0.0085 MMscf/hr  
 - Maximum annual fuel usage = 74.70 MMscf/yr

**Describe each fuel expected to be used during the term of the permit.**

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Pipeline quality natural gas	20 gr sulfur/100 cf	N/A	1,000 Btu/cf

<b>Emissions Data</b>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.50	2.19
Nitrogen Oxides (NO <sub>x</sub> )	3.80	16.66
Lead (Pb)	N/A	N/A
Particulate Matter (PM <sub>2.5</sub> )	< 0.01	< 0.01
Particulate Matter (PM <sub>10</sub> )	< 0.01	< 0.01
Total Particulate Matter (TSP)	0.09	0.37
Sulfur Dioxide (SO <sub>2</sub> )	0.01	0.02
Volatile Organic Compounds (VOC)	1.24	5.44
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Acetaldehyde	0.07	0.31
Acrolein	0.04	0.19
Benzene	< 0.01	0.02
Ethylbenzene	< 0.01	< 0.01
Formaldehyde	0.45	1.97
Hexane	0.01	0.04
Toluene	< 0.01	0.02
Xylene	< 0.01	0.01
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
<p><b>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</b></p> <ul style="list-style-type: none"> <li>- CO, NO<sub>x</sub>, and VOC emission rates based on manufacturer specs.  **Note: The CO emission rates are based off of the catalyst/silencer control efficiency provided by the manufacturer.</li> <li>- PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, and HAP emission factors based on AP-42 Section 3.2, Table 3.2-2.</li> </ul>		

### ***Applicable Requirements***

**List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.**

40 CFR Part 63 Subpart ZZZZ – NESHAP initial compliance date (TV 9.1.1)  
40 CFR Part 63 Subpart ZZZZ – NESHAP emission limits requirements; limiting concentration of CO in the stationary RICE exhaust to 47 ppmvd at 15% O<sub>2</sub> (TV 9.1.2)  
40 CFR Part 63 Subpart ZZZZ – NESHAP operating requirements (TV 9.1.3)  
40 CFR Part 63 Subpart ZZZZ – NESHAP general requirements/provisions (TV 9.1.4)  
45 CSR 13 – Emission limits (TV 9.1.5; R13-2839B 10.1.1)  
45 CSR 13 – Compliance with emission limits are based on the make/model of the engine, 8,760 hours of operation a year, the oxidation catalyst control, and meeting 40 CFR 63 Subpart ZZZZ (TV 9.1.6; R13-2839B 10.1.2)

\_\_\_\_ Permit Shield

**For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)**

40 CFR Part 63 Subpart ZZZZ – Install, operate, and maintain a continuous parameter monitoring system (CPMS) to continuously monitor catalyst inlet temperature OR install equipment to automatically shut down engine if temperature exceeds 1350 °F (TV 9.1.2 [requesting this change])  
40 CFR Part 63 Subpart ZZZZ and 45 CSR 13 – Except for malfunctions, associated repairs, required performance evaluations, and required quality assurance or control activities, continuously monitor that the stationary RICE is operating (TV 9.2.1; R13-2839B 10.2.1)  
40 CFR Part 63 Subpart ZZZZ and 45 CSR 13 – CEM and/or CPMS monitoring provisions (TV 9.2.2 (a) and (b); R13-2839B 10.2.1)  
40 CFR Part 63 Subpart ZZZZ and 45 CSR 13 – Minimize the engine's time spent at idling during startup, not to exceed 30 minutes (TV 9.2.2 (h); R13-2839B 10.2.1)  
40 CFR Part 63 Subpart ZZZZ and 45 CSR 13 – Initial performance test within 180 days after the compliance date (TV 9.3.1; R13-2839B 10.3.2)  
40 CFR Part 63 Subpart ZZZZ and 45 CSR 13 – Subsequent performance tests every 8,760 hours or 3 years, whichever comes first (TV 9.3.2; R13-2839B 10.3.2)  
40 CFR Part 63 Subpart ZZZZ and 45 CSR 13 – Testing conditions (TV 9.3.3 and 9.3.4; R13-2839B 10.3.2)  
40 CFR Part 63 Subpart ZZZZ and 45 CSR 13 – Comply with all applicable recordkeeping requirements (TV 9.4.1, 9.4.2, and 9.4.3; R13-2839B 10.4.1)  
40 CFR Part 63 Subpart ZZZZ and 45 CSR 13 – Permit deviation reporting (TV 9.5.1; R13-2839B 10.4.1)  
40 CFR Part 63 Subpart ZZZZ and 45 CSR 13 – NESHAP notifications (TV 9.5.2; R13-2839B 10.4.1)  
40 CFR Part 63 Subpart ZZZZ and 45 CSR 13 – NESHAP semi-annual reports (TV 9.5.3; R13-2839B 10.4.1)

**Are you in compliance with all applicable requirements for this emission unit?** ☒ Yes ☐ No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

## ATTACHMENT E - Emission Unit Form

### *Emission Unit Description*

<b>Emission unit ID number:</b> F1	<b>Emission unit name:</b> F1 Flare	<b>List any control devices associated with this emission unit:</b> N/A
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**Provide a description of the emission unit (type, method of operation, design parameters, etc.):**

Dehydration Unit Flare

<b>Manufacturer:</b> Questor	<b>Model number:</b> Q250	<b>Serial number:</b>
<b>Construction date:</b>	<b>Installation date:</b> 2010	<b>Modification date(s):</b> N/A

**Design Capacity (examples: furnaces - tons/hr, tanks - gallons):**

Combustor Rating: 10.0 MMBtu/hr

Pilot Burner: 0.2 MMBtu/hr

<b>Maximum Hourly Throughput:</b> Fuel to pilot flame: 208 scf/hr	<b>Maximum Annual Throughput:</b> Fuel to pilot flame: 1.82 MMscf/yr	<b>Maximum Operating Schedule:</b> 8760 hrs/yr
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### *Fuel Usage Data (fill out all applicable fields)*

<b>Does this emission unit combust fuel?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<b>If yes, is it?</b>  <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired
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<b>Maximum design heat input and/or maximum horsepower rating:</b> Combustor Rating: 10.0 MMBtu/hr Pilot Burner: 0.2 MMBtu/hr	<b>Type and Btu/hr rating of burners:</b> Combustor Rating: 10.0 MMBtu/hr Pilot Burner: 0.2 MMBtu/hr
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**List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.**

Natural gas

- Maximum hourly fuel to pilot throughput = 208 scf/hr
- Maximum annual fuel to pilot throughput = 1.82 MMscf/yr

**Describe each fuel expected to be used during the term of the permit.**

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural gas	20 gr sulfur/100 cf	N/A	1,000 Btu/cf



<b><i>Emissions Data</i></b>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.07	0.32
Nitrogen Oxides (NO <sub>x</sub> )	0.01	0.06
Lead (Pb)	N/A	N/A
Particulate Matter (PM <sub>2.5</sub> )	N/A	N/A
Particulate Matter (PM <sub>10</sub> )	N/A	N/A
Total Particulate Matter (TSP)	N/A	N/A
Sulfur Dioxide (SO <sub>2</sub> )	N/A	N/A
Volatile Organic Compounds (VOC)	0.03	0.12
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Benzene	N/A	N/A
Formaldehyde	N/A	N/A
n-Hexane	N/A	N/A
Toluene	N/A	N/A
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
<b>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</b>		
CO, NO <sub>x</sub> , and VOC emission factors based on AP-42, Section 13.5, Industrial Flares, Table 13.5-1 (1/95)		

***Applicable Requirements***

**List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.**

Requirements are listed under Attachment G – Air Pollution Control Device Form.

\_\_\_\_ Permit Shield

**For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)**

Requirements are listed under Attachment G – Air Pollution Control Device Form.

**Are you in compliance with all applicable requirements for this emission unit?** ☒ Yes ☐ No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

## ATTACHMENT E - Emission Unit Form

### *Emission Unit Description*

<b>Emission unit ID number:</b> RBR01	<b>Emission unit name:</b> RBR01 Reboiler	<b>List any control devices associated with this emission unit:</b> N/A
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**Provide a description of the emission unit (type, method of operation, design parameters, etc.):**

Natural gas-fired reboiler

<b>Manufacturer:</b> NATCO	<b>Model number:</b> 900/1500	<b>Serial number:</b>
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<b>Construction date:</b>	<b>Installation date:</b> 2010	<b>Modification date(s):</b> N/A
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**Design Capacity (examples: furnaces - tons/hr, tanks - gallons):**  
1.5 MMBtu/hr

<b>Maximum Hourly Throughput:</b> 1,500 cf/hr	<b>Maximum Annual Throughput:</b> 13.14 MMscf/yr	<b>Maximum Operating Schedule:</b> 8,760 hrs/yr
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### *Fuel Usage Data (fill out all applicable fields)*

<b>Does this emission unit combust fuel?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<b>If yes, is it?</b>  <input type="checkbox"/> Indirect Fired <input checked="" type="checkbox"/> Direct Fired
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<b>Maximum design heat input and/or maximum horsepower rating:</b> 1.5 MMBtu/hr	<b>Type and Btu/hr rating of burners:</b> 1.5 MMBtu/hr
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**List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.**

Natural Gas

- Maximum hourly fuel usage = 1,500 cf/hr
- Maximum annual fuel usage = 13.14 MMscf/yr

**Describe each fuel expected to be used during the term of the permit.**

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Pipeline quality natural gas	20 gr sulfur/100 cf	N/A	1,000 Btu/cf

<b>Emissions Data</b>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.13	0.55
Nitrogen Oxides (NO <sub>x</sub> )	0.15	0.66
Lead (Pb)	N/A	N/A
Particulate Matter (PM <sub>2.5</sub> )	< 0.01	0.01
Particulate Matter (PM <sub>10</sub> )	< 0.01	0.01
Total Particulate Matter (TSP)	0.01	0.05
Sulfur Dioxide (SO <sub>2</sub> )	< 0.01	< 0.01
Volatile Organic Compounds (VOC)	0.01	0.04
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Benzene	< 0.01	< 0.01
Formaldehyde	< 0.01	< 0.01
n-Hexane	< 0.01	0.01
Naphthalene	< 0.01	< 0.01
Toluene	< 0.01	<0.01
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
<b>List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).</b> <ul style="list-style-type: none"> <li>- NO<sub>x</sub> and CO emission factors from AP-42, Section 1.4, Natural Gas Combustion, Table 1.4-1, 7/98</li> <li>- VOC, PM, PM<sub>10</sub>, PM<sub>2.5</sub>, and SO<sub>2</sub> emission factors from AP-42, Section 1.4, Natural Gas Combustion, Table 1.4-2, 7/98</li> <li>- HAP emission factors from AP-42, Section 1.4, Natural Gas Combustion, Tables 1.4-3, 4, 7/98</li> </ul>		

***Applicable Requirements***

**List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.**

45 CSR 2-3.1 and 13 – Opacity limit of 10% on a six minute block average (TV 4.1.1; R13-2839B 5.1.1)

45 CSR 13 – The reboiler shall not exceed 1.5 MMBtu/hr (TV 4.1.3; R13-2839B 5.1.3)

45 CSR 13 – Fuel throughput limit (TV 4.1.4; R13-2839B 5.1.4)

45 CSR 13 – Emission limits (TV 4.1.5; R13-2839B 5.1.5)

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**For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)**

45 CSR 2-3.1 and 13 – Compliance with TV 4.1.1 is demonstrated by a Method 9, if required (TV 4.1.2 and 4.2.1; R13-2839B 5.1.2 and 5.2.1)

45 CSR 13 – Monitor the natural gas consumed on a monthly basis (TV 4.2.2; R13-2839B 5.2.2)

45 CSR 13 – Maintain records of the amount of natural gas consumed for a period of 5 years (TV 4.4.1; R13-2839B 5.3.1)

**Are you in compliance with all applicable requirements for this emission unit?** ☒ Yes ☐ No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

## **Attachment G**

### Air Pollution Control Device Form

## ATTACHMENT G - Air Pollution Control Device Form

**Control device ID number:**  
F1

**List all emission units associated with this control device.**  
DEHY01

**Manufacturer:**  
Questor

**Model number:**  
Q250

**Installation date:**  
2010

**Type of Air Pollution Control Device:**

<input type="checkbox"/> Baghouse/Fabric Filter	<input type="checkbox"/> Venturi Scrubber	<input type="checkbox"/> Multiclone
<input type="checkbox"/> Carbon Bed Adsorber	<input type="checkbox"/> Packed Tower Scrubber	<input type="checkbox"/> Single Cyclone
<input type="checkbox"/> Carbon Drum(s)	<input type="checkbox"/> Other Wet Scrubber	<input type="checkbox"/> Cyclone Bank
<input type="checkbox"/> Catalytic Incinerator	<input type="checkbox"/> Condenser	<input type="checkbox"/> Settling Chamber
<input type="checkbox"/> Thermal Incinerator	<input checked="" type="checkbox"/> Flare	<input type="checkbox"/> Other (describe) _____
<input type="checkbox"/> Wet Plate Electrostatic Precipitator	<input type="checkbox"/> Dry Plate Electrostatic Precipitator	

**List the pollutants for which this device is intended to control and the capture and control efficiencies.**

Pollutant	Capture Efficiency	Control Efficiency
VOC		95%
Benzene		95%
Ethylbenzene		95%
n-Hexane		95%
Toluene		95%
Xylene		95%

**Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).**

QTI dehydration unit controlled flare  
0.2 MMBtu/hr pilot burner

**Is this device subject to the CAM requirements of 40 C.F.R. 64?** ☐ Yes ☒ No

If Yes, **Complete ATTACHMENT H**

If No, **Provide justification.** The dehy unit (DEHY01) is not subject to CAM since it is subject to NESHAP Subpart HH, which has provisions for compliance monitoring established after 1990. Per 64.2(b)(1)(i), “*emission limitations or standards proposed by the Administrator after November 15, 1990 pursuant to section 111 or 112 of the Act*” are exempt from CAM. CAM was established to build in provisions for how compliance would be demonstrated for emission limits if not adequately covered by a NSPS or NESHAP rule.

In addition, for VOC purposes, the dehy unit is not subject to CAM per 64.2(b)(1)(vi), which states “*emission limitations or standards for which a part 70 or 71 permit specified a continuous compliance determination method, as defined in 64.1*” is exempt from CAM. Since the R13 permit for the facility (R13-2839B) specifies a “continuous compliance determination method” condition (e.g continuously monitoring the flare using a thermocouple to detect the presence of a flame) and that R13 condition was rolled into the Title V permit, CAM does not apply.

**Describe the parameters monitored and/or methods used to indicate performance of this control device.**

45 CSR 10-4.1 – Sulfur Dioxide emission limit (TV 3.1.9)  
45 CSR 10-5.1 – Hydrogen Sulfide emission limit (TV 3.1.10)  
45 CSR 6-4.1– Particulate Matter emission limit (TV 5.1.1)  
45 CSR 6-4.5 – Incinerator particles in the open air requirements (TV 5.1.2)  
45 CSR 13 – Emission limits (TV 5.1.4; R13-2839B 6.1.2)  
45 CSR 13 – Operation and design of the flare (TV 5.1.6; R13-2839B 6.1.4)  
45 CSR 13 – No visible emissions except for periods not to exceed a total of 5 minutes during any 2 hour period (TV 5.1.6.b, R13-2839B 6.1.4.b)  
45 CSR 13 – The pilot flame shall be present at all times when emissions may be vented to it, except during SSM (TV 5.1.6.c, R13-2839B 6.1.4.c)  
45 CSR 13 – Conduct a flare design evaluation (TV 5.1.7; R13-2839B 6.1.5)  
45 CSR 6-4.3, 6-4.4, and 13 – Opacity limit of 20%, except smoke less than 40% opacity for a period(s) aggregating no more than 8 minutes per start-up (TV 5.1.8 and 5.1.9; R13-2839B 6.1.6 and 6.1.7)  
45 CSR 6-4.6 and 13 – Incinerator odor prevention requirements (TV 5.1.10; R13-2839B 6.1.8)

**Monitoring**

45 CSR 30-5.1.c – Compliance with 3.1.9 shall be demonstrated by annual inlet wet gas sampling (TV 3.2.2)  
45 CSR 30-5.1.c – Compliance with 3.1.10 shall be demonstrated by annual inlet wet gas sampling (TV 3.2.3)  
45 CSR 13 – Monitor the presence or absence of the flare pilot flame using a thermocouple (TV 5.2.2; R13-2839B 6.2.1)

**Testing**

45 CSR 30-5.1.c and 13 – Conduct an initial Method 22 opacity test within one (1) year of permit issuance or initial startup of the flare, whichever is later (TV 5.3.2; R13-2839B 6.3.1)

**Recordkeeping**

45 CSR 13 – Records of the times and duration of all periods which the pilot flame was absent (TV 5.4.2 and 5.4.5; R13-2839B 6.4.1 and 6.4.4)  
45 CSR 30-5.1.c and 13 – Records of the flare design evaluation (TV 5.4.3, R13-2839B 6.4.2)  
45 CSR 30-5.1.c and 13 – Records of initial Method 22 visible checks (TV 5.4.6; R13-2839B 6.4.5)

**Reporting**

45 CSR 30-5.1.c and 13 – Reporting of violations/deviations of visible emissions requirements (TV 5.5.1, R13-2839B 6.5.2)  
45 CSR 13 – Reporting of any deviation from the flare design and operation criteria (TV 5.5.4; R13-2839B 6.5.3)