Dominion Resource Services, Inc.
5000 Dominion Boulevard, Glen Allen, VA 23060
dom.com

November 23, 2016

BY: U.S. CERTIFIED MAIL, RETURN RECEIPT REQUESTED
7015 0640 0001 0352 8589

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

RE: Dominion Transmission, Inc. – Title V Renewal Application
Cornwell Compressor Station – R30-03900051-2012

Dear Mr. Durham:

Enclosed please find the Title V Renewal Application for Dominion Transmission, Inc.'s (DTI) Cornwell Compressor Station, Permit No. R30-03900051-2012. The enclosure consists of one hard copy and two cd copies of the application that includes all attachments.

A separate R13 Class II Administrative Update application for Cornwell Station's R13-2346C permit was sent into WVDEP on 11/23/16. The administrative update includes the specified changes listed below.

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

- Equipment removed from the facility:
  - CPR01 – Onan MS/4390E Air Compressor (25 hp)
  - TK07 – 400 gal Horizontal Aboveground Storage Tank (Lube Oil)
  - TK09 – 130 gal Horizontal Aboveground Storage Tank (Methanol)
  - TK24 – 230 gal Horizontal Aboveground Storage Tank (Methanol)
- Equipment added to the facility:
  - TK25 – 230 gal Horizontal Aboveground Storage Tank (Ice Chek)
  - TK26 – 130 gal Horizontal Aboveground Storage Tank (Ice Chek)

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

- Section 5.0 – Dehydration Unit (DEHY01) and Flare (F1)

  The dehydration unit and flare are located in the "production section" of the Cornwell Station, which is classified as an area source of hazardous air pollutants (HAPs). We request that the NESHAP Subpart HH requirements for" large dehydration units at major sources of HAPs" be removed for DEHY01 and F1 and that the requirements for "large dehydration units at area sources using the benzene exemption" be included in the Title V permit.

  ***Note:** This permit action has also been requested in the R13-2346C application submitted 11/23/16.

- Section 5.0 – Duplicate Conditions

  We request to delete Title V Condition 5.4.1 (R13-2346C Condition 5.4.2) as it is a duplicate requirement of Title V Condition 5.4.9 (R13-2346C Condition 4.4.3).

  ***Note:** This permit action has also been requested in the R13-2346C application submitted 11/23/16.

- Section 6.0 – Compressor Engine (EN07)

  We request that NESHAP Subpart ZZZZ non-emergency "remote" requirements be spelled out and included in the Title V permit for compressor engine EN07 as this is a remote engine under the NESHAP. As a result, the other NESHAP requirements for this engine would be removed.

- Section 6.0 – Auxiliary Generator (AUX04)

  We request WVDEP reword Title V Condition 6.4.2 to state:

  "...the permittee shall maintain a monthly ~~certified~~ record of the date(s) the generator was used, the amount of natural gas consumed, and the aggregated amount of natural gas consumed for the previous twelve (12) months. These records shall be maintained on site for a period of five (5) years. ~~Certified~~ Copies of these records shall be made available..."

  ***Note:** This permit action has also been requested in the R13-2346C application submitted 11/23/16.

- Section 7.0 – Compressor Engine EN09

  - Title V Condition 7.4.1.b – We request to delete this condition as this condition is only for emergency engines. EN09 is a non-emergency engine that meets standards applicable to non-emergency engines.

  - Title V Condition 7.4.1.c – We request to delete this condition as this requirement has been completed.

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

Sincerely,

Amanda B. Tornabene
Director, Energy Infrastructure Environmental Services

CC: Rebekah Kiss

Enclosure: Title V Renewal Application

CORNWELL COMPRESSOR STATION
DOMINION TRANSMISSION, INC.
APPLICATION FOR TITLE V OPERATING PERMIT RENEWAL
TITLE V OPERATING PERMIT NO: R30-03900051-2012

Dominion Transmission, Inc.
Cornwell Compressor Station
2883 River Haven Road
Clendenin, WV 25045

NOVEMBER 2016

DOMINION TRANMISSION, INC.
CORNWELL COMPRESSOR STATION

TITLE V OPERATING PERMIT RENEWAL APPLICATION

TABLE OF CONTENTS

ATTACHMENTS

****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:

Cornwell Station is a natural gas transmission/storage and production station for Dominion Transmission, Inc. in West Virginia. The Cornwell Station is located in Clendenin, Kanawha County, WV.

Cornwell Station has the potential to emit in excess of 100 tons per year of nitrogen oxides (NOx), carbon monoxide (CO), and volatile organic compounds (VOC). 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. The production section of Cornwell Station (EN07 – EN09 and the dehydration system) 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 transmission/storage section of Cornwell Station (all other emission units) is a major source of HAPs since the potential to emit is more than 10 tons per year for individual HAPs and more than 25 tons per year of combined HAPs. The regulatory appropriateness of the division of the station was completed during the June 8, 2011 EPA audit of the facility.

The last Title V Operating Permit renewal application was submitted in July 2011, and the renewed Title V Operating Permit was issued on July 10, 2012, with an expiration date of January 10, 2017. Cornwell Station is also subject to the underlying State Operating Permits (Rule 13 Permit Nos: R13-2175D and R13-2346C). The Title V operating permit is for the operation of one (1) 810 hp natural gas fired reciprocating engine (EN07), one (1) 440 hp natural gas fired reciprocating engine (EN08), one (1) 750 hp natural gas fired reciprocating engine (EN09), eight (8) 1,350 hp natural gas fired reciprocating engines (EN10 – EN17), two (2) 2,500 hp natural gas fired reciprocating engines (EN18 and EN19), one (1) glycol dehydrator system (DEHY01) with a flare (F1), one (1) dehydration unit reboiler (RBR01), one (1) 810 hp emergency auxiliary generator (AUX04), and twenty three (23) above ground storage tanks of various sizes (TK01 – TK06, TK08, TK10 – TK23, and TK25 – TK26).

PROCESS DESCRIPTION

Cornwell Station is a compressor facility that services a natural gas pipeline system. The compressor engines (EN07 – EN19) 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. A portion of the facility (EN07 – EN09) supports a production gathering pipeline system, while the remainder of the facility (EN10 – EN19) supports the transmissions pipeline system. The gathering portion of the facility is processed by the dehydration unit (DEHY01) prior to exiting the facility. The dehydration unit removes moisture and impurities from the gas stream.

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 Cornwell Station:

One (1) 810 hp Caterpillar G3512 natural gas-fired reciprocating engine/integral compressor

- Emission unit ID: 001-01
- Emission point ID: EN07

One (1) 440 hp Cooper GMX-8TF natural gas-fired reciprocating engine/integral compressor

- Emission unit ID: 001-02
- Emission point ID: EN08

One (1) 750 hp Ajax DPC-2804LE natural gas-fired reciprocating engine/integral compressor

- Emission unit ID: 001-10
- Emission point ID: EN09

Eight (8) 1,350 hp Cooper GMV-A-10TF natural gas-fired reciprocating engines/integral compressors

- Emission unit ID: 001-04 – 001-09, 001-0A, 001-0B
- Emission point ID: EN10 – EN17

Two (2) 2,500 hp Ingersoll Rand 410-KVT natural gas-fired reciprocating engines/integral compressors

- Emission unit ID: 001-0C and 001-0D
- Emission point ID: EN18 and EN19

One (1) 810 hp Caterpillar G3512 emergency auxiliary generator

- Emission unit ID: 002-04
- Emission point ID: AUX04

One (1) 0.62 MMBtu/hr natural gas-fired dehydration unit reboiler

- Emission unit ID: 006-01
- Emission point ID: RBR01

One (1) 23 MMscf wet gas/day glycol dehydration system

- Emission unit ID: 005-01
- Emission point ID: DEHY01

One (1) Questor Q250 flare

- Emission unit ID: 0002
- Emission point ID: F1

One (1) 15,000 gallon horizontal aboveground lube oil storage tank

- Emission unit ID: TK01
- Emission point ID: TK01

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

- Emission unit ID: TK02
- Emission point ID: TK02

One (1) 10,000 gallon horizontal aboveground ethylene glycol storage tank

- Emission unit ID: TK03
- Emission point ID: TK03

One (1) 4,000 gallon horizontal aboveground waste/used oil storage tank

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

One (1) 15,000 gallon horizontal aboveground lube oil storage tank

- Emission unit ID: TK05
- Emission point ID: TK05

One (1) 1,000 gallon horizontal aboveground produced fluids storage tank

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

One (1) 1,000 gallon horizontal aboveground waste water storage tank

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

One (1) 53 gallon horizontal aboveground waste/used oil storage tank

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

One (1) 550 gallon horizontal aboveground produced fluids storage tank

- Emission unit ID: TK11

- Emission point ID: TK11

One (1) 200 gallon horizontal aboveground ethylene glycol storage tank

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

One (1) 200 gallon horizontal aboveground ethylene glycol storage tank

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

One (1) 75 gallon horizontal aboveground waste/used oil storage tank

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

One (1) 1,000 gallon horizontal aboveground waste water storage tank

- Emission unit ID: TK15
- Emission point ID: TK15

One (1) 1,000 gallon horizontal aboveground produced fluids storage tank

- Emission unit ID: TK16
- Emission point ID: TK16

One (1) 330 gallon vertical aboveground triethylene glycol storage tank

- Emission unit ID: TK17
- Emission point ID: TK17

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

- Emission unit ID: TK18
- Emission point ID: TK18

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

- Emission unit ID: TK19
- Emission point ID: TK19

One (1) 3,000 gallon horizontal aboveground produced fluids storage tank

- Emission unit ID: TK20
- Emission point ID: TK20

One (1) 500 gallon horizontal aboveground lube oil storage tank

- Emission unit ID: TK21
- Emission point ID: TK21

One (1) 1,000 gallon vertical aboveground waste water storage tank

- Emission unit ID: TK22
- Emission point ID: TK22

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

- Emission unit ID: TK23
- Emission point ID: TK23

One (1) 230 gallon horizontal aboveground ice chek storage tank

- Emission unit ID: TK25
- Emission point ID: TK25

One (1) 130 gallon horizontal aboveground ice chek storage tank

- Emission unit ID: TK26
- Emission point ID: TK26

SECTION 2

Title V Operating Permit
Renewal Application –
General Forms

WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF AIR QUALITY
601 57th Street SE
Charleston, WV 25304
Phone: (304) 926-0475
www.dep.wv.gov/daq

INITIAL/RENEWAL TITLE V PERMIT APPLICATION - GENERAL FORMS

Section 1: General Information

1. **Name of Applicant (As registered with the WV Secretary of State's Office):** Dominion Transmission, Inc.	**2. Facility Name or Location:** Cornwell Station
3. DAQ Plant ID No.: 0 3 9 — 0 0 0 5 1	**4. Federal Employer ID No. (FEIN):** 5 5 0 6 2 9 2 0 3

5. **Permit Application Type:**

☐ Initial Permit — When did operations commence? 1947
☒ Permit Renewal — What is the expiration date of the existing permit? 7/10/2017
☐ Update to Initial/Renewal Permit Application

6. Type of Business Entity:

☒ Corporation ☐ Governmental Agency ☐ LLC
☐ Partnership ☐ Limited Partnership

8. Number of onsite employees:

14

7. Is the Applicant the:

☐ Owner ☐ Operator ☒ Both

If the Applicant is not both the owner and operator, please provide the name and address of the other party.

_____
_____
_____

9. Governmental Code:

☒ Privately owned and operated; 0
☐ Federally owned and operated; 1
☐ State government owned and operated; 2
☐ County government owned and operated; 3
☐ Municipality government owned and operated; 4
☐ District government owned and operated; 5

10. Business Confidentiality Claims

Does this application include confidential information (per 45CSR31)? ☐ Yes ☒ 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.

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

12. Facility Location		
Street: 2883 River Haven Road	**City:** Clendenin	**County:** Kanawha
UTM Easting: 476.19 km	**UTM Northing:** 4,259.58 km	**Zone:** ☒ 17 or ☐ 18
Directions: From I-79, take exit 19 to WV State Route 4. Take Route 4 north to Clendenin, cross Elk River on Queen Shoals Road (Route 1). Turn left onto River Haven Road (Route 1/6) and proceed 2.5 miles to the station.		
Portable Source? ☐ Yes ☒ No		
Is facility located within a nonattainment area? ☐ Yes ☒ No		**If yes, for what air pollutants?**
Is facility located within 50 miles of another state? ☒ Yes ☐ No		**If yes, name the affected state(s).** Ohio
Is facility located within 100 km of a Class I Area[1]? ☐ Yes ☒ No **If no, do emissions impact a Class I Area[1]?** ☐ Yes ☒ No		**If yes, name the area(s).**

[1] *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.*

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

Cornwell Station is a compressor facility that services a natural gas pipeline system. The compressor engines (EN07-EN19) at the facility receive natural gas flowing through a valve on the pipeline and recompresses 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.	
☐ SIP	☐ FIP
☒ Minor source NSR (45CSR13)	☐ PSD (45CSR14)
☒ NESHAP (45CSR34)	☐ Nonattainment NSR (45CSR19)
☒ Section 111 NSPS	☒ Section 112(d) MACT standards
☐ Section 112(g) Case-by-case MACT	☐ 112(r) RMP
☐ Section 112(i) Early reduction of HAP	☐ Consumer/commercial prod. reqts., section 183(e)
☐ Section 129 Standards/Reqts.	☐ Stratospheric ozone (Title VI)
☐ Tank vessel reqt., section 183(f)	☐ Emissions cap 45CSR§30-2.6.1
☐ NAAQS, increments or visibility (temp. sources)	☐ 45CSR27 State enforceable only rule
☒ 45CSR4 State enforceable only rule	☐ Acid Rain (Title IV, 45CSR33)
☐ Emissions Trading and Banking (45CSR28)	☐ **C**ompliance **A**ssurance **M**onitoring (40CFR64)
☐ CAIR NO_x Annual Trading Program (45CSR39)	☐ CAIR NO_x Ozone Season Trading Program (45CSR40)
☐ CAIR SO_2 Trading Program (45CSR41)	
19. Non Applicability Determinations	

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.

45 CSR 10 – Compressor engines (EN07 – EN19) have been excluded from the applicability of SO_2 and H_2S limits. WVDAQ determined that 45 CSR 10 is not applicable to compressor engines.
40 CFR 60 Subpart JJJJ – The compressor engines (EN07, EN08, EN10 – EN19) and auxiliary generator (AUX04) are not subject to this subpart since they were manufactured before the applicability date.
40 CFR 60 Subpart OOOOa – This subpart does not apply to the facility since the facility does not have gas wells, centrifugal compressors, reciprocating compressors, and/or pneumatic controllers constructed, modified, or reconstructed after September 18, 2015. In addition, there has been no increase in compression horsepower at the facility.

40 CFR 63 Subpart HHH – This subpart does not apply to the facility since the dehydration unit is located on the production section of the facility, which is not subject to this rule.

40 CFR 63 Subpart DDDDD – The reboiler (RBR01) is not subject to this subpart since it is exempt by §63.7491(h) and the production facility is not major source of HAPs.
40 CFR 63 Subpart JJJJJJ – 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.
40 CFR 64 – The dehy unit (DEHY01) is not applicable 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 R13-2346C 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)). In addition, EN09 is not subject to CAM as potential pre-control emissions are not above major source thresholds (64.2(a)(3)).

☒ 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 <u>construction permit</u> 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 3.1.9)
45 CSR 30-12.7 – Burn natural gas meeting the FERC requirements for all combustion equipment (TV 3.9)

☐ 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)
WV Code 22-5-4 (a) (14) – The permittee shall submit annual emission inventory reporting (TV 3.1.6)
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; R13-2175D 4.1.1 and R13-2346C 4.4.1)
45 CSR 4-3.1 – Permittee shall maintain records of all odor complaints received (TV 3.4.3)
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 3.5.4)
45 CSR 30-5.3.e – The permittee shall submit annual compliance certifications (TV 3.5.5)
45 CSR 30-5.1.c.3.A – The permittee shall submit semi-annual monitoring reports (TV 3.5.6)

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

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

21. Active Permits/Consent Orders		
Permit or Consent Order Number	Date of Issuance MM/DD/YYYY	List any Permit Determinations that Affect the Permit *(if any)*
R13-2175D	4/30/2012	N/A
R13-2346C	11/16/2012	N/A

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

Section 3: Facility-Wide Emissions

23. Facility-Wide Emissions Summary [Tons per Year]	
Criteria Pollutants	Potential Emissions
Carbon Monoxide (CO)	515.04
Nitrogen Oxides (NO_X)	3,301.00
Lead (Pb)	N/A
Particulate Matter ($PM_{2.5}$)[1]	17.12
Particulate Matter (PM_{10})[1]	17.12
Total Particulate Matter (TSP)	23.17
Sulfur Dioxide (SO_2)	0.39
Volatile Organic Compounds (VOC)	450.15
Hazardous Air Pollutants[2]	Potential Emissions
Acetaldehyde	4.82
Acrolein	4.29
Benzene	1.35
Ethylbenzene	0.05
Formaldehyde	32.57
Hexane	0.66
Toluene	1.39
Xylene	1.18
Regulated Pollutants other than Criteria and HAP	Potential Emissions

[1] *$PM_{2.5}$ and PM_{10} are components of TSP.*
[2] *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

24. Insignificant Activities (Check all that apply)		
☒	1.	Air compressors and pneumatically operated equipment, including hand tools.
☐	2.	Air contaminant detectors or recorders, combustion controllers or shutoffs.
☒	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.
☒	4.	Bathroom/toilet vent emissions.
☐	5.	Batteries and battery charging stations, except at battery manufacturing plants.
☐	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.
☐	7.	Blacksmith forges.
☐	8.	Boiler water treatment operations, not including cooling towers.
☐	9.	Brazing, soldering or welding equipment used as an auxiliary to the principal equipment at the source.
☐	10.	CO_2 lasers, used only on metals and other materials which do not emit HAP in the process.
☐	11.	Combustion emissions from propulsion of mobile sources, except for vessel emissions from Outer Continental Shelf sources.
☒	12.	Combustion units designed and used exclusively for comfort heating that use liquid petroleum gas or natural gas as fuel.
☒	13.	Comfort air conditioning or ventilation systems not used to remove air contaminants generated by or released from specific units of equipment.
☐	14.	Demineralized water tanks and demineralizer vents.
☐	15.	Drop hammers or hydraulic presses for forging or metalworking.
☐	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.
☐	17.	Emergency (backup) electrical generators at residential locations.
☐	18.	Emergency road flares.
☐	19.	Emission units which do not have any applicable requirements and which emit criteria pollutants (CO, NO_x, SO_2, 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. Please specify all emission units for which this exemption applies along with the quantity of criteria pollutants emitted on an hourly and annual basis: _____ _____ _____ _____ _____ _____ _____ _____ _____

24. Insignificant Activities (Check all that apply)		
☐	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. 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: _____ _____ _____ _____ _____
☐	21.	Environmental chambers not using hazardous air pollutant (HAP) gases.
☒	22.	Equipment on the premises of industrial and manufacturing operations used solely for the purpose of preparing food for human consumption.
☐	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.
☐	24.	Equipment used for quality control/assurance or inspection purposes, including sampling equipment used to withdraw materials for analysis.
☐	25.	Equipment used for surface coating, painting, dipping or spray operations, except those that will emit VOC or HAP.
☐	26.	Fire suppression systems.
☒	27.	Firefighting equipment and the equipment used to train firefighters.
☐	28.	Flares used solely to indicate danger to the public.
☒	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.
☐	30.	Hand-held applicator equipment for hot melt adhesives with no VOC in the adhesive formulation.
☒	31.	Hand-held equipment for buffing, polishing, cutting, drilling, sawing, grinding, turning or machining wood, metal or plastic.
☐	32.	Humidity chambers.
☐	33.	Hydraulic and hydrostatic testing equipment.
☐	34.	Indoor or outdoor kerosene heaters.
☒	35.	Internal combustion engines used for landscaping purposes.
☐	36.	Laser trimmers using dust collection to prevent fugitive emissions.
☐	37.	Laundry activities, except for dry-cleaning and steam boilers.
☐	38.	Natural gas pressure regulator vents, excluding venting at oil and gas production facilities.
☐	39.	Oxygen scavenging (de-aeration) of water.
☐	40.	Ozone generators.

24. Insignificant Activities (Check all that apply)		
☒	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.)
☐	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.
☐	43.	Process water filtration systems and demineralizers.
☐	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.
☒	45.	Repairs or maintenance where no structural repairs are made and where no new air pollutant emitting facilities are installed or modified.
☐	46.	Routing calibration and maintenance of laboratory equipment or other analytical instruments.
☐	47.	Salt baths using nonvolatile salts that do not result in emissions of any regulated air pollutants. Shock chambers.
☐	48.	Shock chambers.
☐	49.	Solar simulators.
☐	50.	Space heaters operating by direct heat transfer.
☐	51.	Steam cleaning operations.
☐	52.	Steam leaks.
☐	53.	Steam sterilizers.
☒	54.	Steam vents and safety relief valves.
☐	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.
☒	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.
☐	57.	Such other sources or activities as the Director may determine.
☐	58.	Tobacco smoking rooms and areas.
☐	59.	Vents from continuous emissions monitors and other analyzers.

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

25. Equipment Table
Fill out the **Title V Equipment Table** and provide it as **ATTACHMENT D**.
26. Emission Units
For each emission unit listed in the **Title V Equipment Table**, fill out and provide an **Emission Unit Form** as **ATTACHMENT E**.
For each emission unit not in compliance with an applicable requirement, fill out a **Schedule of Compliance Form** as **ATTACHMENT F**.
27. Control Devices
For each control device listed in the **Title V Equipment Table**, fill out and provide an **Air Pollution Control Device Form** as **ATTACHMENT G**.
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 **Compliance Assurance Monitoring (CAM) Form(s)** for CAM applicability. Fill out and provide these forms, if applicable, for each Pollutant Specific Emission Unit (PSEU) as **ATTACHMENT H**.

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:

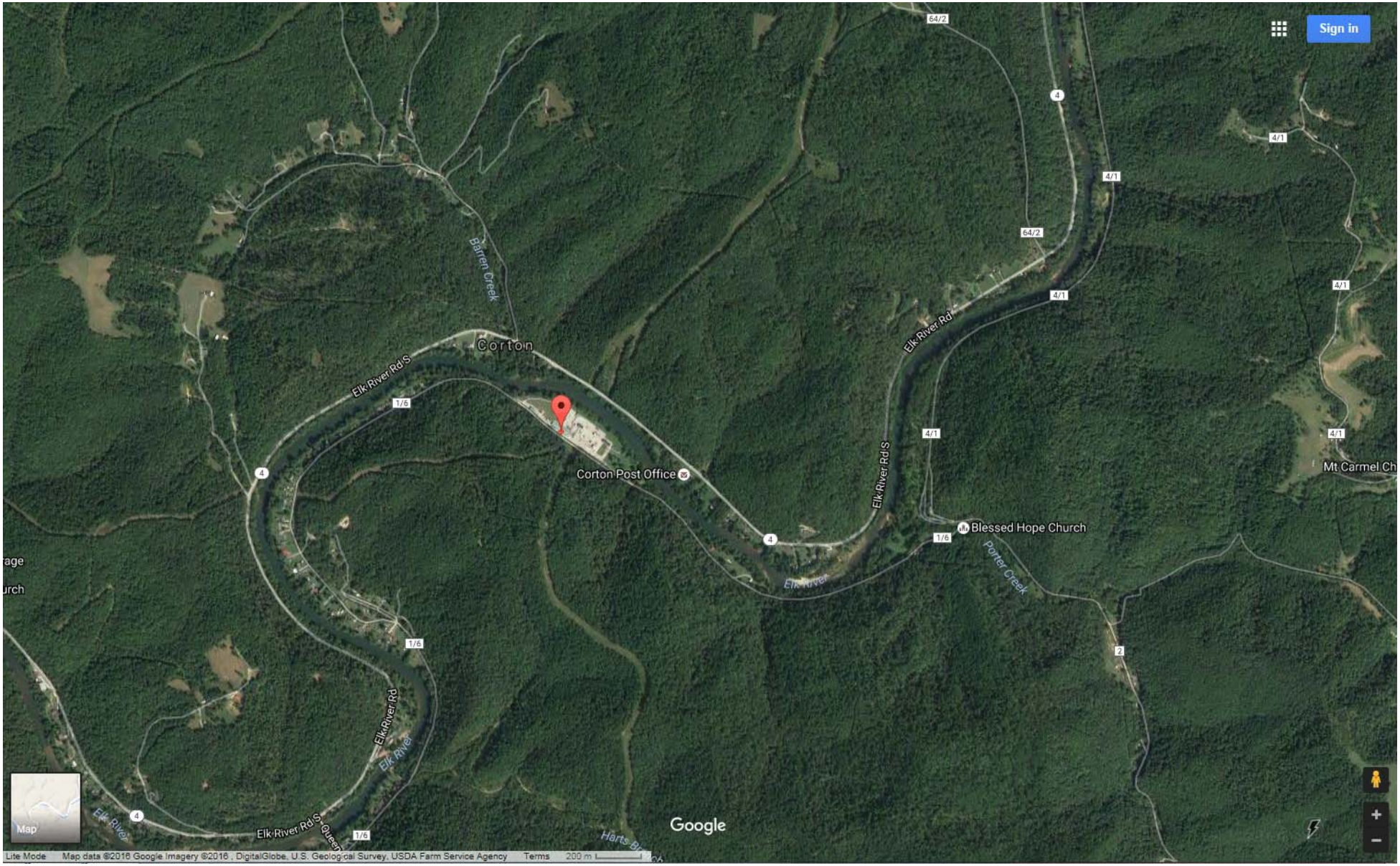
Signature: _____ Signature Date: 11-09-16
(Must be signed and dated in blue ink)

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/daq, requested by phone (304) 926-0475, and/or obtained through the mail.

Attachment A

Area Map


Sign in
Barren Creek
Corton
Elk River Rd S
Corton Post Office
Elk River Rd
Elk River Rd S
Blessed Hope Church
Mt Carmel Ch
Porter Creek
Elk River
Elk River Rd
Elk River Rd S Queen
Harts Br
Google
Map
Lite Mode
Map data ©2016 Google Imagery ©2016 , DigitalGlobe, U.S. Geological Survey, USDA Farm Service Agency
Terms
200 m

Attachment B

Plot Plan

INDOOR TANKS/CONTAINERS		
TANK	DESCRIPTION	LOCATION
*A-5	180-GALLON LUBE OIL	MAIN COMPRESSOR BLDG. (BASEMENT)
*A-6	110-GALLON LUBE OIL	MAIN COMPRESSOR BLDG. (BASEMENT)
B-3	200-GALLON ETHYLENE GLYCOL	MAIN COMPRESSOR BUILDING
B-4	200-GALLON ETHYLENE GLYCOL	MAIN COMPRESSOR BUILDING
E-2	53-GALLON USED OIL	MAIN COMPRESSOR BUILDING

*NOTE: A-5 & A-6 ARE PART OF THE LUBE OIL SYSTEM AND CONSIDERED OIL FILLED MECHANICAL EQUIMENT.

LEGEND:
- ABOVE GROUND OIL CONTAINING PIPE
- UNDERGROUND OIL CONTAINING PIPE
- SURFACE FLOW DIRECTION
- TRUCK LOADING/ UNLOADING AREA

REFERENCE :
AERIAL MAPPING BY AIR SURVEY CORPORATION DATED 4/4/93
WITH GROUND CONTROL BY MSES CONSULTANTS, INC. DATED APRIL 1993.
SITE MAPPING FIELD VERIFIED AND UPDATED JANUARY 2001.

SOURCE OF ELEVATION :
U.S.G.S. BENCH MARK,
226 SKS, SET 1956, ELEV. 637.731'
MSES CAD FILE NO. 00-584-1/DISK 1594

15,000-GALLON LUBE OIL TANK A-2
15,000-GALLON LUBE OIL TANK A-1
4,000-GALLON USED OIL TANK E-1
1,000-GALLON PRODUCED FLUIDS TANK I-3
1,000-GALLON WASTE WATER TANK G-1
75-GALLON USED OIL TANK E-6
500-GALLON LUBE OIL TANK A-3
1,000-GALLON ETHYLENE GLYCOL TANK B-2
ELK RIVER
WOODED AREA
CONCRETE PAD W/ CONCRETE CURB
3,000-GALLON PRODUCED FLUIDS TANK I-1
1,000-GALLON PRODUCED FLUIDS TANK I-2
550-GALLON PRODUCED FLUIDS TANK I-4
PARKING LOT
STATION OFFICE BUILDING
STORAGE BUILDING
GARAGE
AUXILIARY BUILDING
GENERATOR
OUTFALL #002 DRAIN W/VALVE
CONCRETE CURB
AIR TANKS
DAY TANK
SUCT. SCRUBBER
DISCH. SCRUBBER
COMPRESSOR SHED
WET GAS COMPRESSOR BLDG.
UNIT #9 SCRUBBER (PERMANENTLY CLOSED)
UNIT #7 & #8 SCRUBBER
CONTACTOR
FILTER/SEPARATOR FOR TENNESSEE
PIPE
COOLER AREA
UNIT #9 HYDRAULIC COOLER
CONCRETE CURB
DEHY. SKIMMER TANK
3RD STAGE SUCTION SCRUBBER
1ST STAGE SUCTION SCRUBBER
2ND STAGE SUCTION SCRUBBER
1,000-GALLON MOP WATER TANK (K-1)
(3) LOWER BANK TENNESSEE SCRUBBERS
* DRUM STORAGE BUILDING
COOLER AREA
HELICAL SEP.
230-GALLON ICE CHECK TANK (IC-2)
2 DRUM STORAGE
KING TOOL
FILTER
SEP
330-GALLON TRIETHYLENE GLYCOL TANK T-1
TL-382 FILTER SEPARATOR
COMPRESSOR BUILDING 3
GRAVEL
MAIN GATE
DUMPSTER
HEAVY SHED
RAMP
CONCRETE CURB
DRAIN W/VALVE
TRUCK LOADING
A-5
A-6
B-4
B-3
MAIN COMPRESSOR BUILDING
E-2
130-GALLON ICE CHECK TANK (IC-1)
TL-585 FILTER SEPARATOR
(3) UPPER BANK TENNESSEE SCRUBBERS
MHO
GATE
GRAVEL
STORAGE BUILDING
10,000-GALLON ETHYLENE GLYCOL TANK B-1
KINGTOOL FUEL GAS FILTER SEPARATOR
1,000-GALLON LUBE OIL TANK A-7
1,000-GALLON USED OIL TANK E-7
1,000-GALLON ETHYLENE GLYCOL TANK B-5
1,000-GALLON MOP WATER TANK K-2
WOODED AREA
WOODED AREA

OIL CONTAINING MECHANICAL EQUIPMENT		
QUANTITY	MATERIAL	LOCATION
8@250-GALLONS EACH	LUBE OIL	COOPER GMV10 MAIN COMPRESSOR BUILDING
2@350-GALLONS EACH	LUBE OIL	INGERSOL RAND KVT MAIN COMPRESSOR BUILDING
2@110-GALLONS EACH	LUBE OIL	COOPER GMX SECONDARY COMPRESSOR BUILDING
90-GALLONS	LUBE OIL	CATERPILLAR 3512 COMPRESSOR SKID
95-GALLONS	LUBE OIL	AJAX DPC 2804 COMPRESSOR BUILDING 3
90-GALLONS	LUBE OIL	CATERPILLAR GENERATOR AUXILIARY BUILDING
>200-GALLONS	HYDRAULIC OIL	HYDRAULIC COOLER OUTSIDE SECONDARY COMPRESSOR BUILDING
798-GALLONS	DISTILLATE	DEHY. SKIMMER TANK
6@1,855-GALLONS EACH	PIPELINE FLUIDS	(3) UPPER AND (3) LOWER BANK TENNESSEE GAS SCRUBBERS
228-GALLONS	PIPELINE FLUIDS	TL-382 FILTER SEPARATOR
795-GALLONS	PIPELINE FLUIDS	TL-585 FILTER SEPARATOR
1,395-GALLONS	PIPELINE FLUIDS	TENNESSEE FILTER SEPARATOR

OIL CONTAINING MECHANICAL EQUIPMENT		
QUANTITY	MATERIAL	LOCATION
1128 GALLONS	PIPELINE FLUIDS	HELICAL SEPERATOR
72 GALLONS	PRODUCED FLUIDS	KINGTOOL FUEL GAS FILTER SEPARATOR
1504 GALLONS	PRODUCED FLUIDS	UNIT #7 & #8 SCRUBBER
141 GALLONS	PRODUCED FLUIDS	SUCTION SCRUBBER COMPRESSOR SHED
73 GALLONS	PRODUCED FLUIDS	DISCHARGE SCRUBBER COMPRESSOR SHED
435 GALLONS	PRODUCED FLUIDS	FILTER/SEPARATOR (KINGTOOL)
215 GALLONS	PRODUCED FLUIDS	1ST STAGE SUCTION SCRUBBER COMPRESSOR BUILDING 3
195 GALLONS	PRODUCED FLUIDS	2ND STAGE SUCTION SCRUBBER COMPRESSOR BUILDING 3
115 GALLONS	PRODUCED FLUIDS	3RD STAGE SUCTION SCRUBBER COMPRESSOR BUILDING 3

NOTE: THE OIL PIPING RUNS SHOWN ON THIS DRAWING ARE APPROXIMATE; FOR MORE DETAIL REFER TO "AS-BUILT" DRAWINGS MAINTAINED IN DTI's DRAFTING & RECORDS DEPARTMENT.

NOTE: THE MAXIMUM NUMBER OF DRUMS IN THE DRUM STORAGE BUILDING SHOULD TYPICALLY NOT EXCEED 50 DRUMS. THE TYPE AND LOCATION ON SITE CAN VARY DEPENDENT ON OPERATIONAL NEEDS FOR DRUMS ON SITE.

100' 0' 100' 200'
SCALE: 1"= 100'

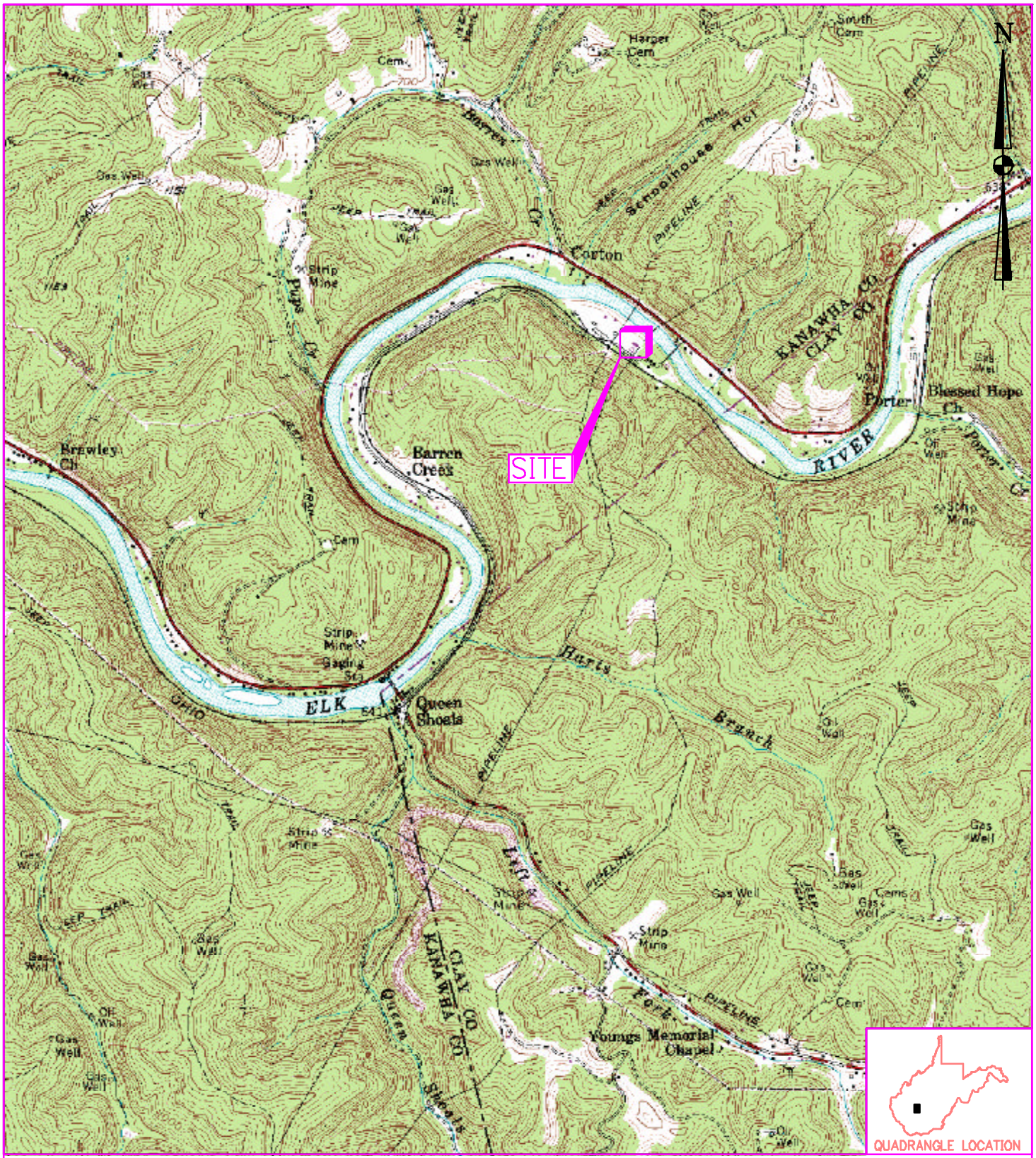
SYM.	DATE	BY	REVISION DESCRIPTION	PRJ/TSK	APP.
11	10/17/16	JAR	REMOVED A-4 & E-4, ADDED (BASEMENT) TO A-5, CHANGED B-5 TO ETHYLENE GLYCOL		
10	01/28/16	TBB	REVISED PER TIM JACKSON MARK UPS		
9	10/13/14	TBB	SCALED CORRECTLY & ADDED ADJACENT PROPERTIES		
8	02/13/14	BWH	PER TIM JACKSONS MARK UPS		
7	12/18/13	BWH	PER TIM JACKSONS MARK UPS		

SCALE	1" = 100'	DATE
DRAWN	JSS	07/17/06
CHECKED		
APP. FOR BID		
APP. FOR CONST.		
TOWN:	CLENDENIN, WV	COUNTY: KANAWHA

Dominion Transmission, Inc.
925 White Oaks Blvd. Bridgeport, West Virginia 26330 / Phone: (681) 842-3000

FOR: CORNWELL COMPRESSOR STATION
TITLE: ENVIRONMENTAL EMERGENCY SITE PLAN

DIR:	DOCUMENTUM	GROUP	DWG. NO.	REV.
FILE:	PRJ/TSK:	PD	X9780	11



REFERENCE: USGS 7.5' QUADRANGLE MAP OF: CLENDENIN, WEST VIRGINIA; DATED 1957, PHOTOREVISED 1976.

DRAWN BY	DJF
DATE	
CHECKED BY	
SET JOB NO.	205091
SET DWG FILE	CORNWELLm01.dwg
DRAWING SCALE	1"=2000'

TECHNOLOGIES
98 Vanadium Road Bridgeville, PA 15017 (412) 221-1100

DOMINION TRANSMISSION

CORNWELL COMPRESSOR STATION
KANAWHA COUNTY, WEST VIRGINIA
ENVIRONMENTAL EMERGENCY PLAN
SITE LOCATION MAP

DRAWING NO.	REV.
FIGURE 1	0

Plot: env045 05/25/2005 15:32 G:\DOMINION\205091\CORNWELLm01.dwg

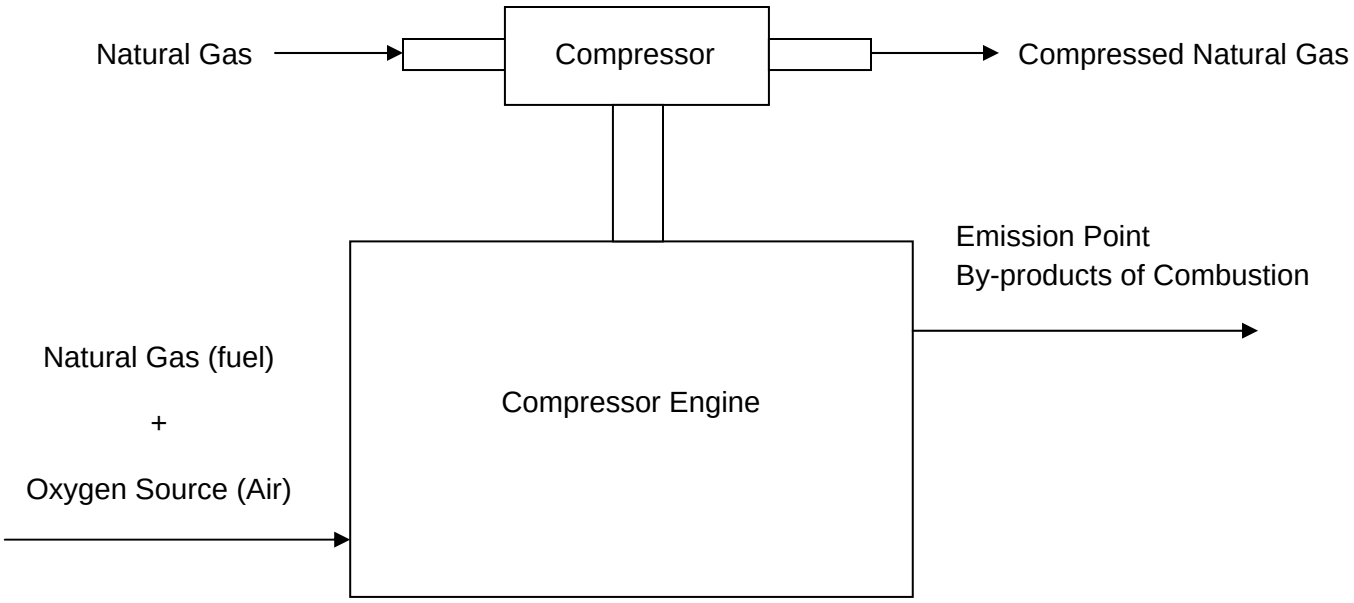
Attachment C

Process Flow Diagrams

Dominion Transmission, Inc.

Cornwell Compressor Station

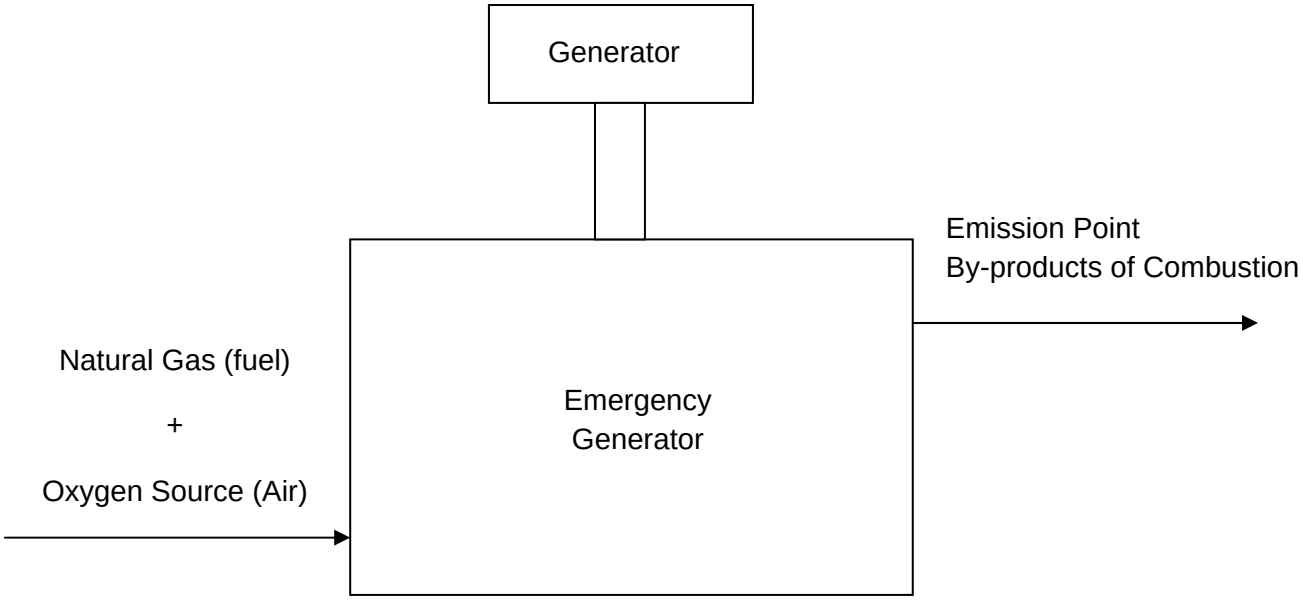
Compressor Engines (EN07 – EN19) Process Flow Diagram



Dominion Transmission, Inc.

Cornwell Compressor Station

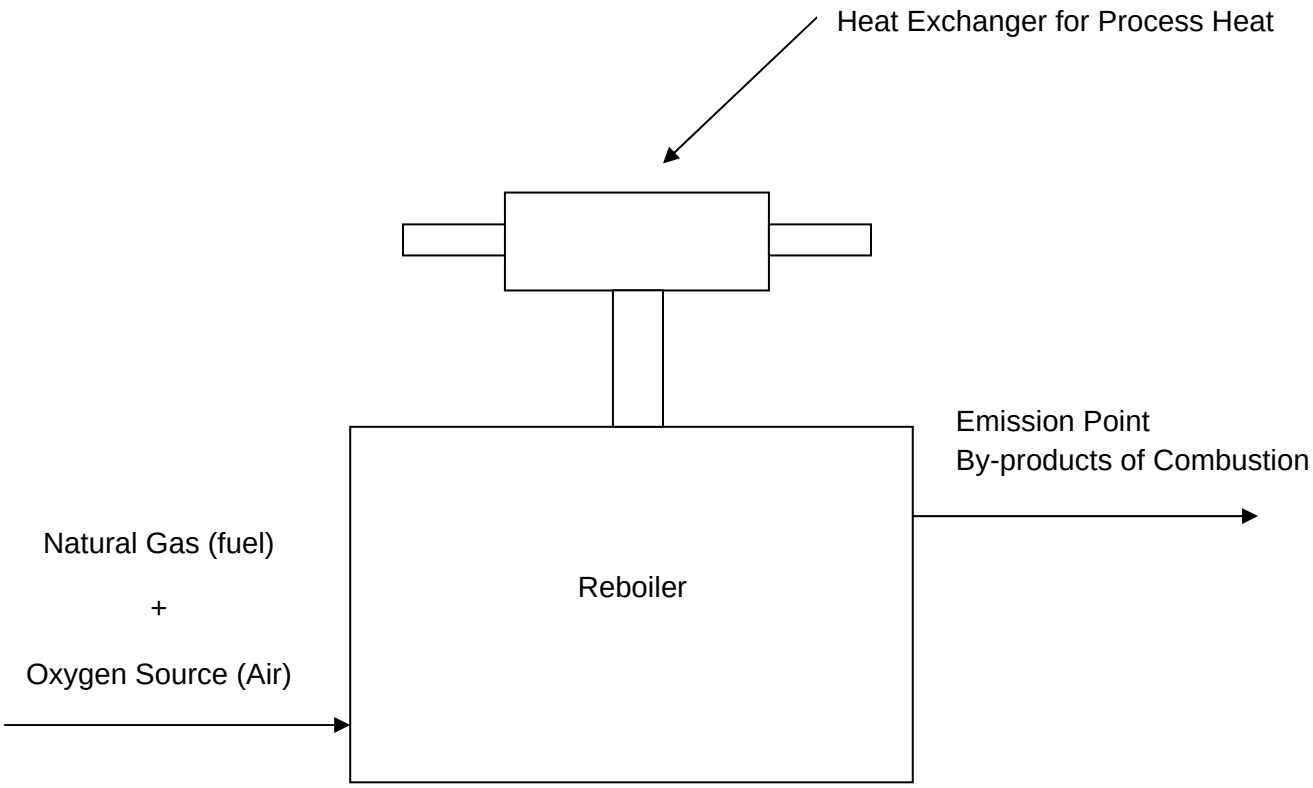
Emergency Auxiliary Generator (AUX04) Process Flow Diagram



Dominion Transmission, Inc.

Cornwell Compressor Station

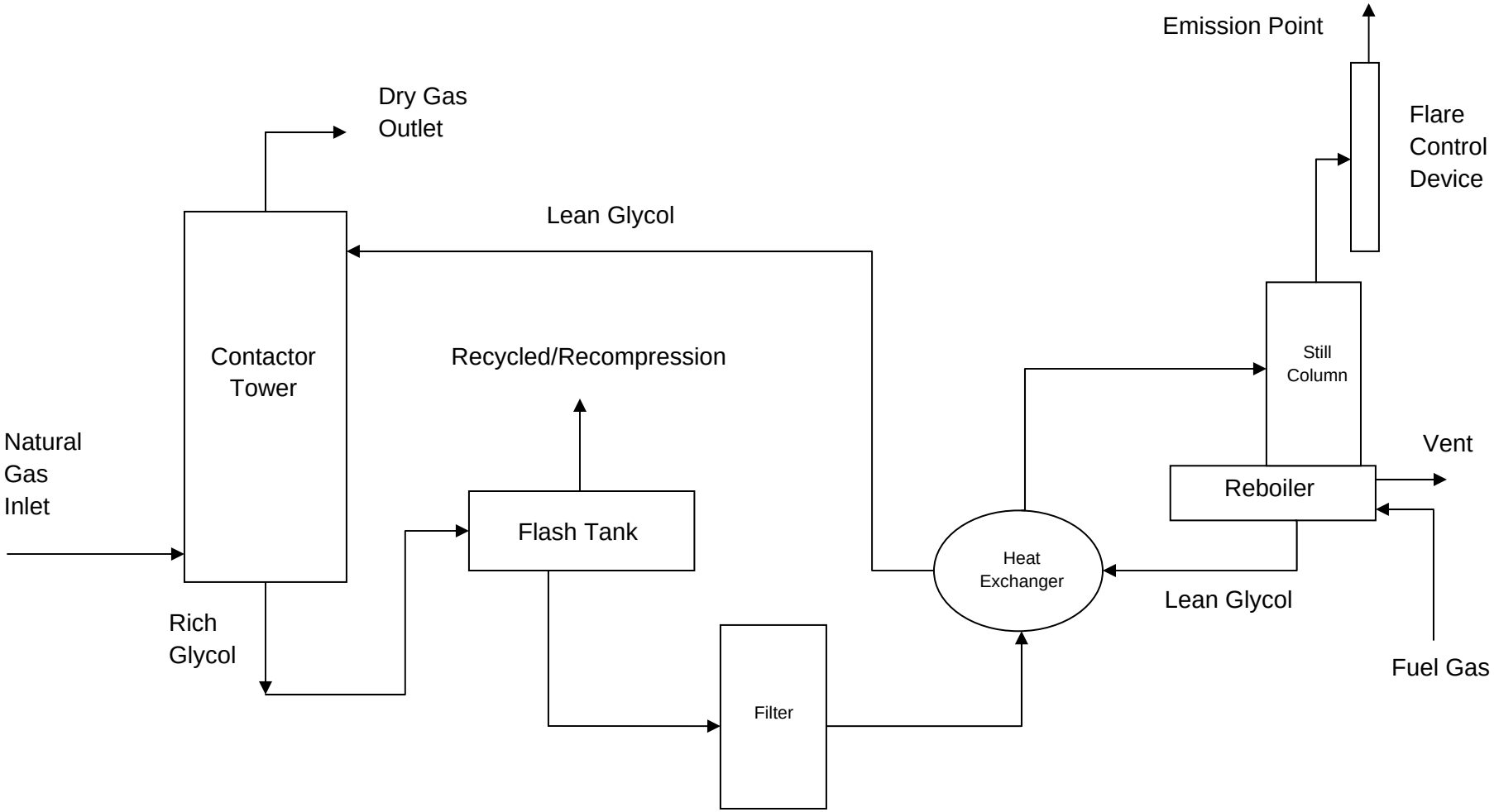
Reboiler (RBR01) Process Flow Diagram



Dominion Transmission, Inc.

Cornwell 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[1]	Control Device[1]	Emission Unit ID[1]	Emission Unit Description	Design Capacity	Year Installed/ Modified
EN07	N/A	001-01	Reciprocating Engine/Integral Compressor; Caterpillar Model G3512	810 hp	1988
EN08	N/A	001-02	Reciprocating Engine/Integral Compressor; Cooper GMX-8TF	440 hp	1969
EN09	CC01	001-10	Reciprocating Engine/Integral Compressor; Ajax DPC-2804LE	750 hp	2012
EN10	N/A	001-04	Reciprocating Engine/Integral Compressor; Cooper GMV-A-10TF	1,350 hp	1947
EN11	N/A	001-05	Reciprocating Engine/Integral Compressor; Cooper GMV-A-10TF	1,350 hp	1947
EN12	N/A	001-06	Reciprocating Engine/Integral Compressor; Cooper GMV-A-10TF	1,350 hp	1947
EN13	N/A	001-07	Reciprocating Engine/Integral Compressor; Cooper GMV-A-10TF	1,350 hp	1947
EN14	N/A	001-08	Reciprocating Engine/Integral Compressor; Cooper GMV-A-10TF	1,350 hp	1947
EN15	N/A	001-09	Reciprocating Engine/Integral Compressor; Cooper GMV-A-10TF	1,350 hp	1947
EN16	N/A	001-0A	Reciprocating Engine/Integral Compressor; Cooper GMV-A-10TF	1,350 hp	1947
EN17	N/A	001-0B	Reciprocating Engine/Integral Compressor; Cooper GMV-A-10TF	1,350 hp	1947
EN18	N/A	001-0C	Reciprocating Engine/Integral Compressor; Ingersoll Rand 410-KVT	2,500 hp	1962
EN19	N/A	001-0D	Reciprocating Engine/Integral Compressor; Ingersoll Rand 410-KVT	2,500 hp	1962
AUX04	N/A	002-04	Reciprocating Engine/Generator; Caterpillar G3512	810 hp	2002
DEHY01	F1	005-01	Dehydration Unit Still; Natco Model SHV-3	23 MMcf/day	1999
RBR01	N/A	006-01	Dehydration Reboiler; Natco 5GR-375-DX5	0.62 MMBtu/hr	1999
F1	N/A	0002	Dehydration Unit Flare; QTI Q250	10.0 MMBtu/hr	2012
TK01	N/A	TK01	Horizontal Aboveground Lube Oil Tank	15,000 Gallons	1995
TK02	N/A	TK02	Horizontal Aboveground Ethylene Glycol Tank	1,000 Gallons	2000
TK03	N/A	TK03	Horizontal Aboveground Ethylene Glycol Tank	10,000 Gallons	1990
TK04	N/A	TK04	Horizontal Aboveground Waste/Used Oil Tank	4,000 Gallons	1995

TK05	N/A	TK05	Horizontal Aboveground Lube Oil Tank	15,000 Gallons	1995
TK06	N/A	TK06	Horizontal Aboveground Produced Fluids Tank	1,000 Gallons	2004
TK08	N/A	TK08	Horizontal Aboveground Waste Water Tank	1,000 Gallons	1990
TK10	N/A	TK10	Horizontal Aboveground Waste/Used Oil Tank	53 Gallons	1990
TK11	N/A	TK11	Horizontal Aboveground Produced Fluids Tank	550 Gallons	2010
TK12	N/A	TK12	Horizontal Aboveground Ethylene Glycol Tank	200 Gallons	1990
TK13	N/A	TK13	Horizontal Aboveground Ethylene Glycol Tank	200 Gallons	1990
TK14	N/A	TK14	Horizontal Aboveground Waste/Used Oil Tank	75 Gallons	2000
TK15	N/A	TK15	Horizontal Aboveground Waste Water Tank	1,000 Gallons	2011
TK16	N/A	TK16	Horizontal Aboveground Produced Fluids Tank	1,000 Gallons	2007
TK17	N/A	TK17	Vertical Aboveground Triethylene Glycol Tank	330 Gallons	1999
TK18	N/A	TK18	Horizontal Aboveground Lube Oil Tank	1,000 Gallons	2012
TK19	N/A	TK19	Horizontal Aboveground Waste/Used Oil Tank	1,000 Gallons	2012
TK20	N/A	TK20	Horizontal Aboveground Produced Fluids Tank	3,000 Gallons	2013
TK21	N/A	TK21	Horizontal Aboveground Lube Oil Tank	500 Gallons	2013
TK22	N/A	TK22	Vertical Aboveground Waste Water Tank	1,000 Gallons	2012
TK23	N/A	TK23	Horizontal Aboveground Ethylene Glycol Tank	1,000 Gallons	2012
New units (and updates) to equipment list:					
TK25	N/A	TK25	Horizontal Aboveground Ice Chek Tank	230 Gallons	2013
TK26	N/A	TK26	Horizontal Aboveground Ice Chek Tank	130 Gallons	2013
Units that have been removed:					
CPR01	N/A	004-01	Air Compressor; Onan MS/4390E	25 hp	1985
TK07	N/A	TK07	Horizontal Aboveground Lube Oil Tank	400 Gallons	2013
TK09	N/A	TK09	Horizontal Aboveground Methanol Tank	130 Gallons	N/A
TK24	N/A	TK24	Horizontal Aboveground Methanol Tank	230 Gallons	N/A

[1]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

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
AUX04	AUX04 Emergency Generator	NA

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

Natural gas-fired emergency auxiliary generator

Manufacturer:	**Model number:**	**Serial number:**
Caterpillar	G3512	CTM00272
Construction date:	**Installation date:**	**Modification date(s):**
2002	2002	N/A

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

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
5,882 scf/hr	8.823 MMscf/yr	1,500 hrs/yr

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

Does this emission unit combust fuel? _X__Yes ___ No	**If yes, is it?** ___ Indirect Fired _X__Direct Fired
Maximum design heat input and/or maximum horsepower rating: 810 hp	**Type and Btu/hr rating of burners:** 6.0 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 = 5,882 scf/hr
- Maximum annual fuel usage = 8.823 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	1,020 Btu/cf

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	2.85	2.14
Nitrogen Oxides (NO_X)	3.57	2.68
Lead (Pb)	N/A	N/A
Particulate Matter ($PM_{2.5}$)	< 0.01	< 0.01
Particulate Matter (PM_{10})	< 0.01	< 0.01
Total Particulate Matter (TSP)	0.06	0.04
Sulfur Dioxide (SO_2)	0.01	< 0.01
Volatile Organic Compounds (VOC)	1.28	0.96
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Acetaldehyde	0.05	0.04
Acrolein	0.03	0.02
Benzene	< 0.01	< 0.01
Ethylbenzene	< 0.01	< 0.01
Formaldehyde	0.32	0.24
Toluene	< 0.01	< 0.01
Xylene	< 0.01	< 0.01
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

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.).

- CO, NOx, and VOC emission rates based on manufacturer specs.
- PM10, PM2.5, SO2, and HAP emission factors based on AP-42 Section 3.2, Table 3.2-2.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> 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 design heat input of 6.0 MMBtu/hr, heat content of 1,020 Btu/cf, and only burn natural gas (TV 6.1.4; R13-2346C 6.1.1)
45 CSR 13 – Emission limits (TV 6.1.5; R13-2346C 6.1.2)
45 CSR 13 – Fuel throughput limit of 8.823 MMcf/yr (TV 6.1.6; R13-2346C 6.1.3)
40 CFR Part 63 Subpart ZZZZ - Existing emergency stationary RICE with a rating of > 500 HP located at a major source of HAP emissions do not have to meet the requirements of 40 CFR 63 Subpart ZZZZ, including initial notification (§63.6590(b)(3)(iii))

____ 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 13 – Permittee shall maintain a monthly certified record of the date(s) the generator was used, amount of natural gas consumed, and the aggregated amount of natural gas consumed for the previous 12 months (TV 6.4.2; R13-2346C 6.4.1)

Are you in compliance with all applicable requirements for this emission unit? _X__Yes ___No

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

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
DEHY01	DEHY01 Glycol Dehydration Unit	F1 Flare

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

Dehydration unit still column

Manufacturer:	**Model number:**	**Serial number:**
NATCO	SHV-3	

Construction date:	**Installation date:**	**Modification date(s):**
1999	1999	N/A

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

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
23 MMscf/day (daily)	8,395 MMscf/yr	8,760 hrs/yr

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

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating:	**Type and Btu/hr rating of burners:**

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 = 23 MMscf/day
- Maximum annual wet gas throughput = 8,395 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

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	N/A	N/A
Nitrogen Oxides (NO_X)	N/A	N/A
Lead (Pb)	N/A	N/A
Particulate Matter ($PM_{2.5}$)	N/A	N/A
Particulate Matter (PM_{10})	N/A	N/A
Total Particulate Matter (TSP)	N/A	N/A
Sulfur Dioxide (SO_2)	N/A	N/A
Volatile Organic Compounds (VOC)	3.64	15.93
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Benzene	0.10	0.42
Ethylbenzene	N/A	N/A
n-Hexane	0.06	0.27
Toluene	0.21	0.90
Xylenes	0.24	0.90
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

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.).

Emission rates for the dehydration unit were obtained from GRI GLYCalc 4.0 with a 95% destruction efficiency from the flare.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> 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 23 MMscf/day and 8,395 MMscf/yr (TV 5.1.7; R13-2346C 5.1.2)
45 CSR 13 – The dehydration unit shall not exceed 1 ton benzene/yr (TV 5.1.8; R13-2346C 5.1.3)
45 CSR 13 – Emission limits (TV 5.1.9; R13-2346C 5.1.1)
45 CSR 13 and 40 CFR Part 63 Subpart HH – The dehy unit is subject to NESHAP Subpart HH and shall meet the benzene exemption (TV 5.1.12; R13-2346C 5.1.5)

____ 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 13 and 40 CFR Part 63 Subpart HH – Determine benzene emissions units GLYCalc (TV 5.2.4; R13-2346C 5.3.2)
45 CSR 13 and 40 CFR Part 63 Subpart HH – Maintain daily and annual records of the dehydrator unit's operating hours and natural gas flow. Maintain records of any maintenance performed on the dehydrator unit (TV 5.4.2; R13-2346C 5.4.1)
45 CSR 13 and 40 CFR Part 63 Subpart HH – Maintain records of actual average benzene emissions (TV 5.4.3; R13-2346C 5.4.4)
45 CSR 13 and 40 CFR Part 63 Subpart HH – Maintain records of malfunction and applicable records in 40 CFR Part 63, Subpart A (TV 5.4.6 and 5.4.7; R13-2346C 5.4.6 and 5.4.7)
45 CSR 13 and 40 CFR Part 63 Subpart HH – Notification of process change (TV 5.5.4; R13-2346C 5.5.4)

Are you in compliance with all applicable requirements for this emission unit? _X_Yes ___No

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

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
001-01	EN07 Reciprocating Engine/Integral Compressor	N/A

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

Natural gas fired reciprocating engine/integral compressor

Manufacturer:	**Model number:**	**Serial number:**
Caterpillar	G3512	87045
Construction date:	**Installation date:**	**Modification date(s):**
	1998	N/A

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

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
0.0060 MMscf/hr	52.56 MMscf/yr	8,760 hrs/yr

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

Does this emission unit combust fuel? _X_Yes ___ No	**If yes, is it?** ___ Indirect Fired _X_Direct Fired
Maximum design heat input and/or maximum horsepower rating: 810 hp	**Type and Btu/hr rating of burners:** 7,407 Btu/hp-hr 6.0 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 = 0.0060 MMscf/hr
- Maximum annual fuel usage = 52.56 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

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	2.86	12.51
Nitrogen Oxides (NO_X)	6.16	26.99
Lead (Pb)	N/A	N/A
Particulate Matter ($PM_{2.5}$)	< 0.01	< 0.01
Particulate Matter (PM_{10})	< 0.01	< 0.01
Total Particulate Matter (TSP)	0.06	0.26
Sulfur Dioxide (SO_2)	< 0.01	0.02
Volatile Organic Compounds (VOC)	0.71	3.13
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Acetaldehyde	0.05	0.22
Acrolein	0.03	0.14
Benzene	< 0.01	0.01
Ethylbenzene	< 0.01	< 0.01
Formaldehyde	0.18	0.79
Hexane	0.01	0.03
Toluene	< 0.01	0.01
Xylene	< 0.01	< 0.01
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

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.).

- CO, NOx, VOC, and Formaldehyde emission rates based on permit limits from R13-2175C.
- PM10, PM2.5, SO2, and HAP emission factors based on AP-42 Section 3.2, Table 3.2-2.

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.

**Note: This unit is a "remote" unit under NESHAP Subpart ZZZZ. Therefore, the requirements below are based off of that category and not of the conditions in the Title V permit (which are not for remote units).

45 CSR 13 – Emission limits (TV 6.1.1; R13-2175D 5.1.1 and 5.1.2)
40 CFR Part 63 Subpart ZZZZ – NESHAP maintenance requirements
40 CFR Part 63 Subpart ZZZZ – NESHAP operating requirements
40 CFR Part 63 Subpart ZZZZ – NESHAP continuous compliance requirements
40 CFR Part 63 Subpart ZZZZ – NESHAP general requirements/provisions

____ 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 – Change oil and filter, inspect spark plugs, and inspect all hoses and belts every 2,160 hours of operation or annually, whichever comes first, or implement an oil analysis program (63.6595(a)(1), 63.6603, and Table 2d)
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 (63.6625(e)(5), 63.6640(a), and Table 6)
40 CFR Part 63 Subpart ZZZZ – Evaluate the status of the RICE every 12 months to determine the remote status (63.6603(f))
40 CFR Part 63 Subpart ZZZZ – Be in compliance with the NESHAP work practice standards within 30 minutes of startup. Minimize idling time (63.6625(h))
40 CFR Part 63 Subpart ZZZZ – Comply with all applicable general requirements/provisions (63.6605)
40 CFR Part 63 Subpart ZZZZ – Comply with all applicable recordkeeping requirements (63.6640, 63.6655, 63.10(b)(1))
40 CSR 30-5.1.c.3.C – Portable testing for EN07 once every 6 months (TV 6.3.1)
40 CSR 45 and 30-5.1.c – Maintain monthly records and 12-month rolling totals of the amount of natural gas consumed and the hours of operation (TV 6.4.1; R13-2175D 5.3.1)

Are you in compliance with all applicable requirements for this emission unit? _X_Yes ___No

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

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
001-02	EN08 Reciprocating Engine/Integral Compressor	N/A

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

Natural gas fired reciprocating engine/integral compressor

Manufacturer:	**Model number:**	**Serial number:**
Cooper	GMX-8TF	
Construction date:	**Installation date:**	**Modification date(s):**
	1969	N/A

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

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
0.0037 MMscf/hr	32.76 MMscf/yr	8,760 hrs/yr

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

Does this emission unit combust fuel? _X_Yes ___ No	**If yes, is it?** ___ Indirect Fired _X_Direct Fired
Maximum design heat input and/or maximum horsepower rating: 440 hp	**Type and Btu/hr rating of burners:** 8,500Btu/hp-hr 3.74 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 = 0.0037 MMscf/hr
- Maximum annual fuel usage = 32.76 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

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	2.91	12.75
Nitrogen Oxides (NO_X)	19.69	86.24
Lead (Pb)	N/A	N/A
Particulate Matter ($PM_{2.5}$)	0.14	0.63
Particulate Matter (PM_{10})	0.14	0.63
Total Particulate Matter (TSP)	0.18	0.79
Sulfur Dioxide (SO_2)	< 0.01	0.01
Volatile Organic Compounds (VOC)	2.20	9.64
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Acetaldehyde	0.03	0.13
Acrolein	0.03	0.13
Benzene	0.01	0.03
Ethylbenzene	< 0.01	< 0.01
Formaldehyde	0.21	0.90
Hexane	< 0.01	0.01
Toluene	< 0.01	0.02
Xylene	< 0.01	< 0.01
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

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.).

- CO, NOx, and VOC emission rates based on manufacturer specs.
- PM10, PM2.5, SO2, and HAP emission factors based on AP-42 Section 3.2, Table 3.2-1, 8/00

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> 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 maintenance requirements (TV 6.1.7.b)
40 CFR Part 63 Subpart ZZZZ – NESHAP general requirements/provisions (TV 6.1.7.c and d)
40 CFR Part 63 Subpart ZZZZ – NESHAP continuous compliance requirements (TV 6.1.7.h)

____ 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 – Change oil and filter, inspect spark plugs, and inspect all hoses and belts every 4,320 hours of operation or annually, whichever one first (TV 6.1.7.b)
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 6.1.7.h)
40 CFR Part 63 Subpart ZZZZ – Minimize the engine's time spent at idling during startup, not to exceed 30 minutes (63.6625(h))
40 CFR Part 63 Subpart ZZZZ - Comply with all applicable recordkeeping requirements (TV 6.4.3)
40 CFR Part 63 Subpart ZZZZ – Keep records of maintenance and malfunctions on the stationary RICE (63.665(e) and 63.10)

Are you in compliance with all applicable requirements for this emission unit? _X_Yes ___No

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

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
001-10	EN09 Reciprocating Engine/Integral Compressor	CC01 Oxidation Catalyst

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

Natural gas fired reciprocating engine/integral compressor

Manufacturer:	**Model number:**	**Serial number:**
Ajax	DPC-2804-LE	85895
Construction date:	**Installation date:**	**Modification date(s):**
2012	2012	N/A

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

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
0.0056 MMscf/hr	49.18 MMscf/yr	8,760 hrs/yr

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

Does this emission unit combust fuel? _X_Yes ___ No	**If yes, is it?** ___ Indirect Fired _X_Direct Fired
Maximum design heat input and/or maximum horsepower rating: 750 hp	**Type and Btu/hr rating of burners:** 7,860 Btu/hp-hr 5.9 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 = 0.0056 MMscf/hr
- Maximum annual fuel usage = 49.18 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	1,050 Btu/cf

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	1.23	5.4
Nitrogen Oxides (NO_X)	1.65	7.2
Lead (Pb)	N/A	N/A
Particulate Matter ($PM_{2.5}$)	0.23	0.99
Particulate Matter (PM_{10})	0.23	0.99
Total Particulate Matter (TSP)	0.28	1.25
Sulfur Dioxide (SO_2)	< 0.01	0.02
Volatile Organic Compounds (VOC)	0.50	2.2
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Acetaldehyde	0.05	0.20
Acrolein	0.05	0.20
Benzene	0.01	0.05
Ethylbenzene	< 0.01	< 0.01
Formaldehyde	0.33	1.43
Hexane	< 0.01	0.01
Toluene	0.01	0.02
Xylene	< 0.01	0.01
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

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.).

- CO, NOx, and VOC emission factors and tons/yr values based on manufacturer specs.
  CO = Ajax manufacturer data, 11/8/10, at 560 hp load due to higher emissions
  NOx and VOC = Ajax manufacturer data, 11/8/10, at 100% load
- PM10, PM2.5, SO2, and HAP emission factors based on AP-42 Section 3.2, Table 3.2-1, 8/00

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> 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 – Emission limits (TV 6.1.2; R13-2175D 5.1.4)
45 CSR 13 – Catalyst maintenance and operation (TV 6.1.3 and 6.1.8; R13-2175D 5.1.5 and 4.1.2)
45 CSR 13 and 16 and 40 CFR Part 60 Subpart JJJJ – NSPS emission limits (TV 7.1.2 and 7.1.3; R13-2175 6.2.1 and 6.2.2)
45 CSR 13 and 16 and 40 CFR Part 60 Subpart JJJJ – Operate and maintain the engine to meet the emission standards over the entire life of the engine (TV 7.1.4; R13-2175D 6.2.3)

____ 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 13 – Regularly inspect, properly maintain and/or replace the catalytic reduction device to ensure functional and effective operation. Maintain proper operation of the automatic air/fuel ration controller or automatic feedback controller and follow operating and maintenance recommendations of the catalyst manufacturer (TV 6.2.1; R13-2175D 5.2.1)
40 CSR 45 and 30-5.1.c – Maintain monthly records and 12-month rolling totals of the amount of natural gas consumed and the hours of operation (TV 6.4.1; R13-2175D 5.3.1)
45 CSR 13 - Maintain records of malfunctions of the catalyst (TV 6.4.4; R13-2175D 4.1.3)
45 CSR 13 and 16 and 40 CFR Part 60 Subpart JJJJ – Purchase a non-certified engine and keep a maintenance plan and records of conducted maintenance. Conduct an initial performance test and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first (TV 7.2.1; R13-2175D 6.4.1)
45 CSR 13 and 16 and 40 CFR Part 60 Subpart JJJJ – Can operate using propane for a maximum of 100 hrs/yr as an alternative fuel during emergency operations. Keep records (TV 7.2.2; R13-2175D 6.4.2)
45 CSR 13 and 16 and 40 CFR Part 60 Subpart JJJJ – The air-to-fuel ratio controller must be maintained and operated appropriately to ensure proper operation of the engine and control device (TV 7.2.3; R13-2175D 6.4.3)
45 CSR 13 and 16 and 40 CFR Part 60 Subpart JJJJ – NSPS Subpart JJJJ testing requirements (TV 7.3.1; R13-2175D 6.5.1)
45 CSR 13 and 16 and 40 CFR Part 60 Subpart JJJJ – Maintain records of all notifications submitted, maintenance conducted on the engine, and documentation that the engine meets the emission standards (TV 7.4.1.a; R13-2175D 6.6.1.a)
45 CSR 13 and 16 and 40 CFR Part 60 Subpart JJJJ – Submit a copy of each performance test within 60 days after the test has been completed.
40 CFR Part 60 Subpart OOOO – Replace the reciprocating compressor rod packing (1) before the compressor has operated for 26,000 hours; or (2) prior to 36 months from the date of startup or the most recent rod packing replacement (60.5385(a))
40 CFR Part 60 Subpart OOOO – Continuously monitor the number of hours of operation or tack the number of months since the last rod packing replacement (60.5410(c), 60.5415(c)(1), and 60.5385(b and c))
40 CFR Part 60 Subpart OOOO – Submit initial annual report no later than 90 days after the end of the initial compliance period (60.5420(b), 60.5410(c)(3), and 60.5385(b and d))
40 CFR Part 60 Subpart OOOO – Submit subsequent annual reports no later than the same date each year as the initial annual report (60.5420(b), 60.5410(c)(3), 60.5415(c)(2), and 60.5385(b, c, and d))
40 CFR Part 60 Subpart OOOO – Maintain records of (1) cumulative number of hours of operation or number of months since initial startup or 10/15/12, or the previous replacement rod packing (2) date/time of each rod packing replacement (3) deviations in cases where the reciprocating compressor was not operated in compliance (60.5420(c)(3), 60.5410(c)(3), 60.5415(c)(2), and 60.5385(b, c, and d))
40 CFR Part 60 Subpart OOOO – Do not need to submit notifications required by 60.7(a)(1, 3, and 4) (60.5420(1)(1)

and 60.5385(d))
Are you in compliance with all applicable requirements for this emission unit? _X_Yes ___No If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
001-04	EN10 Reciprocating Engine/Integral Compressor	N/A

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

Natural gas fired reciprocating engine/integral compressor

Manufacturer:	**Model number:**	**Serial number:**
Cooper	GMV-A-10TF	41601
Construction date:	**Installation date:**	**Modification date(s):**
	1947	N/A

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
1,350 hp

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
0.0113 MMscf/hr	99.34 MMscf/yr	8,760 hrs/yr

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

Does this emission unit combust fuel? _X_Yes ___ No	**If yes, is it?** ___ Indirect Fired _X_Direct Fired
Maximum design heat input and/or maximum horsepower rating: 1,350 hp	**Type and Btu/hr rating of burners:** 8,400Btu/hp-hr 11.34 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 = 0.0113 MMscf/hr
- Maximum annual fuel usage = 99.34 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

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	8.93	39.11
Nitrogen Oxides (NO_X)	60.30	264.11
Lead (Pb)	N/A	N/A
Particulate Matter ($PM_{2.5}$)	0.44	1.91
Particulate Matter (PM_{10})	0.44	1.91
Total Particulate Matter (TSP)	0.55	2.40
Sulfur Dioxide (SO_2)	0.01	0.03
Volatile Organic Compounds (VOC)	6.76	29.61
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Acetaldehyde	0.09	0.39
Acrolein	0.09	0.39
Benzene	0.02	0.10
Ethylbenzene	< 0.01	0.01
Formaldehyde	0.63	2.74
Hexane	0.01	0.02
Toluene	0.01	0.05
Xylene	< 0.01	0.01
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

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.).

- CO, NOx, and VOC emission rates based on manufacturer specs.
- PM10, PM2.5, SO2, and HAP emission factors based on AP-42 Section 3.2, Table 3.2-1, 8/00

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> 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.

No applicable requirements.

40 CFR 63 Subpart ZZZZ - Existing spark ignition 2 stroke lean burn (2SLB) stationary RICE with a rating of > 500 HP located at a major source of HAP emissions do not have to meet the requirements of 40 CFR 63 Subpart ZZZZ, including initial notification (63.6590(b)(3)(i))

____ 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.)

No applicable requirements.

40 CFR 63 Subpart ZZZZ - Existing spark ignition 2 stroke lean burn (2SLB) stationary RICE with a rating of > 500 HP located at a major source of HAP emissions do not have to meet the requirements of 40 CFR 63 Subpart ZZZZ, including initial notification (63.6590(b)(3)(i))

Are you in compliance with all applicable requirements for this emission unit? _X_Yes ___No

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

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
001-05	EN11 Reciprocating Engine/Integral Compressor	N/A

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

Natural gas fired reciprocating engine/integral compressor

Manufacturer:	**Model number:**	**Serial number:**
Cooper	GMV-A-10TF	41599
Construction date:	**Installation date:**	**Modification date(s):**
	1947	N/A

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
1,350 hp

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
0.0113 MMscf/hr	99.34 MMscf/yr	8,760 hrs/yr

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

Does this emission unit combust fuel? _X_Yes ___ No	**If yes, is it?** ___ Indirect Fired _X_Direct Fired
Maximum design heat input and/or maximum horsepower rating: 1,350 hp	**Type and Btu/hr rating of burners:** 8,400Btu/hp-hr 11.34 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 = 0.0113 MMscf/hr
- Maximum annual fuel usage = 99.34 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

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	8.93	39.11
Nitrogen Oxides (NO_X)	60.30	264.11
Lead (Pb)	N/A	N/A
Particulate Matter ($PM_{2.5}$)	0.44	1.91
Particulate Matter (PM_{10})	0.44	1.91
Total Particulate Matter (TSP)	0.55	2.40
Sulfur Dioxide (SO_2)	0.01	0.03
Volatile Organic Compounds (VOC)	6.76	29.61
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Acetaldehyde	0.09	0.39
Acrolein	0.09	0.39
Benzene	0.02	0.10
Ethylbenzene	< 0.01	0.01
Formaldehyde	0.63	2.74
Hexane	0.01	0.02
Toluene	0.01	0.05
Xylene	< 0.01	0.01
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

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.).

- CO, NOx, and VOC emission rates based on manufacturer specs.
- PM10, PM2.5, SO2, and HAP emission factors based on AP-42 Section 3.2, Table 3.2-1, 8/00

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> 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.

No applicable requirements.

40 CFR 63 Subpart ZZZZ - Existing spark ignition 2 stroke lean burn (2SLB) stationary RICE with a rating of > 500 HP located at a major source of HAP emissions do not have to meet the requirements of 40 CFR 63 Subpart ZZZZ, including initial notification (63.6590(b)(3)(i))

____ 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.)

No applicable requirements.

40 CFR 63 Subpart ZZZZ - Existing spark ignition 2 stroke lean burn (2SLB) stationary RICE with a rating of > 500 HP located at a major source of HAP emissions do not have to meet the requirements of 40 CFR 63 Subpart ZZZZ, including initial notification (63.6590(b)(3)(i))

Are you in compliance with all applicable requirements for this emission unit? _X_Yes ___No

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

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
001-06	EN12 Reciprocating Engine/Integral Compressor	N/A

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

Natural gas fired reciprocating engine/integral compressor

Manufacturer:	**Model number:**	**Serial number:**
Cooper	GMV-A-10TF	41600
Construction date:	**Installation date:**	**Modification date(s):**
	1947	N/A

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
1,350 hp

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
0.0113 MMscf/hr	99.34 MMscf/yr	8,760 hrs/yr

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

Does this emission unit combust fuel? _X_Yes ___ No	**If yes, is it?** ___ Indirect Fired _X_Direct Fired
Maximum design heat input and/or maximum horsepower rating: 1,350 hp	**Type and Btu/hr rating of burners:** 8,400Btu/hp-hr 11.34 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 = 0.0113 MMscf/hr
- Maximum annual fuel usage = 99.34 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

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	8.93	39.11
Nitrogen Oxides (NO_X)	60.30	264.11
Lead (Pb)	N/A	N/A
Particulate Matter ($PM_{2.5}$)	0.44	1.91
Particulate Matter (PM_{10})	0.44	1.91
Total Particulate Matter (TSP)	0.55	2.40
Sulfur Dioxide (SO_2)	0.01	0.03
Volatile Organic Compounds (VOC)	6.76	29.61
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Acetaldehyde	0.09	0.39
Acrolein	0.09	0.39
Benzene	0.02	0.10
Ethylbenzene	< 0.01	0.01
Formaldehyde	0.63	2.74
Hexane	0.01	0.02
Toluene	0.01	0.05
Xylene	< 0.01	0.01
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

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.).

- CO, NOx, and VOC emission rates based on manufacturer specs.
- PM10, PM2.5, SO2, and HAP emission factors based on AP-42 Section 3.2, Table 3.2-1, 8/00

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> 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.

No applicable requirements.

40 CFR 63 Subpart ZZZZ - Existing spark ignition 2 stroke lean burn (2SLB) stationary RICE with a rating of > 500 HP located at a major source of HAP emissions do not have to meet the requirements of 40 CFR 63 Subpart ZZZZ, including initial notification (63.6590(b)(3)(i))

____ 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.)

No applicable requirements.

40 CFR 63 Subpart ZZZZ - Existing spark ignition 2 stroke lean burn (2SLB) stationary RICE with a rating of > 500 HP located at a major source of HAP emissions do not have to meet the requirements of 40 CFR 63 Subpart ZZZZ, including initial notification (63.6590(b)(3)(i))

Are you in compliance with all applicable requirements for this emission unit? _X_Yes ___No

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

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
001-07	EN13 Reciprocating Engine/Integral Compressor	N/A

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

Natural gas fired reciprocating engine/integral compressor

Manufacturer:	**Model number:**	**Serial number:**
Cooper	GMV-A-10TF	41598
Construction date:	**Installation date:**	**Modification date(s):**
	1947	N/A

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
1,350 hp

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
0.0113 MMscf/hr	99.34 MMscf/yr	8,760 hrs/yr

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

Does this emission unit combust fuel? _X_Yes ___ No	**If yes, is it?** ___ Indirect Fired _X_Direct Fired
Maximum design heat input and/or maximum horsepower rating: 1,350 hp	**Type and Btu/hr rating of burners:** 8,400Btu/hp-hr 11.34 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 = 0.0113 MMscf/hr
- Maximum annual fuel usage = 99.34 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

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	8.93	39.11
Nitrogen Oxides (NO_X)	60.30	264.11
Lead (Pb)	N/A	N/A
Particulate Matter ($PM_{2.5}$)	0.44	1.91
Particulate Matter (PM_{10})	0.44	1.91
Total Particulate Matter (TSP)	0.55	2.40
Sulfur Dioxide (SO_2)	0.01	0.03
Volatile Organic Compounds (VOC)	6.76	29.61
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Acetaldehyde	0.09	0.39
Acrolein	0.09	0.39
Benzene	0.02	0.10
Ethylbenzene	< 0.01	0.01
Formaldehyde	0.63	2.74
Hexane	0.01	0.02
Toluene	0.01	0.05
Xylene	< 0.01	0.01
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

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.).

- CO, NOx, and VOC emission rates based on manufacturer specs.
- PM10, PM2.5, SO2, and HAP emission factors based on AP-42 Section 3.2, Table 3.2-1, 8/00

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> 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.

No applicable requirements.

40 CFR 63 Subpart ZZZZ - Existing spark ignition 2 stroke lean burn (2SLB) stationary RICE with a rating of > 500 HP located at a major source of HAP emissions do not have to meet the requirements of 40 CFR 63 Subpart ZZZZ, including initial notification (63.6590(b)(3)(i))

____ 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.)

No applicable requirements.

40 CFR 63 Subpart ZZZZ - Existing spark ignition 2 stroke lean burn (2SLB) stationary RICE with a rating of > 500 HP located at a major source of HAP emissions do not have to meet the requirements of 40 CFR 63 Subpart ZZZZ, including initial notification (63.6590(b)(3)(i))

Are you in compliance with all applicable requirements for this emission unit? _X_Yes ___No

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

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
001-08	EN14 Reciprocating Engine/Integral Compressor	N/A

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

Natural gas fired reciprocating engine/integral compressor

Manufacturer:	**Model number:**	**Serial number:**
Cooper	GMV-A-10TF	41838
Construction date:	**Installation date:**	**Modification date(s):**
	1947	N/A

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
1,350 hp

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
0.0113 MMscf/hr	99.34 MMscf/yr	8,760 hrs/yr

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

Does this emission unit combust fuel? _X_Yes ___ No	**If yes, is it?** ___ Indirect Fired _X_Direct Fired
Maximum design heat input and/or maximum horsepower rating: 1,350 hp	**Type and Btu/hr rating of burners:** 8,400Btu/hp-hr 11.34 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 = 0.0113 MMscf/hr
- Maximum annual fuel usage = 99.34 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

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	8.93	39.11
Nitrogen Oxides (NO_X)	60.30	264.11
Lead (Pb)	N/A	N/A
Particulate Matter ($PM_{2.5}$)	0.44	1.91
Particulate Matter (PM_{10})	0.44	1.91
Total Particulate Matter (TSP)	0.55	2.40
Sulfur Dioxide (SO_2)	0.01	0.03
Volatile Organic Compounds (VOC)	6.76	29.61
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Acetaldehyde	0.09	0.39
Acrolein	0.09	0.39
Benzene	0.02	0.10
Ethylbenzene	< 0.01	0.01
Formaldehyde	0.63	2.74
Hexane	0.01	0.02
Toluene	0.01	0.05
Xylene	< 0.01	0.01
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

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.).

- CO, NOx, and VOC emission rates based on manufacturer specs.
- PM10, PM2.5, SO2, and HAP emission factors based on AP-42 Section 3.2, Table 3.2-1, 8/00

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> 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.

No applicable requirements.

40 CFR 63 Subpart ZZZZ - Existing spark ignition 2 stroke lean burn (2SLB) stationary RICE with a rating of > 500 HP located at a major source of HAP emissions do not have to meet the requirements of 40 CFR 63 Subpart ZZZZ, including initial notification (63.6590(b)(3)(i))

____ 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.)

No applicable requirements.

40 CFR 63 Subpart ZZZZ - Existing spark ignition 2 stroke lean burn (2SLB) stationary RICE with a rating of > 500 HP located at a major source of HAP emissions do not have to meet the requirements of 40 CFR 63 Subpart ZZZZ, including initial notification (63.6590(b)(3)(i))

Are you in compliance with all applicable requirements for this emission unit? _X_Yes ___No

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

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
001-09	EN15 Reciprocating Engine/Integral Compressor	N/A

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

Natural gas fired reciprocating engine/integral compressor

Manufacturer:	**Model number:**	**Serial number:**
Cooper	GMV-A-10TF	41837
Construction date:	**Installation date:**	**Modification date(s):**
	1947	N/A

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
1,350 hp

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
0.0113 MMscf/hr	99.34 MMscf/yr	8,760 hrs/yr

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

Does this emission unit combust fuel? _X_Yes ___ No	**If yes, is it?** ___ Indirect Fired _X_Direct Fired
Maximum design heat input and/or maximum horsepower rating: 1,350 hp	**Type and Btu/hr rating of burners:** 8,400Btu/hp-hr 11.34 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 = 0.0113 MMscf/hr
- Maximum annual fuel usage = 99.34 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

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	8.93	39.11
Nitrogen Oxides (NO_X)	60.30	264.11
Lead (Pb)	N/A	N/A
Particulate Matter ($PM_{2.5}$)	0.44	1.91
Particulate Matter (PM_{10})	0.44	1.91
Total Particulate Matter (TSP)	0.55	2.40
Sulfur Dioxide (SO_2)	0.01	0.03
Volatile Organic Compounds (VOC)	6.76	29.61
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Acetaldehyde	0.09	0.39
Acrolein	0.09	0.39
Benzene	0.02	0.10
Ethylbenzene	< 0.01	0.01
Formaldehyde	0.63	2.74
Hexane	0.01	0.02
Toluene	0.01	0.05
Xylene	< 0.01	0.01
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

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.).

- CO, NOx, and VOC emission rates based on manufacturer specs.
- PM10, PM2.5, SO2, and HAP emission factors based on AP-42 Section 3.2, Table 3.2-1, 8/00

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> 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.

No applicable requirements.

40 CFR 63 Subpart ZZZZ - Existing spark ignition 2 stroke lean burn (2SLB) stationary RICE with a rating of > 500 HP located at a major source of HAP emissions do not have to meet the requirements of 40 CFR 63 Subpart ZZZZ, including initial notification (63.6590(b)(3)(i))

____ 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.)

No applicable requirements.

40 CFR 63 Subpart ZZZZ - Existing spark ignition 2 stroke lean burn (2SLB) stationary RICE with a rating of > 500 HP located at a major source of HAP emissions do not have to meet the requirements of 40 CFR 63 Subpart ZZZZ, including initial notification (63.6590(b)(3)(i))

Are you in compliance with all applicable requirements for this emission unit? _X_Yes ___No

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

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
001-0A	EN16 Reciprocating Engine/Integral Compressor	N/A

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

Natural gas fired reciprocating engine/integral compressor

Manufacturer:	**Model number:**	**Serial number:**
Cooper	GMV-A-10TF	41836
Construction date:	**Installation date:**	**Modification date(s):**
	1947	N/A

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
1,350 hp

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
0.0113 MMscf/hr	99.34 MMscf/yr	8,760 hrs/yr

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

Does this emission unit combust fuel? _X_Yes ___ No	**If yes, is it?** ___ Indirect Fired _X_Direct Fired
Maximum design heat input and/or maximum horsepower rating: 1,350 hp	**Type and Btu/hr rating of burners:** 8,400Btu/hp-hr 11.34 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 = 0.0113 MMscf/hr
- Maximum annual fuel usage = 99.34 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

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	8.93	39.11
Nitrogen Oxides (NO_X)	60.30	264.11
Lead (Pb)	N/A	N/A
Particulate Matter ($PM_{2.5}$)	0.44	1.91
Particulate Matter (PM_{10})	0.44	1.91
Total Particulate Matter (TSP)	0.55	2.40
Sulfur Dioxide (SO_2)	0.01	0.03
Volatile Organic Compounds (VOC)	6.76	29.61
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Acetaldehyde	0.09	0.39
Acrolein	0.09	0.39
Benzene	0.02	0.10
Ethylbenzene	< 0.01	0.01
Formaldehyde	0.63	2.74
Hexane	0.01	0.02
Toluene	0.01	0.05
Xylene	< 0.01	0.01
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

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.).

- CO, NOx, and VOC emission rates based on manufacturer specs.
- PM10, PM2.5, SO2, and HAP emission factors based on AP-42 Section 3.2, Table 3.2-1, 8/00

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> 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.

No applicable requirements.

40 CFR 63 Subpart ZZZZ - Existing spark ignition 2 stroke lean burn (2SLB) stationary RICE with a rating of > 500 HP located at a major source of HAP emissions do not have to meet the requirements of 40 CFR 63 Subpart ZZZZ, including initial notification (63.6590(b)(3)(i))

____ 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.)

No applicable requirements.

40 CFR 63 Subpart ZZZZ - Existing spark ignition 2 stroke lean burn (2SLB) stationary RICE with a rating of > 500 HP located at a major source of HAP emissions do not have to meet the requirements of 40 CFR 63 Subpart ZZZZ, including initial notification (63.6590(b)(3)(i))

Are you in compliance with all applicable requirements for this emission unit? _X_Yes ___No

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

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
001-0B	EN17 Reciprocating Engine/Integral Compressor	N/A

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

Natural gas fired reciprocating engine/integral compressor

Manufacturer:	**Model number:**	**Serial number:**
Cooper	GMV-A-10TF	42770
Construction date:	**Installation date:**	**Modification date(s):**
	1947	N/A

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
1,350 hp

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
0.0113 MMscf/hr	99.34 MMscf/yr	8,760 hrs/yr

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

Does this emission unit combust fuel? _X_Yes ___ No	**If yes, is it?** ___ Indirect Fired _X_Direct Fired
Maximum design heat input and/or maximum horsepower rating: 1,350 hp	**Type and Btu/hr rating of burners:** 8,400Btu/hp-hr 11.34 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 = 0.0113 MMscf/hr
- Maximum annual fuel usage = 99.34 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

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	8.93	39.11
Nitrogen Oxides (NO_X)	60.30	264.11
Lead (Pb)	N/A	N/A
Particulate Matter ($PM_{2.5}$)	0.44	1.91
Particulate Matter (PM_{10})	0.44	1.91
Total Particulate Matter (TSP)	0.55	2.40
Sulfur Dioxide (SO_2)	0.01	0.03
Volatile Organic Compounds (VOC)	6.76	29.61
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Acetaldehyde	0.09	0.39
Acrolein	0.09	0.39
Benzene	0.02	0.10
Ethylbenzene	< 0.01	0.01
Formaldehyde	0.63	2.74
Hexane	0.01	0.02
Toluene	0.01	0.05
Xylene	< 0.01	0.01
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

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.).

- CO, NOx, and VOC emission rates based on manufacturer specs.
- PM10, PM2.5, SO2, and HAP emission factors based on AP-42 Section 3.2, Table 3.2-1, 8/00

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> 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.

No applicable requirements.

40 CFR 63 Subpart ZZZZ - Existing spark ignition 2 stroke lean burn (2SLB) stationary RICE with a rating of > 500 HP located at a major source of HAP emissions do not have to meet the requirements of 40 CFR 63 Subpart ZZZZ, including initial notification (63.6590(b)(3)(i))

____ 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.)

No applicable requirements.

40 CFR 63 Subpart ZZZZ - Existing spark ignition 2 stroke lean burn (2SLB) stationary RICE with a rating of > 500 HP located at a major source of HAP emissions do not have to meet the requirements of 40 CFR 63 Subpart ZZZZ, including initial notification (63.6590(b)(3)(i))

Are you in compliance with all applicable requirements for this emission unit? _X_Yes ___No

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

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
001-0C	EN18 Reciprocating Engine/Integral Compressor	N/A

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

Natural gas fired reciprocating engine/integral compressor

Manufacturer:	**Model number:**	**Serial number:**
Ingersoll Rand	410 KVT	410KVT110
Construction date:	**Installation date:**	**Modification date(s):**
	1962	N/A

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
2,500 hp

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
0.0158 MMscf/hr	137.97 MMscf/yr	8,760 hrs/yr

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

Does this emission unit combust fuel? _X_Yes ___ No	**If yes, is it?** ___ Indirect Fired _X_Direct Fired
Maximum design heat input and/or maximum horsepower rating: 2,500 hp	**Type and Btu/hr rating of burners:** 6,300 Btu/hp-hr 15.75 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 = 0.0158 MMscf/hr
- Maximum annual fuel usage = 137.97 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

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	19.29	84.49
Nitrogen Oxides (NO_X)	121.31	531.34
Lead (Pb)	N/A	N/A
Particulate Matter ($PM_{2.5}$)	< 0.01	0.01
Particulate Matter (PM_{10})	< 0.01	0.01
Total Particulate Matter (TSP)	0.16	0.69
Sulfur Dioxide (SO_2)	0.01	0.04
Volatile Organic Compounds (VOC)	13.39	58.65
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Acetaldehyde	0.13	0.58
Acrolein	0.08	0.35
Benzene	0.01	0.03
Ethylbenzene	< 0.01	< 0.01
Formaldehyde	0.83	3.64
Hexane	0.02	0.08
Toluene	0.01	0.03
Xylene	< 0.01	0.01
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

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.).

- CO, NOx, and VOC emission rates based on manufacturer specs.
- PM10, PM2.5, SO2, and HAP emission factors based on AP-42 Section 3.2, Table 3.2-2

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> 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 - Existing 4SLB stationary RICE with site rating of > 500 HP located at major source does not need to comply with emission limitations in Tables 1a, 2a, 2c, and 2d or operating limitations in Tables 1b and 2b (63.6600(c))

____ 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 - At all times operate and maintain any affected source, including associated air pollution control and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions (63.6605)
40 CFR Part 63 Subpart ZZZZ - Existing 4SLB stationary RICE with site rating of > 500 HP located at major source does not need to comply with emission limitations in Tables 1a, 2a, 2c, and 2d or operating limitations in Tables 1b and 2b (63.6600(c))

Are you in compliance with all applicable requirements for this emission unit? _X_Yes ___No

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

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
001-0D	EN19 Reciprocating Engine/Integral Compressor	N/A

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

Natural gas fired reciprocating engine/integral compressor

Manufacturer:	**Model number:**	**Serial number:**
Ingersoll Rand	410 KVT	410KVT111
Construction date:	**Installation date:**	**Modification date(s):**
	1962	N/A

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
2,500 hp

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
0.0158 MMscf/hr	137.97 MMscf/yr	8,760 hrs/yr

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

Does this emission unit combust fuel? _X_Yes ___ No	**If yes, is it?** ___ Indirect Fired _X_Direct Fired
Maximum design heat input and/or maximum horsepower rating: 2,500 hp	**Type and Btu/hr rating of burners:** 6,300 Btu/hp-hr 15.75 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 = 0.0158 MMscf/hr
- Maximum annual fuel usage = 137.97 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

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	19.29	84.49
Nitrogen Oxides (NO_X)	121.31	531.34
Lead (Pb)	N/A	N/A
Particulate Matter ($PM_{2.5}$)	< 0.01	0.01
Particulate Matter (PM_{10})	< 0.01	0.01
Total Particulate Matter (TSP)	0.16	0.69
Sulfur Dioxide (SO_2)	0.01	0.04
Volatile Organic Compounds (VOC)	13.39	58.65
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Acetaldehyde	0.13	0.58
Acrolein	0.08	0.35
Benzene	0.01	0.03
Ethylbenzene	< 0.01	< 0.01
Formaldehyde	0.83	3.64
Hexane	0.02	0.08
Toluene	0.01	0.03
Xylene	< 0.01	0.01
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

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.).

- CO, NOx, and VOC emission rates based on manufacturer specs.
- PM10, PM2.5, SO2, and HAP emission factors based on AP-42 Section 3.2, Table 3.2-2

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> 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 - Existing 4SLB stationary RICE with site rating of > 500 HP located at major source does not need to comply with emission limitations in Tables 1a, 2a, 2c, and 2d or operating limitations in Tables 1b and 2b (63.6600(c))

____ 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 - At all times operate and maintain any affected source, including associated air pollution control and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions (63.6605)
40 CFR Part 63 Subpart ZZZZ - Existing 4SLB stationary RICE with site rating of > 500 HP located at major source does not need to comply with emission limitations in Tables 1a, 2a, 2c, and 2d or operating limitations in Tables 1b and 2b (63.6600(c))

Are you in compliance with all applicable requirements for this emission unit? _X_Yes ___No

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

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
0002	F1 Flare	N/A

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

Dehydration Unit Flare

Manufacturer:	**Model number:**	**Serial number:**
Questor	Q250	
Construction date:	**Installation date:**	**Modification date(s):**
	2012	N/A

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
Combustor Rating: 10.0 MMBtu/hr
Pilot Burner: 0.56MMBtu/hr

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Total Fuel Input: 6,793 scf/hr	Total Fuel Input: 59.51 MMscf/yr	8760 hrs/yr

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

Does this emission unit combust fuel? _X__Yes ___ No	**If yes, is it?** ___ Indirect Fired _X_Direct Fired
Maximum design heat input and/or maximum horsepower rating: Combustor Rating: 10.0 MMBtu/hr Pilot Burner: 0.56MMBtu/hr	**Type and Btu/hr rating of burners:** Combustor Rating: 10.0 MMBtu/hr Pilot Burner: 0.56MMBtu/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.

Natural gas
- Maximum hourly total fuel throughput = 6,793 scf/hr
- Maximum annual total fuel throughput = 59.51 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

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.03	0.13
Nitrogen Oxides (NO_X)	0.46	2.02
Lead (Pb)	N/A	N/A
Particulate Matter ($PM_{2.5}$)	0.05	0.23
Particulate Matter (PM_{10})	0.05	0.23
Total Particulate Matter (TSP)	0.05	0.23
Sulfur Dioxide (SO_2)	< 0.01	0.02
Volatile Organic Compounds (VOC)	0.01	0.03
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

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.).

- NOX, CO, and VOC emission factor from Dominion Spec Sheet, 2/20/12
- SO2, PM total, PM10, and PM 2.5 emission factors from AP-42 Section 1.4 (7/98)

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> 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? _X__Yes ___No

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

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
006-01	RBR01 Reboiler	N/A

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

Natural gas-fired reboiler

Manufacturer:	**Model number:**	**Serial number:**
NATCO	5GR-375-DX5	EL2E35103-01
Construction date:	**Installation date:**	**Modification date(s):**
	1999	N/A

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

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
618 cf/hr	5.41 MMscf/yr	8,760 hrs/yr

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

Does this emission unit combust fuel? _X_Yes ___ No	**If yes, is it?** ___ Indirect Fired _X_Direct Fired
Maximum design heat input and/or maximum horsepower rating: 0.62 MMBtu/hr	**Type and Btu/hr rating of burners:** 0.62 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.

Natural Gas
- Maximum hourly fuel usage = 618 cf/hr
- Maximum annual fuel usage = 5.41 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

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.05	0.23
Nitrogen Oxides (NO_X)	0.06	0.28
Lead (Pb)	N/A	N/A
Particulate Matter ($PM_{2.5}$)	< 0.01	0.01
Particulate Matter (PM_{10})	< 0.01	0.01
Total Particulate Matter (TSP)	< 0.01	0.02
Sulfur Dioxide (SO_2)	< 0.01	0.01
Volatile Organic Compounds (VOC)	< 0.01	0.02
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

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.).

- NOx and CO emission factors from AP-42, Section 1.4, Natural Gas Combustion, Table 1.4-1, 7/98
- PM, PM10, PM2.5, VOC, and SO2 emission factors from AP-42, Section 1.4, Natural Gas Combustion, Table 1.4-2, 7/98
- HAP emission factors from AP-42, Section 1.4, Natural Gas Combustion, Tables 1.4-3, 4, 7/98

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> 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– Opacity limit of 10% on a six minute block average (TV 4.1.1)
45 CSR 13 – Emission limits (TV 4.1.2; R13-2346C 5.1.1)

____ 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 13 – Compliance with TV 4.1.1 is demonstrated by a Method 9, if required.

Are you in compliance with all applicable requirements for this emission unit? _X_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:** 2012

Type of Air Pollution Control Device:

___ Baghouse/Fabric Filter	___ Venturi Scrubber	___ Multiclone
___ Carbon Bed Adsorber	___ Packed Tower Scrubber	___ Single Cyclone
___ Carbon Drum(s)	___ Other Wet Scrubber	___ Cyclone Bank
___ Catalytic Incinerator	___ Condenser	___ Settling Chamber
___Thermal Incinerator	_X__ Flare	___ Other (describe) _____
___ Wet Plate Electrostatic Precipitator		___ 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 enclosed flare
10.0 MMBtu/hr combustor rating

Is this device subject to the CAM requirements of 40 C.F.R. 64? ___ Yes _X_ No

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.** For HAPS, 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, DEHY01 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 (R13-2346C) 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 6-4.1– Particulate Matter emission limit (TV 5.1.1)
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 5.1.2; R13-2346C 5.1.4)
45 CSR 6-4.5 – Incinerator particles in the open air requirements (TV 5.1.3)
45 CSR 6-4.6 and 13 – Incinerator odor prevention requirements (TV 5.1.4; R13-2346C 5.1.4)
45 CSR 10-4.1 – Sulfur Dioxide emission limit (TV 5.1.5)
45 CSR 10-5.1 – Hydrogen Sulfide emission limit (TV 5.1.6)
45 CSR 13 – Emission limits (TV 5.1.9; R13-2346C 5.1.1)
45 CSR 13 – Operation and design of the flare (TV 5.1.10; R13-2346C 5.1.8)
45 CSR 13 – No visible emissions except for periods not to exceed a total of 5 minutes during any 2 hour period (TV 5.1.10 and Appendix A, R13-2346C 5.1.8)
45 CSR 13 – The pilot flame shall be present at all times when emissions may be vented to it (TV 5.1.10 and Appendix A, R13-2346C 5.1.8)
45 CSR 13-5.11 and 13 – Operation and maintenance of the flare (TV 5.1.13; R13-2346C 4.1.1)

Monitoring
45 CSR 13 and 30-5.1.c – Conduct an initial Method 22 opacity test within one (1) year of permit issuance or initial startup of the flare, whichever is later (TV 5.2.1; R13-2346C 5.2.1)
45 CSR 13 and 30-5.1.c – Monthly visual emission checks (TV 5.2.1; R13-2346C 5.2.1)
45 CSR 30-5.1.c – Compliance with 5.1.5 shall be demonstrated by annual inlet wet gas sampling (TV 5.2.2)
45 CSR 30-5.1.c – Compliance with 5.1.6 shall be demonstrated by annual inlet wet gas sampling (TV 5.2.3)
45 CSR 13 – Monitor the presence or absence of the flare pilot flame using a thermocouple (TV 5.1.10 and Appendix A; R13-2346C 5.1.8)

Recordkeeping
45 CSR 30-5.1.c – Records of the monthly visual emission checks and initial Method 22 (TV 5.2.1)
45 CSR 30-5.1.c – Records of the annual inlet wet gas sampling (TV 5.2.3 and 5.2.4)
45 CSR 13 – Records of malfunctions (TV 5.4.1, 5.4.6, and 5.4.9; R13-2346C 5.4.2, 5.4.6, and 4.4.3)
45 CSR 13 – Records of the flare design and flare design evaluation (TV 5.4.5; R13-2346C 5.4.5)
45 CSR 13 – Records of the times and duration of all periods which the pilot flame was absent (TV 5.4.5; R13-2346C 5.4.5)
45 CSR 13 – Records of maintenance (TV 5.4.8; R13-2346C 4.4.2)