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

June 3, 2016

BY: U.S. CERTIFIED MAIL, RETURN RECEIPT REQUESTED
9590 9401 0037 5168 3777 90

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

RE: Dominion Transmission, Inc. – Title V Renewal Application
Craig Compressor Station – R30-08500004-2011

Dear Mr. Durham:

Enclosed please find the Title V Renewal Application for Dominion Transmission, Inc.'s (DTI) Craig Compressor Station, Permit No. R30-08500004-2011. The enclosure consists of one hard copy and two cd copies of the application that includes all attachments.

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

- Equipment added to the facility:
  - CPR01 – Natural gas fired 11hp emergency air compressor
- Correction to equipment at the facility:
  - TK04 – This tank was previously listed as an antifreeze tank, but the correct description is an ethylene glycol (mix) tank.
  - TK11 – This tank was previously listed as a drip gas tank, but the correct description is a produced fluids tank.
  - TK12 – This tank was previously listed as an engine oil tank, but the correct description is a lube oil tank.

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

Sincerely,

Amanda B. Tornabene
Director, Energy Infrastructure Environmental Services

CRAIG COMPRESSOR STATION
DOMINION TRANSMISSION, INC.
APPLICATION FOR TITLE V OPERATING PERMIT RENEWAL
TITLE V OPERATING PERMIT NO: R30-08500004-2011

Dominion Transmission, Inc.
Craig Compressor Station
Route 16
Smithville, WV

JUNE 2016

DOMINION TRANMISSION, INC.
CRAIG COMPRESSOR STATION

TITLE V OPERATING PERMIT RENEWAL APPLICATION

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Attachment D: Title V Equipment Table

Attachment E: Emission Unit Forms

Attachment G: Air Pollution Control Device Form

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

TITLE V PERMIT APPLICATION CHECKLIST FOR ADMINISTRATIVE COMPLETENESS

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

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

SECTION 1

Introduction

INTRODUCTION:

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

Craig Station has the potential to emit in excess of 100 tons per year of nitrogen oxides (NOx) and volatile organic compounds (VOCs). 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. Craig Station is an area source of hazardous air pollutants (HAPs) since the potential to emit is less than 10 tons per year for individual HAPs and less than 25 tons per year of combined HAPs.

The last Title V Operating Permit renewal application was submitted in December 2010, and the renewed Title V Operating Permit was issued on December 20, 2011, with an expiration date of December 20, 2016. Craig Station is also subject to the underlying State Operating Permits (Rule 13 Permit Nos: R13-2497A and R13-2503). The Title V operating permit is for the operation of three (3) 869 hp natural gas fired reciprocating engines (EN01 – EN03), one (1) glycol dehydrator system (DEHY02) with a thermal oxidizer (2C), one (1) dehydration unit reboiler (RBR02), two (2) 225 hp emergency generators (EN05 and EN06), one (1) 11 hp emergency air compressor, and six (6) above ground storage tanks of various sizes (TK04 and TK10 – TK14).

PROCESS DESCRIPTION

Craig Station is a compressor facility that services a natural gas pipeline system. The compressor engines (EN01 – EN03) at the facility receive natural gas, flowing through a valve on the pipeline, and recompresses that natural gas in order to further transport the natural gas through the pipeline system. Prior to exiting the facility through the pipeline, the compressed natural gas is processed by the dehydration unit (DEHY02). The dehydration unit removes moisture and impurities from the gas stream. Emergency backup power is supplied by emergency generators (EN05 and EN06).

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 (RBR02), 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 (DEHY02) using the heat generated from the natural gas-fired reboiler (RBR02) to liberate the moisture and hydrocarbon vapors. The regenerator vapors are vented to the thermal oxidizer (2C) 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 Craig Station:

Three (3) 869 hp Ajax DPC-720 natural gas-fired reciprocating engines/integral compressors

- Emission unit ID: EN01 – EN03
- Emission point ID: EN01 – EN03

Two (2) 225 hp Caterpillar G342NA emergency generators

- Emission unit ID: EN05 and EN06
- Emission point ID: S05 and S06

One (1) 11 hp Honda GX 340 emergency air compressor

- Emission unit ID: CPR01
- Emission point ID: CPR01

One (1) 0.75 MMBtu/hr natural gas-fired dehydration unit reboiler

- Emission unit ID: RBR02
- Emission point ID: RBR02

One (1) 18 MMscf wet gas/day glycol dehydration system

- Emission unit ID: DEHY02
- Emission point ID: DEHY02

One (1) 3.2 MMBtu/hr thermal oxidizer

- Emission unit ID: 2C
- Emission point ID: 2C

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

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

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

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

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

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

One (1) 6,000 gallon vertical aboveground lube oil storage tank

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

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

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

One (1) 500 gallon vertical aboveground wastewater storage tank

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

SECTION 2

Title V Operating Permit
Renewal Application –
General Forms

WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF AIR QUALITY
601 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:** Craig Station
3. DAQ Plant ID No.: 0 8 5 — 0 0 0 0 4	**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? 1984
☒ Permit Renewal — What is the expiration date of the existing permit? 12/20/2016
☐ Update to Initial/Renewal Permit Application

6. Type of Business Entity: ☒ Corporation ☐ Governmental Agency ☐ LLC ☐ Partnership ☐ Limited Partnership	**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. _____ _____ _____
8. Number of onsite employees: 5	

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: Route 16	**City:** Smithville	**County:** Ritchie
UTM Easting: 491.49 km	**UTM Northing:** 4,324.68 km	**Zone:** ☒ 17 or ☐ 18
Directions: From Clarksburg, take Route 50 West for 41 miles to the Ellensboro exit. Go left on Route 16 South for 18 miles thru Harrisville to Route 47. Turn left and go 0.2 miles across the bridge and then turn right on Route 16 South. Go approximately 20 feet and turn right up the hill. Go 0.3 miles to 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).** Pennsylvania 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 Remick		**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.Remick@dom.com		
Application Preparer: Rebekah Remick		**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.Remick@dom.com		

14. Facility Description

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

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

Provide a general description of operations.

Craig Station is a compressor facility that services a natural gas pipeline system. The compressor engines (EN01-EN03) at the facility receive natural gas flowing through a valve on the pipeline and recompress the natural gas in order to further transport the natural gas through the pipeline system. Prior to exiting the facility through the pipeline, the compressed natural gas is processed by the dehydration unit (DEHY02). 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 (EN01 – EN03) 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 (EN01 – EN03) and emergency generators (EN05 and EN06) are not subject to this subpart since they were manufactured before the applicability date.
40 CFR 60 Subpart OOOO – This subpart does not apply to the facility since the facility is a gathering facility that does not have gas wells, centrifugal compressors, reciprocating compressors, tanks, and/or pneumatic controllers constructed, modified, or reconstructed after August 23, 2011.

40 CFR 63 Subpart HHH – This subpart does not apply to the facility since the facility is not a transmission or storage station and is not a major source of HAPs.

40 CFR 63 Subpart DDDDD – The reboiler (RBR02) is not subject to this subpart since it is exempt by §63.7491(h) and facility is not major source of HAPs.
40 CFR 63 Subpart JJJJJJ – The reboiler (RBR02) 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 (DEHY02) is not subject to CAM since the unit is subject to NESHAP Subpart HH, which has provisions for compliance monitoring established after 1990 (exemption per 64.2(b)(1)(i)). In addition, since the R13-2497A 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)).

☒ 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)

☐ Permit Shield

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

45 CSR 6-3.1 – The permittee shall prohibit open burning (TV 3.1.1)
45 CSR 6-3.2 – The permittee shall notify if open burning occurs (TV 3.1.2)
40 CFR Part 61 and 45 CSR 15 – Prior to demolition/construction buildings will be inspected for asbestos (TV 3.1.3)
45 CSR 11 – Upon request by the Secretary, the permittee shall prepare a standby plan (TV 3.1.5)
40 CFR Part 82 Subpart F – The permittee will prohibit maintenance, service, or repair of appliances containing ozone depleting substances (TV 3.1.7)
40 CFR Part 68 – Should the permittee become subject to 40 CFR Part 68, a RMP shall be submitted (TV 3.1.8)
45 CSR 17 – The permittee will limit fugitive particulate matter emissions from the facility by burning only pipeline quality natural gas (TV 3.1.9)
45 CSR 13 and WV Code 22-5-4 (a) (14-15) – Testing Requirements (TV 3.3.1)
45 CSR 30 – Recordkeeping Requirements (TV 3.4)
45 CSR 30-5.1.c.2.A and 13 – The permittee shall keep records of monitoring information (TV 3.4.1; R13-2497A 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)*
R13-2497A	08/24/2015	N/A
R13-2503	02/19/2003	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)	86.36
Nitrogen Oxides (NO_X)	246.43
Lead (Pb)	N/A
Particulate Matter ($PM_{2.5}$)[1]	3.63
Particulate Matter (PM_{10})[1]	3.63
Total Particulate Matter (TSP)	4.58
Sulfur Dioxide (SO_2)	0.07
Volatile Organic Compounds (VOC)	212.63
Hazardous Air Pollutants[2]	Potential Emissions
Acetaldehyde	0.71
Acrolein	0.71
Benzene	0.38
Ethylbenzene	0.20
Formaldehyde	5.06
Hexane	0.28
Toluene	1.23
Xylene	7.84
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: 05/31/16
(Must be signed and dated in blue ink)

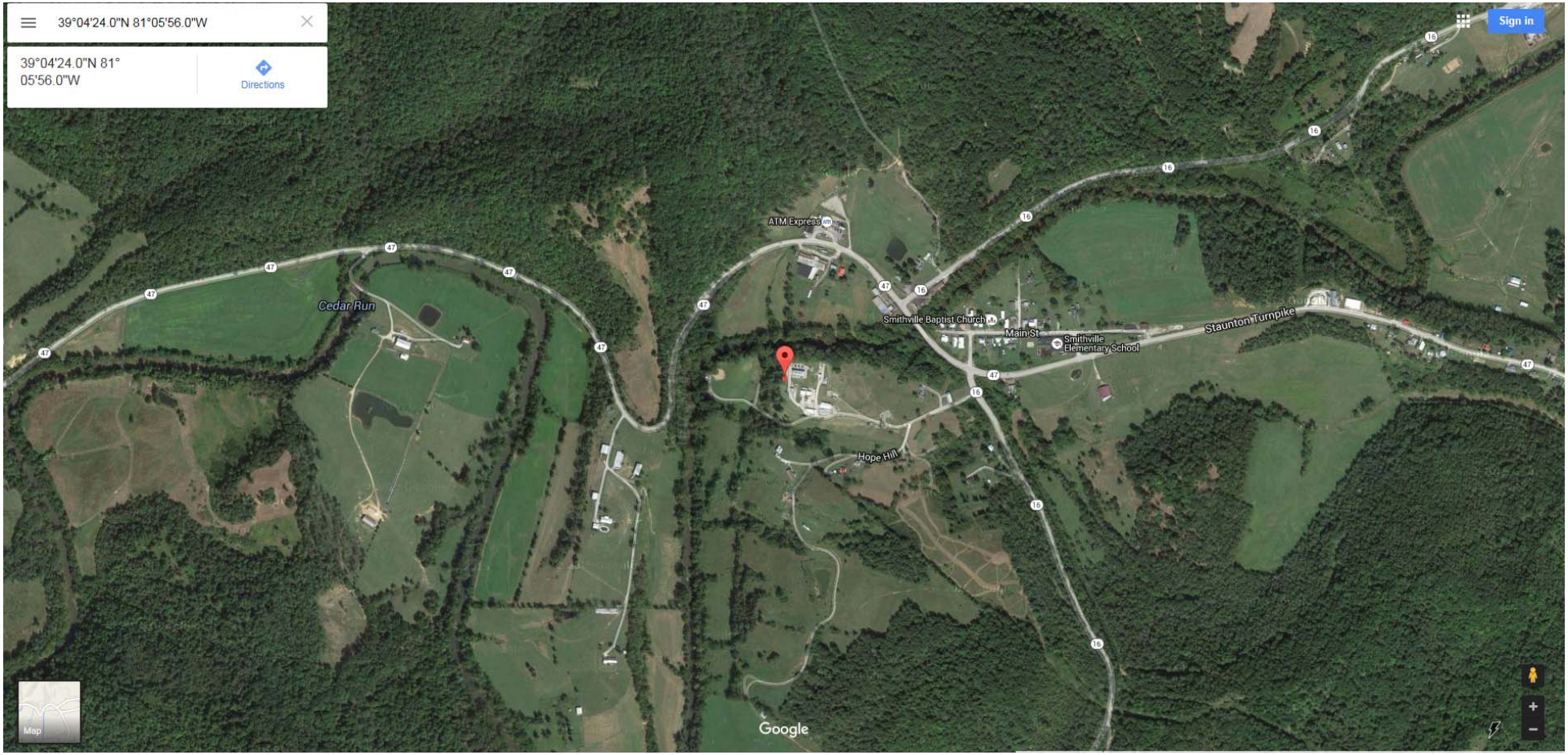
Note: Please check all applicable attachments included with this permit application:

☒	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.

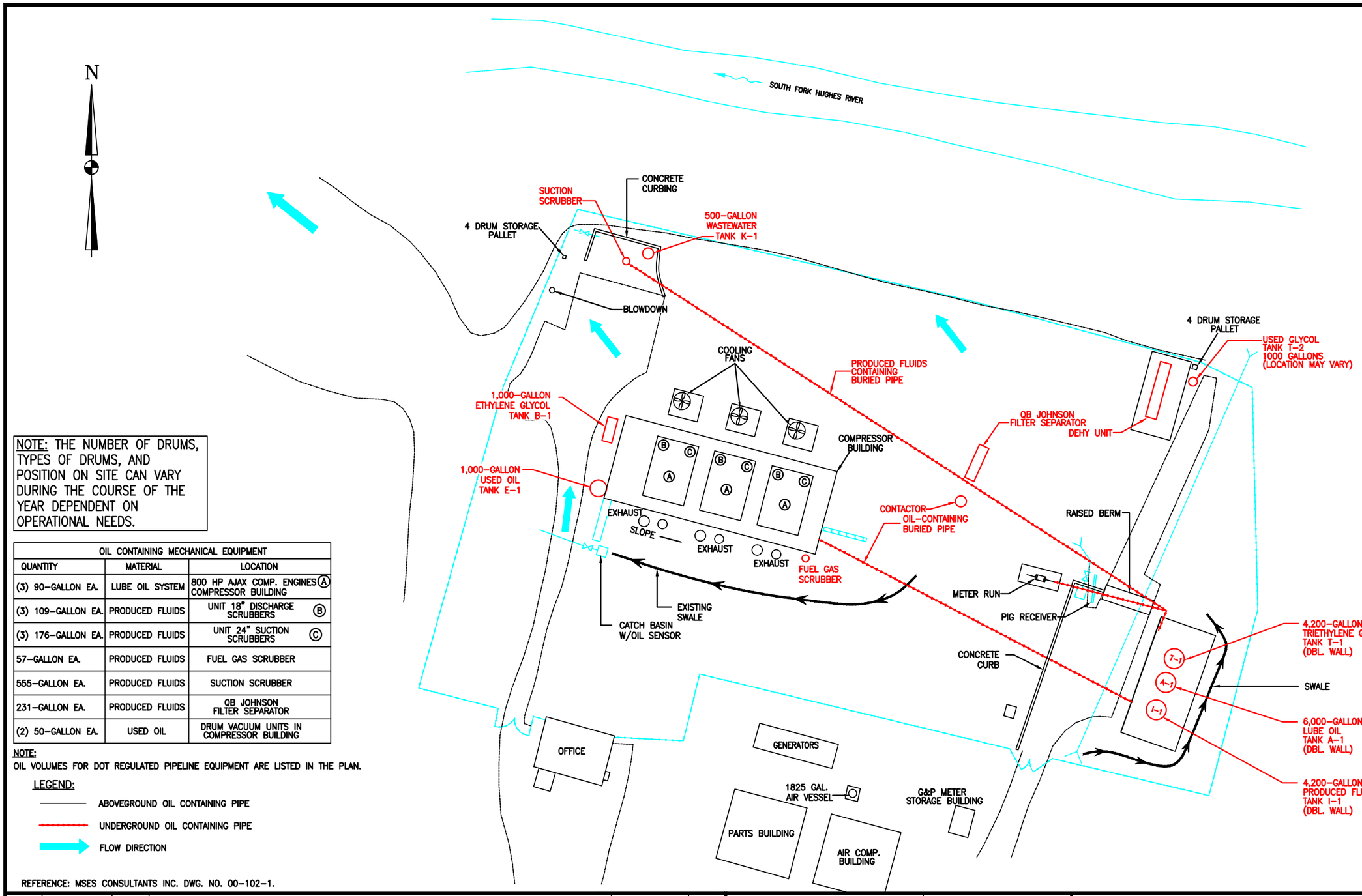
Attachment A

Area Map


39°04'24.0"N 81°05'56.0"W
39°04'24.0"N 81° 05'56.0"W
Directions
Sign in
ATM Express
Cedar Run
Smithville Baptist Church
Main St
Smithville Elementary School
Staunton Turnpike
Hope Hill
Map
Google

Attachment B

Plot Plan



NOTE: THE NUMBER OF DRUMS, TYPES OF DRUMS, AND POSITION ON SITE CAN VARY DURING THE COURSE OF THE YEAR DEPENDENT ON OPERATIONAL NEEDS.

OIL CONTAINING MECHANICAL EQUIPMENT		
QUANTITY	MATERIAL	LOCATION
(3) 90-GALLON EA.	LUBE OIL SYSTEM	800 HP AJAX COMP. ENGINES COMPRESSOR BUILDING (A)
(3) 109-GALLON EA.	PRODUCED FLUIDS	UNIT 18" DISCHARGE SCRUBBERS (B)
(3) 176-GALLON EA.	PRODUCED FLUIDS	UNIT 24" SUCTION SCRUBBERS (C)
57-GALLON EA.	PRODUCED FLUIDS	FUEL GAS SCRUBBER
555-GALLON EA.	PRODUCED FLUIDS	SUCTION SCRUBBER
231-GALLON EA.	PRODUCED FLUIDS	QB JOHNSON FILTER SEPARATOR
(2) 50-GALLON EA.	USED OIL	DRUM VACUUM UNITS IN COMPRESSOR BUILDING

NOTE:
OIL VOLUMES FOR DOT REGULATED PIPELINE EQUIPMENT ARE LISTED IN THE PLAN.

LEGEND:

- ABOVEGROUND OIL CONTAINING PIPE
- UNDERGROUND OIL CONTAINING PIPE
- FLOW DIRECTION

REFERENCE: MSES CONSULTANTS INC. DWG. NO. 00-102-1.

SYM.	DATE	BY	REVISION DESCRIPTION	PRJ/TSK	APP.
5	02/26/14	TBB	PER TIM JACKSON MARKUPS		
4	03/04/13	TBB	PER TIM JACKSON MARKUPS		
3	02/05/13	TBB	REVISED USING MSES VENDOR DWG# 11-557-1		
2	3/30/12	DRC	PER TIM JACKSON MARKUPS		
1	3/15/10	JDB	PER RUSS EVANS MARKUPS		

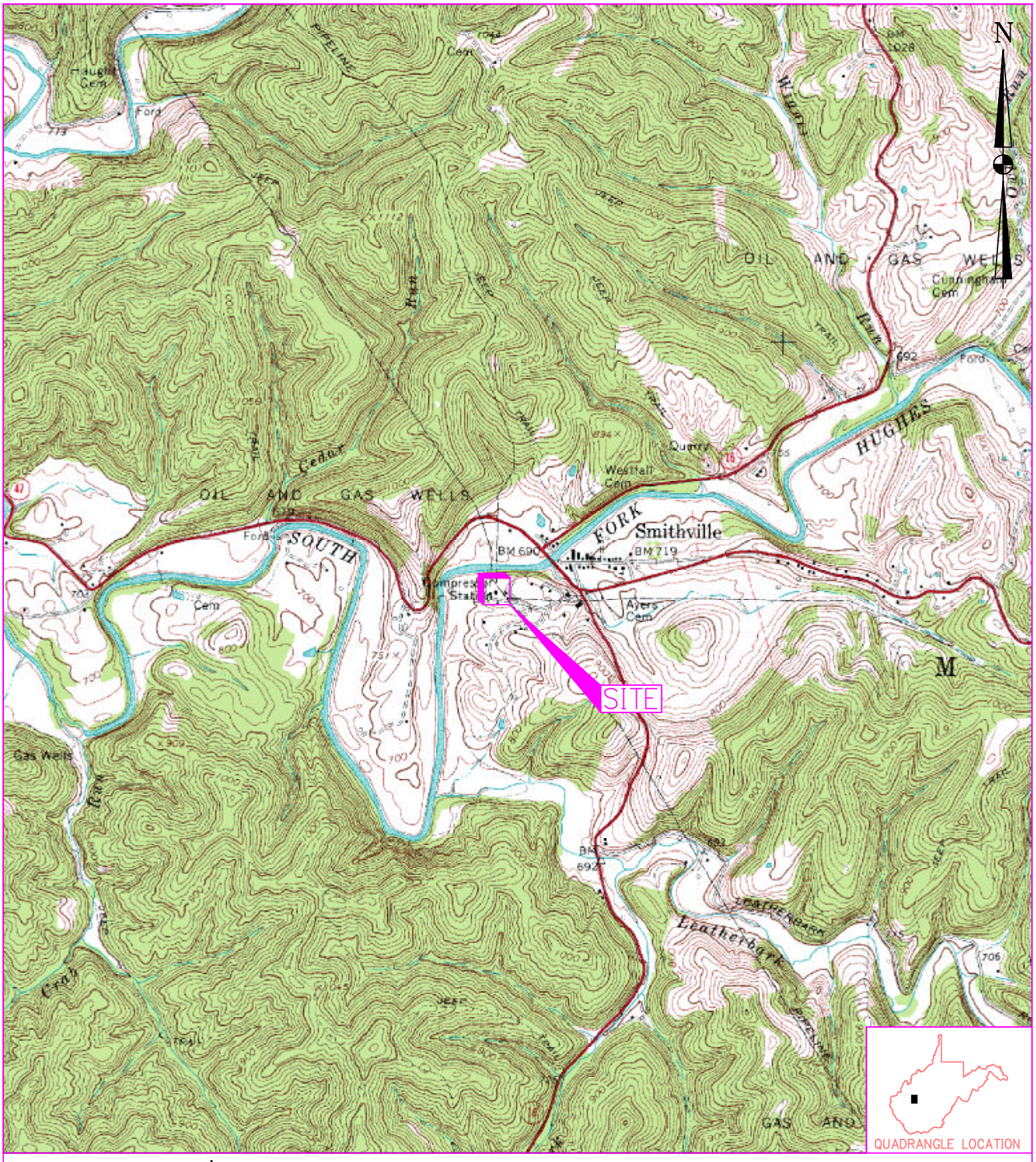
		DATE
SCALE	1"=40'	
DRAWN	DJF	
CHECKED		

Dominion Transmission, Inc.
445 West Main St. Clarksburg, West Virginia 26301 / Phone: (304) 623-8000

TITLE:
CRAIG COMPRESSOR STATION
RITCHIE COUNTY, WEST VIRGINIA
ENVIRONMENTAL EMERGENCY SITE PLAN

DIR:		GROUP	DWG. NO.	REV.
FILE:	PRJ/TSK:	PD	X9773	5

Printed: Feb 26, 2014 @12:39, By: timo409, Filename: PDX9773.dwg



REFERENCE: USGS 7.5' QUADRANGLE MAP OF: SMITHVILLE, WQEST VIRGINIA; DATED 1964.

DRAWN BY	DJF
DATE	
CHECKED BY	
SET JOB NO.	202059-04
SET DWG FILE	CRAIGm01.dwg
DRAWING SCALE	1"=2000'

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

DOMINION TRANSMISSION

CRAIG COMPRESSOR STATION
MURPHY DISTRICT, RITCHIE COUNTY, WEST VIRGINIA
SITE LOCATION MAP

DRAWING NO.	REV.
FIGURE 1	0

Plot: env045 07/31/2002 16:07 G:\DOMINION\202059\CRAIGm01.dwg

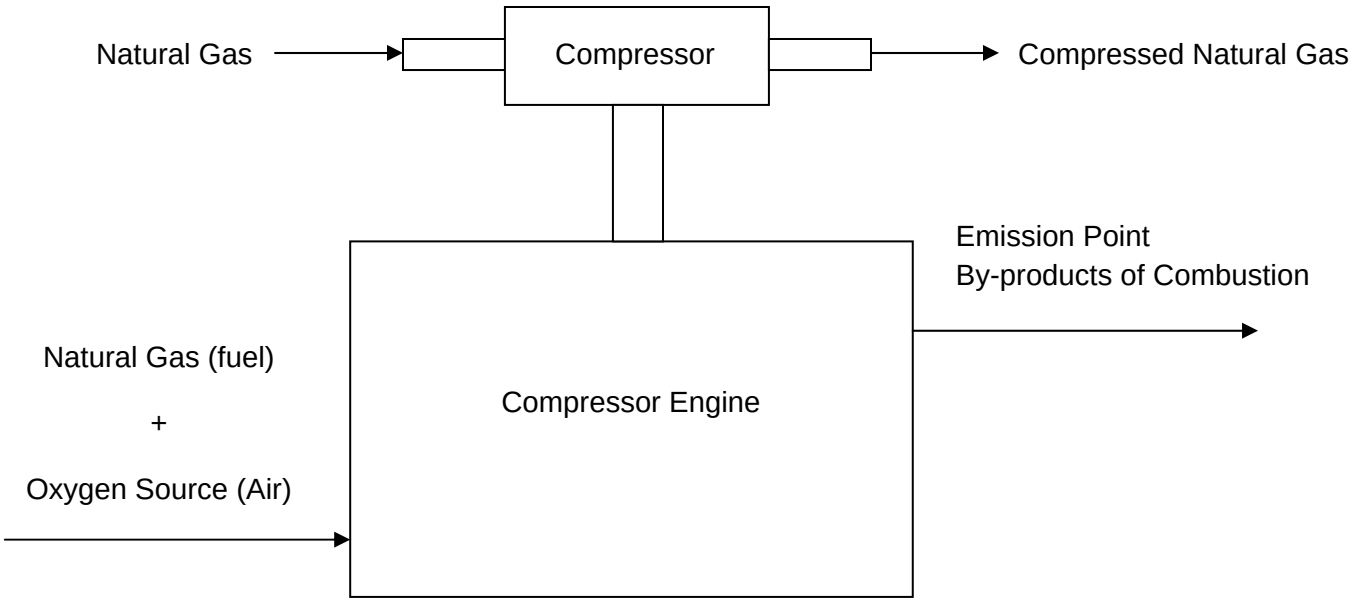
Attachment C

Process Flow Diagrams

Dominion Transmission, Inc.

Craig Compressor Station

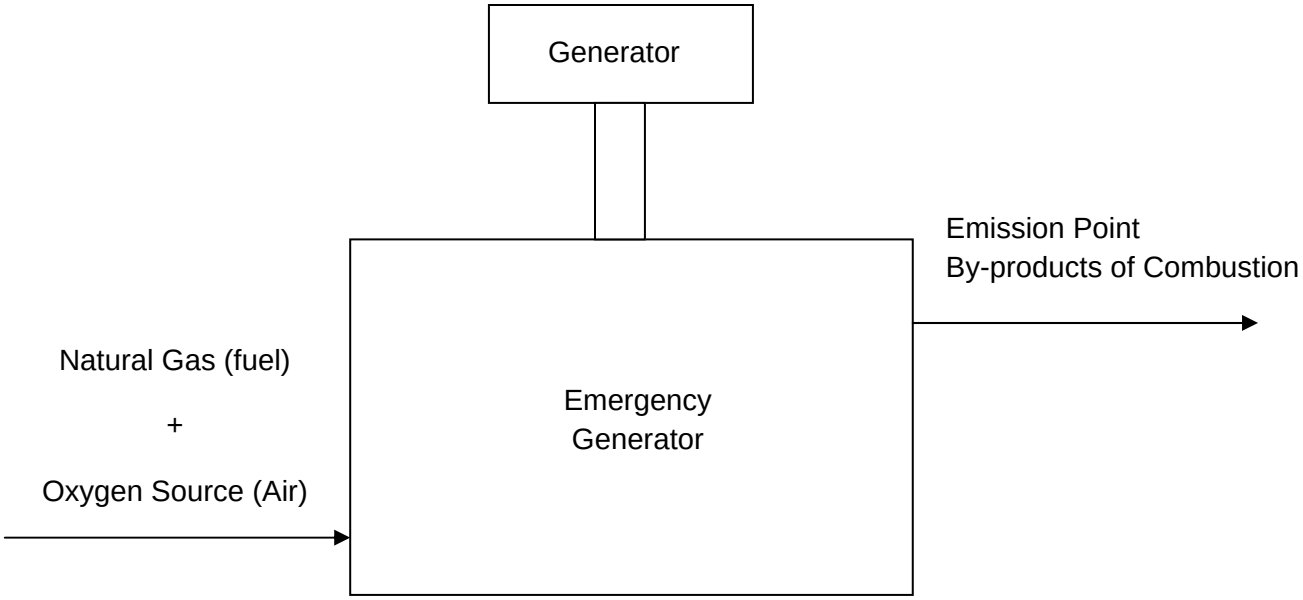
Compressor Engines (EN01 – EN03) Process Flow Diagram



Dominion Transmission, Inc.

Craig Compressor Station

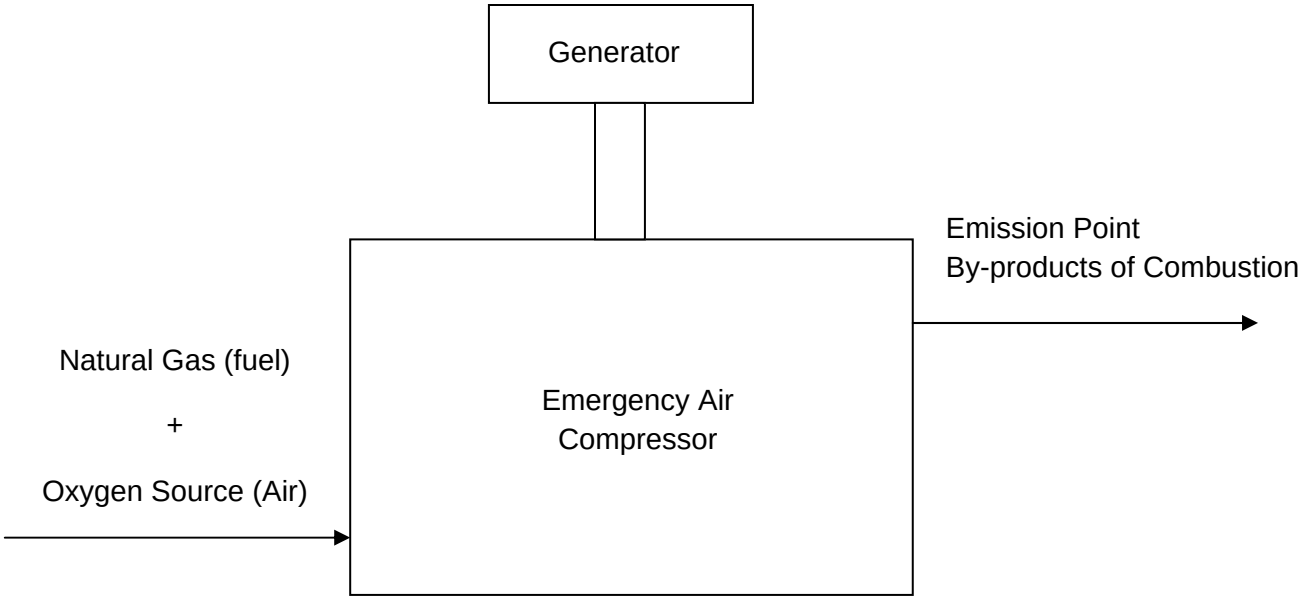
Emergency Generators (EN05 and EN06) Process Flow Diagram



Dominion Transmission, Inc.

Craig Compressor Station

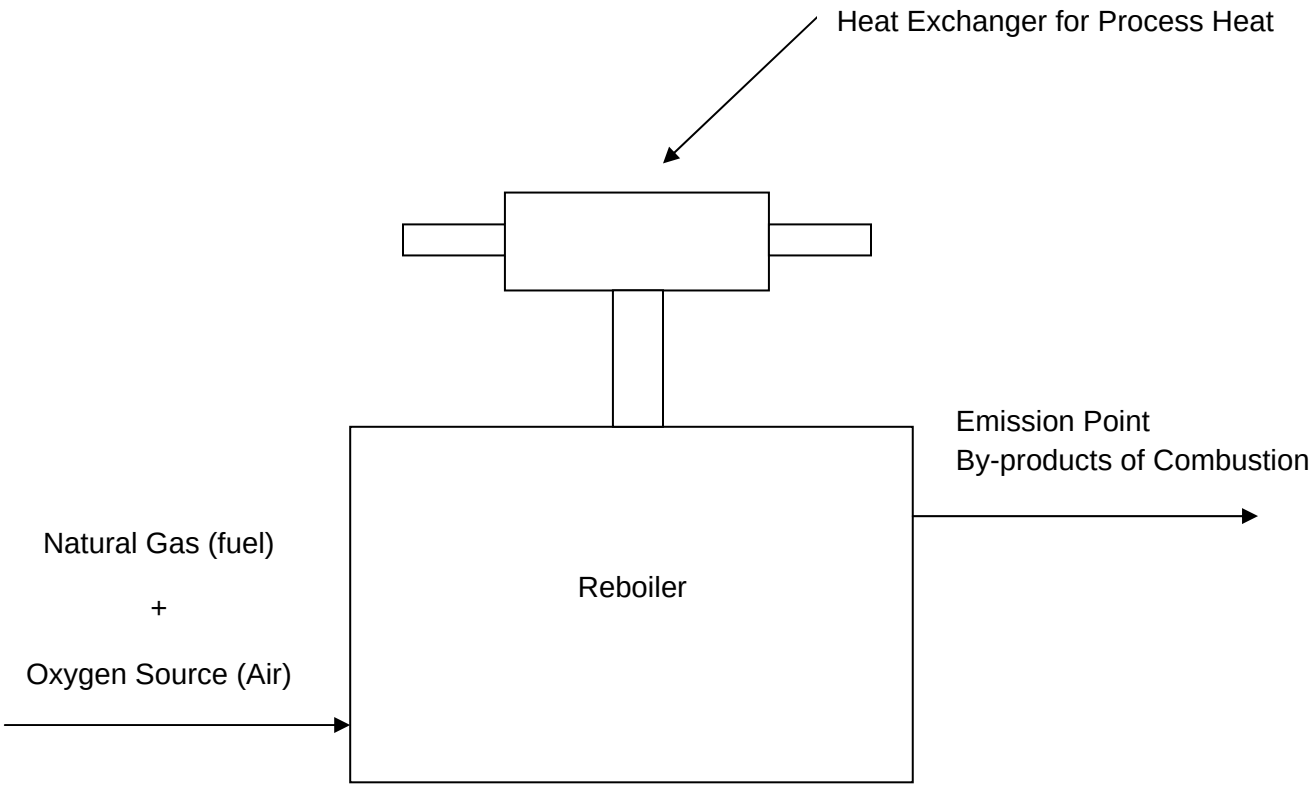
Emergency Air Compressor (CPR01) Process Flow Diagram



Dominion Transmission, Inc.

Craig Compressor Station

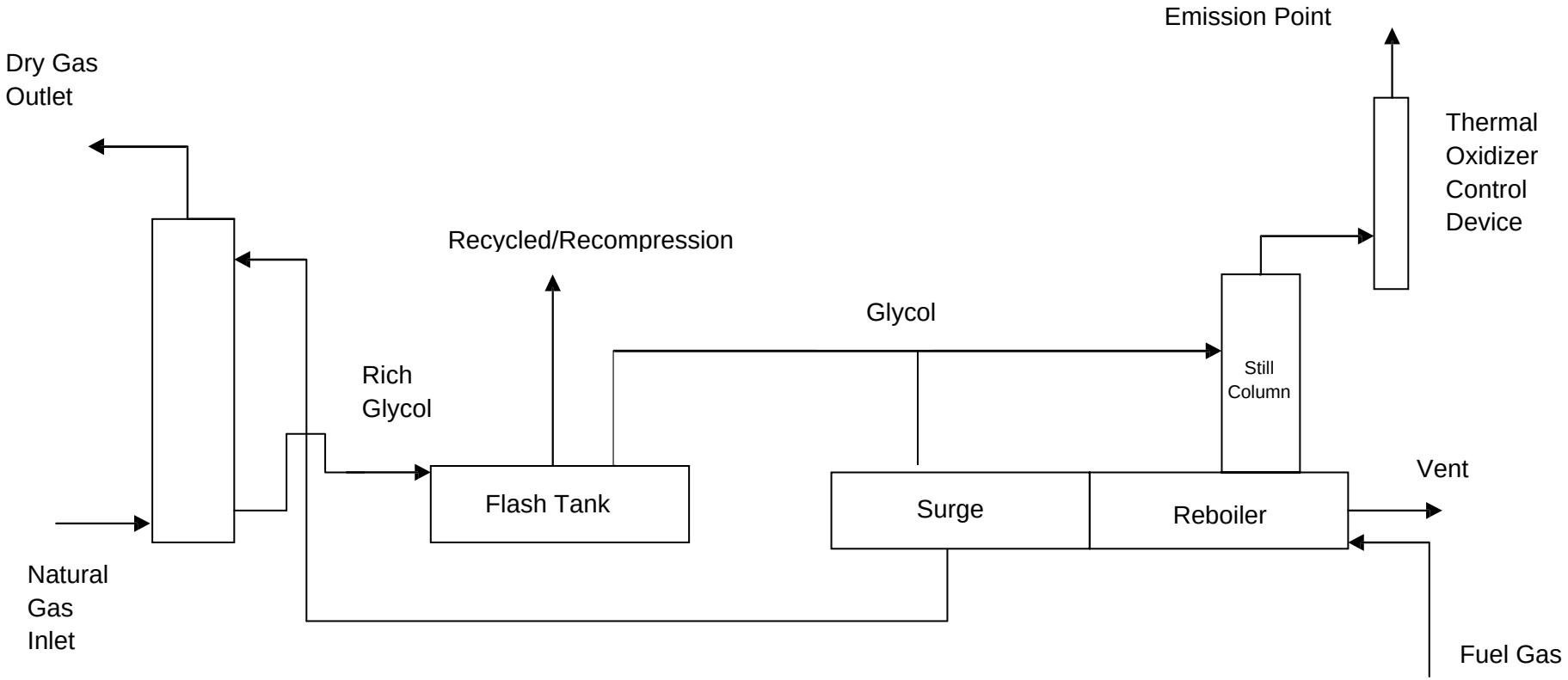
Reboiler (RBR02) Process Flow Diagram



Dominion Transmission, Inc.

Craig Compressor Station

Dehydration Unit (2C, DEHY02, and RBR02) 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
EN01	N/A	EN01	Reciprocating Engine/Integral Compressor; Ajax DPC-720	869 hp	1986
EN02	N/A	EN02	Reciprocating Engine/Integral Compressor; Ajax DPC-720	869 hp	1986
EN03	N/A	EN03	Reciprocating Engine/Integral Compressor; Ajax DPC-720	869 hp	1987
EN05	N/A	S05	Caterpillar Emergency Back-Up Generator	225 hp	2003
EG06	N/A	S06	Caterpillar Emergency Back-Up Generator	225 hp	2003
DEHY02	2C	DEHY02	Dehydrator Still Column	18 MMscf/day	2016
	N/A	N/A	Dehydrator Flash Tank		
RBR02	N/A	RBR02	Dehydrator Reboiler	0.75 MMBtu/hr	2016
2C	N/A	2C	Thermal Oxidizer	3.2 MMBtu/hr	2016
TK04	N/A	TK04	Vertical Aboveground Ethylene Glycol (Mix) Tank	1,000 Gallons	2011
TK10	N/A	TK10	Vertical Aboveground Tri-Ethylene Glycol Tank	4,200 Gallons	2011
TK11	N/A	TK11	Vertical Aboveground Produced Fluids Tank	4,200 Gallons	2011
TK12	N/A	TK12	Vertical Aboveground Lube Oil Tank	6,000 Gallons	2011
TK13	N/A	TK13	Vertical Aboveground Used Oil Tank	1,000 Gallons	2002
TK14	N/A	TK14	Vertical Aboveground Wastewater Tank	500 Gallons	2002
New units (and updates) to equipment list:					
CPR01	N/A	CPR01	Emergency Air Compressor, Honda GX 340	11 hp	2011

[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:**
2C	2C Thermal Oxidizer	N/A

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

Dehydration Unit Thermal Oxidizer

Manufacturer:	**Model number:**	**Serial number:**
Questor	Q100	

Construction date:	**Installation date:**	**Modification date(s):**
~ 2016	~ 2016	N/A

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
Combustor Rating: 3.19 MMBtu/hr
Pilot Burner: 60,000 Btu/hr

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Fuel to pilot flame: 60 scf/hr	Fuel to pilot flame: 0.526 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: 3.19 MMBtu/hr Pilot Burner: 60,000 Btu/hr	**Type and Btu/hr rating of burners:** Combustor Rating: 3.19 MMBtu/hr Pilot Burner: 60,000 Btu/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 to pilot throughput = 60 scf/hr
- Maximum annual fuel to pilot throughput = 0.526 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)	0.99	4.35
Nitrogen Oxides (NO_X)	0.22	0.98
Lead (Pb)	N/A	N/A
Particulate Matter ($PM_{2.5}$)	0.02	0.11
Particulate Matter (PM_{10})	0.02	0.11
Total Particulate Matter (TSP)	0.02	0.11
Sulfur Dioxide (SO_2)	N/A	N/A
Volatile Organic Compounds (VOC)	< 0.01	< 0.01
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Benzene	< 0.01	< 0.01
Formaldehyde	< 0.01	< 0.01
n-Hexane	< 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.).

Emissions were added together for the pilot and combustor:

- Emission factors from AP-42 Section 1.4 "Natural Gas Combustion" Tables 1.4-1, 1.4-2. Used for Pilot.
- Emission factors from AP-42 Section 13.5 "Industrial Flares" Tables 13.5-1, 13.5-2. Used for Combustor.

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:**
CPR01	Emergency Air Compressor	N/A

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

Natural gas-fired emergency air compressor

Manufacturer:	**Model number:**	**Serial number:**
Honda	GX 340	GCBET-1007181
Construction date:	**Installation date:**	**Modification date(s):**
2011	2011	N/A

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

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
175 cf/hr	87,500 cf/yr	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: 11 hp	**Type and Btu/hr rating of burners:** 0.18 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 = 175 cf/hr
- Maximum annual fuel usage = 87,500 cf/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)	0.65	0.16
Nitrogen Oxides (NO_X)	0.40	0.10
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	< 0.01
Sulfur Dioxide (SO_2)	< 0.01	< 0.01
Volatile Organic Compounds (VOC)	0.01	< 0.01
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Acetaldehyde	< 0.01	< 0.01
Acrolein	< 0.01	< 0.01
Benzene	< 0.01	< 0.01
Ethylbenzene	< 0.01	< 0.01
Formaldehyde	< 0.01	< 0.01
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.).

- NOx and CO emissions calculated from AP-42, Section 3.2, Natural Gas-Fired Reciprocating Engines, Table 3.2-3, 7/00 (worst case factors)
- PM, SO2, VOC, and HAP emissions calculated from AP-42, Section 3.2, Natural Gas-Fired Reciprocating Engines, Table 3.2-3, 7/00

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 60 Subpart JJJJ – NSPS emission limits (60.4233(a) and 60.4231(a))
40 CFR Part 60 Subpart JJJJ – Emergency definition; limitation on maintenance and readiness testing to 100 hrs/yr (60.4243(d))
40 CFR Part 63 Subpart ZZZZ – RICE NESHAP as a new, emergency, spark ignition engine at an area source (40 CFR 63 Subpart ZZZZ)

____ 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 60 Subpart JJJJ – Operate and maintain the RICE according to the manufacturer's instructions OR develop and follow your own maintenance plan (60.4243(a)(1 and 2))
40 CFR Part 60 Subpart JJJJ – Install a non-resettable hour meter (60.4237(c))
40 CFR Part 60 Subpart JJJJ – Keep records of maintenance on the engine and certified documentation (60.4245(a))
40 CFR Part 60 Subpart JJJJ – Keep records of the hours of operation (emergency vs non-emergency) (60.4245(b))
40 CFR Part 63 Subpart ZZZZ – Compliance with NSPS Subpart JJJJ shows compliance with NESHAP Subpart ZZZZ

Are you in compliance with all applicable requirements for this emission unit? _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:**
DEHY02	DEHY02 Glycol Dehydration Unit	Thermal Oxidizer (2C)

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

Dehydration unit still column

Manufacturer:	**Model number:**	**Serial number:**
Inegral		
Construction date:	**Installation date:**	**Modification date(s):**
~ 2016	~ 2016	N/A

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

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
18 MMscf/day (daily)	6,570 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 = 18 MMscf/day
- Maximum annual wet gas throughput = 6,570 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)	6.83	29.91
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Benzene	0.05	0.20
Ethylbenzene	0.04	0.19
n-Hexane	0.05	0.23
Toluene	0.26	1.14
Xylenes	1.79	7.82
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 thermal oxidizer. A safety factor of 20% is included in the total.

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 – Dehydration unit shall be installed, maintained, and operated to minimize pollutants, not exceed the listed design capacities, and use the specified control devices (TV 5.1.5; R13-2497A 4.1.1)
45 CSR 13 – The maximum wet natural gas shall not exceed 18 MMscf/day or 6,570 MMscf/year (TV 5.1.6; R13-2497A 4.1.2)
45 CSR 13 – Maximum emission limits (TV 5.1.7.a; R13-2497A 4.1.3.a)
45 CSR 13 – Dehydration flash tank emissions shall be captured and recycled back using a closed vent process (TV 5.1.7.b; R13-2497A 4.1.3.b)
45 CSR 13 – The existing dehydration unit (DEHY01) shall cease operating upon startup of the new dehydration unit (DEHY02) within 90 days of the startup of the new dehydration unit (TV 5.1.10; R13-2497A 4.1.7)
45 CSR 34 and 40 CFR 63.10(b)(3) – The facility is an area source of HAPs for NESHAP purposes (TV 5.1.13)
45 CSR 34 and 40 CFR Part 63 Subpart HH – Compliance with the applicable requirements of NESHAP Subpart HH is required upon initial start-up (TV 5.1.14)
45 CSR 13 and 40 CFR Part 63 Subpart HH – NESHAP Subpart HH benzene exemption requirements (TV 5.1.15; R13-2497A 4.1.3.d)

____ 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 5.1.6 will be demonstrated by monitoring daily, monthly, and rolling 12-month records of wet gas throughput (TV 5.2.5; R13-2497A 4.2.1)
45 CSR 13 – The permittee shall meet all applicable monitoring, compliance demonstration, recording, reporting, testing, and recordkeeping requirements given in 45 CSR 2 & 6 and 40 CFR 63 Subpart HH (TV 5.2.8, 5.3.4, and 5.4.11; R13-2497A 4.2.8, 4.3.3, and 4.4.4)
45 CSR 13 – Emissions shall be determined based on GRI- GYLCalc 3.0 or higher (TV 5.3.2 and 5.3.3; R13-2497A 4.3.2)
45 CSR 34 and 40 CFR Part 63 Subpart HH – Installation of a monitoring instrument that directly measures natural gas flowrate to the dehydration unit (TV 5.3.3)
45 CSR 34 and 40 CFR Part 63 Subpart HH – Maintain records of the wet gas throughput or benzene emissions (TV 5.4.10)

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:**
EN01	EN01 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:**
Ajax	DPC-720	83003
Construction date:	**Installation date:**	**Modification date(s):**
	1986	N/A

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

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
0.007 MMscf/hr	60.90 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: 869 hp	**Type and Btu/hr rating of burners:** 8,000 Btu/hp-hr 0.007 MMscf/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 = 0.007 MMscf/hr
- Maximum annual fuel usage = 60.90 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)	5.94	26.01
Nitrogen Oxides (NO_X)	18.39	80.56
Lead (Pb)	N/A	N/A
Particulate Matter ($PM_{2.5}$)	0.27	1.17
Particulate Matter (PM_{10})	0.27	1.17
Total Particulate Matter (TSP)	0.34	1.47
Sulfur Dioxide (SO_2)	< 0.01	0.02
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Acetaldehyde	0.05	0.24
Acrolein	0.05	0.24
Benzene	0.01	0.06
Ethylbenzene	< 0.01	< 0.01
Formaldehyde	0.38	1.68
Hexane	< 0.01	0.01
Toluene	0.01	0.03
Xylene	< 0.01	0.01
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

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, SO_2, 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 7.1.2)
40 CFR Part 63 Subpart ZZZZ – NESHAP operating requirements (TV 7.1.3)
40 CFR Part 63 Subpart ZZZZ – NESHAP continuous compliance requirements (TV 7.1.4)
40 CFR Part 63 Subpart ZZZZ – NESHAP general requirements/provisions (TV 7.1.5)

____ 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.)

40 CFR Part 63 Subpart ZZZZ – Change oil and filter, inspect spark plugs, and inspect all hoses and belts every 4,320 hours of operation or annually, whichever one first, or utilize an oil analysis program (TV 7.1.2 and 7.2.1(c))
40 CFR Part 63 Subpart ZZZZ – Operate and maintain the RICE according to the manufacturer's instructions OR develop and follow your own maintenance plan (TV 7.2.1 (a))
40 CFR Part 63 Subpart ZZZZ – Minimize the engine's time spent at idling during startup, not to exceed 30 minutes (TV 7.2.1 (b))
40 CFR Part 63 Subpart ZZZZ - Comply with all applicable recordkeeping requirements (TV 7.4.1)
40 CFR Part 63 Subpart ZZZZ – Keep records of maintenance on the stationary RICE (TV 7.4.2 and 7.4.3)
40 CFR Part 63 Subpart ZZZZ – Permit deviation reporting (TV 7.5.1)

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:**
EN02	EN02 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:**
Ajax	DPC-720	83006
Construction date:	**Installation date:**	**Modification date(s):**
	1986	N/A

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

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
0.007 MMscf/hr	60.90 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: 869 hp	**Type and Btu/hr rating of burners:** 8,000 Btu/hp-hr 0.007 MMscf/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 = 0.007 MMscf/hr
- Maximum annual fuel usage = 60.90 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)	5.94	26.01
Nitrogen Oxides (NO_X)	18.39	80.56
Lead (Pb)	N/A	N/A
Particulate Matter ($PM_{2.5}$)	0.27	1.17
Particulate Matter (PM_{10})	0.27	1.17
Total Particulate Matter (TSP)	0.34	1.47
Sulfur Dioxide (SO_2)	< 0.01	0.02
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Acetaldehyde	0.05	0.24
Acrolein	0.05	0.24
Benzene	0.01	0.06
Ethylbenzene	< 0.01	< 0.01
Formaldehyde	0.38	1.68
Hexane	< 0.01	0.01
Toluene	0.01	0.03
Xylene	< 0.01	0.01
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

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, SO_2, 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 7.1.2)
40 CFR Part 63 Subpart ZZZZ – NESHAP operating requirements (TV 7.1.3)
40 CFR Part 63 Subpart ZZZZ – NESHAP continuous compliance requirements (TV 7.1.4)
40 CFR Part 63 Subpart ZZZZ – NESHAP general requirements/provisions (TV 7.1.5)

____ 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.)

40 CFR Part 63 Subpart ZZZZ – Change oil and filter, inspect spark plugs, and inspect all hoses and belts every 4,320 hours of operation or annually, whichever one first, or utilize an oil analysis program (TV 7.1.2 and 7.2.1(c))
40 CFR Part 63 Subpart ZZZZ – Operate and maintain the RICE according to the manufacturer's instructions OR develop and follow your own maintenance plan (TV 7.2.1 (a))
40 CFR Part 63 Subpart ZZZZ – Minimize the engine's time spent at idling during startup, not to exceed 30 minutes (TV 7.2.1 (b))
40 CFR Part 63 Subpart ZZZZ - Comply with all applicable recordkeeping requirements (TV 7.4.1)
40 CFR Part 63 Subpart ZZZZ – Keep records of maintenance on the stationary RICE (TV 7.4.2 and 7.4.3)
40 CFR Part 63 Subpart ZZZZ – Permit deviation reporting (TV 7.5.1)

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:**
EN03	EN03 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:**
Ajax	DPC-720	83009
Construction date:	**Installation date:**	**Modification date(s):**
	1987	N/A

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

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
0.007 MMscf/hr	60.90 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: 869 hp	**Type and Btu/hr rating of burners:** 8,000 Btu/hp-hr 0.007 MMscf/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 = 0.007 MMscf/hr
- Maximum annual fuel usage = 60.90 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)	5.94	26.01
Nitrogen Oxides (NO_X)	18.39	80.56
Lead (Pb)	N/A	N/A
Particulate Matter ($PM_{2.5}$)	0.27	1.17
Particulate Matter (PM_{10})	0.27	1.17
Total Particulate Matter (TSP)	0.34	1.47
Sulfur Dioxide (SO_2)	< 0.01	0.02
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Acetaldehyde	0.05	0.24
Acrolein	0.05	0.24
Benzene	0.01	0.06
Ethylbenzene	< 0.01	< 0.01
Formaldehyde	0.38	1.68
Hexane	< 0.01	0.01
Toluene	0.01	0.03
Xylene	< 0.01	0.01
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

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, SO_2, 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 7.1.2)
40 CFR Part 63 Subpart ZZZZ – NESHAP operating requirements (TV 7.1.3)
40 CFR Part 63 Subpart ZZZZ – NESHAP continuous compliance requirements (TV 7.1.4)
40 CFR Part 63 Subpart ZZZZ – NESHAP general requirements/provisions (TV 7.1.5)

____ 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.)

40 CFR Part 63 Subpart ZZZZ – Change oil and filter, inspect spark plugs, and inspect all hoses and belts every 4,320 hours of operation or annually, whichever one first, or utilize an oil analysis program (TV 7.1.2 and 7.2.1(c))
40 CFR Part 63 Subpart ZZZZ – Operate and maintain the RICE according to the manufacturer's instructions OR develop and follow your own maintenance plan (TV 7.2.1 (a))
40 CFR Part 63 Subpart ZZZZ – Minimize the engine's time spent at idling during startup, not to exceed 30 minutes (TV 7.2.1 (b))
40 CFR Part 63 Subpart ZZZZ - Comply with all applicable recordkeeping requirements (TV 7.4.1)
40 CFR Part 63 Subpart ZZZZ – Keep records of maintenance on the stationary RICE (TV 7.4.2 and 7.4.3)
40 CFR Part 63 Subpart ZZZZ – Permit deviation reporting (TV 7.5.1)

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:**
EN05	EN05 Emergency Generator	N/A

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

Natural gas-fired emergency generator

Manufacturer:	**Model number:**	**Serial number:**
Caterpillar	G342NA	71B03463
Construction date:	**Installation date:**	**Modification date(s):**
1982	2003	N/A

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

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
1,800 scf/hr	0.90 MMscf/yr	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: 225 hp	**Type and Btu/hr rating of burners:** 1.80 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 = 1,800 scf/hr
- Maximum annual fuel usage = 0.90 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)	6.79	1.70
Nitrogen Oxides (NO_X)	6.40	1.60
Lead (Pb)	N/A	N/A
Particulate Matter ($PM_{2.5}$)	0.02	0.01
Particulate Matter (PM_{10})	0.02	0.01
Total Particulate Matter (TSP)	0.03	0.01
Sulfur Dioxide (SO_2)	< 0.01	< 0.01
Volatile Organic Compounds (VOC)	0.05	0.01
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Acetaldehyde	0.01	< 0.01
Acrolein	< 0.01	< 0.01
Benzene	< 0.01	< 0.01
Ethylbenzene	< 0.01	< 0.01
Formaldehyde	0.04	0.01
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.).

- NOx, CO, and VOC data taken from permit limits.
- PM, SO2, and HAP emissions calculated from AP-42, Section 3.2, Natural Gas-Fired Reciprocating Engines, Table 3.2-3, 7/00

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 6.1.1; R13-2503 A.1)
45 CSR 13 – Limit emergency engine to 500 hours/yr (TV 6.1.2; R13-2503 A.2)
40 CFR Part 63 Subpart ZZZZ – Comply with the applicable emission limitations and operating limitations of NESHAP Subpart ZZZZ (TV 6.1.3)

____ 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 – Maintain an operating log of the hours of operation for the generator. Keep records for 5 years (TV 6.4.1; R13-2503 B.1)
40 CFR Part 63 Subpart ZZZZ – Change oil and filter and inspect all hoses and belts every 500 hours of operation or annually, whichever one first. Inspect spark plugs every 1,000 hours of operation or annually, whichever one first, or utilize an oil analysis program (63.6603(a) 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)(3), 63.6640(a), and Table 6)
40 CFR Part 63 Subpart ZZZZ – Install a non-resettable hour meter (63.6625(f))
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 – Emergency definition (63.6640(f))
40 CFR Part 63 Subpart ZZZZ - Comply with all applicable recordkeeping requirements (63.6665, 63.10(b))
40 CFR Part 63 Subpart ZZZZ – Keep records of maintenance on the stationary RICE (63.6665, 63.10(b))

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:**
EN06	EN06 Emergency Generator	N/A

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

Natural gas-fired emergency generator

Manufacturer:	**Model number:**	**Serial number:**
Caterpillar	G342NA	71B3480
Construction date:	**Installation date:**	**Modification date(s):**
1982	2003	N/A

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

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
1,800 scf/hr	0.90 MMscf/yr	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: 225 hp	**Type and Btu/hr rating of burners:** 1.80 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 = 1,800 scf/hr
- Maximum annual fuel usage = 0.90 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)	6.79	1.70
Nitrogen Oxides (NO_X)	6.40	1.60
Lead (Pb)	N/A	N/A
Particulate Matter ($PM_{2.5}$)	0.02	0.01
Particulate Matter (PM_{10})	0.02	0.01
Total Particulate Matter (TSP)	0.03	0.01
Sulfur Dioxide (SO_2)	< 0.01	< 0.01
Volatile Organic Compounds (VOC)	0.05	0.01
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Acetaldehyde	0.01	< 0.01
Acrolein	< 0.01	< 0.01
Benzene	< 0.01	< 0.01
Ethylbenzene	< 0.01	< 0.01
Formaldehyde	0.04	0.01
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.).

- NOx, CO, and VOC data taken from permit limits.
- PM, SO2, and HAP emissions calculated from AP-42, Section 3.2, Natural Gas-Fired Reciprocating Engines, Table 3.2-3, 7/00

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 6.1.1; R13-2503 A.1)
45 CSR 13 – Limit emergency engine to 500 hours/yr (TV 6.1.2; R13-2503 A.2)
40 CFR Part 63 Subpart ZZZZ – Comply with the applicable emission limitations and operating limitations of NESHAP Subpart ZZZZ (TV 6.1.3)

____ 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 – Maintain an operating log of the hours of operation for the generator. Keep records for 5 years (TV 6.4.1; R13-2503 B.1)
40 CFR Part 63 Subpart ZZZZ – Change oil and filter and inspect all hoses and belts every 500 hours of operation or annually, whichever one first. Inspect spark plugs every 1,000 hours of operation or annually, whichever one first, or utilize an oil analysis program (63.6603(a) 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)(3), 63.6640(a), and Table 6)
40 CFR Part 63 Subpart ZZZZ – Install a non-resettable hour meter (63.6625(f))
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 – Emergency definition (63.6640(f))
40 CFR Part 63 Subpart ZZZZ - Comply with all applicable recordkeeping requirements (63.6665, 63.10(b))
40 CFR Part 63 Subpart ZZZZ – Keep records of maintenance on the stationary RICE (63.6665, 63.10(b))

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:**
RBR02	RBR02 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:**
Inegral		

Construction date:	**Installation date:**	**Modification date(s):**
~ 2016	~ 2016	N/A

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

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
1,104 cf/hr	9.67 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: 0.75 MMBtu/hr	**Type and Btu/hr rating of burners:** 1.104 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 = 1,104 cf/hr
- Maximum annual fuel usage = 9.67 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)	0.09	0.41
Nitrogen Oxides (NO_X)	0.11	0.48
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	0.04
Sulfur Dioxide (SO_2)	< 0.01	<0 .01
Volatile Organic Compounds (VOC)	0.01	0.03
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
- VOC, PM, PM10, PM2.5, 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 and 13 – Opacity limit of 10% on a six minute block average (TV 4.1.1; R13-2497A 4.1.4.d)
45 CSR 13 – The reboiler shall not exceed 0.75 MMBtu/hr and only burn natural gas (TV 4.1.2; R13-2497A 4.1.4.a)
45 CSR 13 – Emission limits (TV 4.1.3; R13-2497A 4.1.4.b and c)
45 CSR 13 – Reboiler shall be installed, maintained, and operated to minimize pollutants (TV 4.1.4; R13-2497A 4.1.1)

____ 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 2-3.1 and 13 – Compliance with TV 4.1.1 is demonstrated by combusting natural gas (TV 4.1.2; R13-2497A 4.1.4.a)
45 CSR 13 – Compliance with 4.1.1 shall be demonstrated by a Method 9, if requested. Maintain records (TV 4.2.1; R13-2497A 4.2.2)
45 CSR 13 – If Method 9 is requested and deviations are discovered, report within 10 days (TV 4.2.1.c; R13-2497A 4.2.2.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 G

Air Pollution Control Device Form

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: 2C	**List all emission units associated with this control device.** DEHY02	
Manufacturer: QTI	**Model number:** Q100	**Installation date:** ~ 2016

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
_X__ Thermal Incinerator	___ 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 thermal oxidizer
3.19 MMBtu/hr burner

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.** The dehy unit (DEHY02) is not subject to CAM since it is subject to NESHAP Subpart HH, which has provisions for compliance monitoring established after 1990. Per 64.2(b)(1)(i), *"emission limitations or standards proposed by the Administrator after November 15, 1990 pursuant to section 111 or 112 of the Act"* are exempt from CAM. CAM was established to build in provisions for how compliance would be demonstrated for emission limits if not adequately covered by a NSPS or NESHAP rule.

In addition, for VOC purposes, the dehy unit is not subject to CAM per 64.2(b)(1)(vi), which states "*emission limitations or standards for which a part 70 or 71 permit specified a continuous compliance determination method, as defined in 64.1*" is exempt from CAM. Since the R13 permit for the facility (R13-2497A) 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 and 13 – Particulate Matter emission limit (TV 5.1.1; R13-2497A 4.1.5.h.1)
45 CSR 6-4.3 and 13 – Opacity limit of 20% (TV 5.1.2; R13-2497A 4.1.5.h.2)
45 CSR 6-4.5 and 13 – Incinerator particles in the open air requirements (TV 5.1.3; R13-2497A 4.1.5.h.4)
45 CSR 6-4.6 and 13 – Incinerator odor prevention requirements (TV 5.1.4; R13-2497A 4.1.5.h.5)
45 CSR 13 – Emission limits (TV 5.1.8.a, R13-2497A 4.1.5.a)
45 CSR 13 – Design capacity (TV 5.1.8.b, R13-2497A 4.1.5.b)
45 CSR 13 – The pilot flame shall be present at all times when the thermal oxidizer is operating (TV 5.1.8.c, R13-2497A 4.1.5.c)
45 CSR 13 – No visible emissions except for periods not to exceed a total of one minutes during any 15 minute period (TV 5.1.8.d, R13-2497A 4.1.5.d)
45 CSR 13 – The thermal oxidizer shall be operated at all times when emissions may be vented to it (TV 5.1.8.e, R13-2497A 4.1.5.e)
45 CSR 13 – Operation and design of the thermal oxidizer to meet a 95.0% control (TV 5.1.8.f, R13-2497A 4.1.5.f)
45 CSR 13 – Operate and maintain the thermal oxidizer according to manufacturer specification (TV 5.1.8.g, R13-2497A 4.1.5.g)
45 CSR 13 – Closed vent requirements (TV 5.1.9, R13-2497A 4.1.6)
45 CSR 13 and 13-5.11 – Install, maintain, and operate the thermal oxidizer to minimize emissions (TV 5.1.17; R13-2497A 4.1.8)

Monitoring
45 CSR 13 – Compliance with 5.1.8.d shall be demonstrated by monthly visible checks using Section 11 of EPA Method 22 (TV 5.2.1.a; R13-2497A 4.2.5.a)
45 CSR 13 – Conduct an initial Method 22 opacity test within 180 days of initial startup of the thermal oxidizer (TV 5.2.1.b; R13-2497A 4.2.5.b)
45 CSR 13 – Compliance with 5.1.8.c shall be demonstrated by continuously monitoring using a thermocouple to detect a presence of a flame (TV 5.2.6.c; R13-2497A 4.2.3.c)
45 CSR 13 – Compliance with 5.1.9 shall be demonstrated by an initial AVO and annual AVOs (TV 5.2.7; R13-2797A 4.2.6)

Testing
45 CSR 13 – Testing if required (TV 5.3.1, R13-2497A 4.3.1)

Recordkeeping
45 CSR 13 – Records of manufacturer's specifications/maintenance requirements (TV 5.1.8.g, R13-2497A 4.1.5.g)
45 CSR 13 – Records of initial/annual Method 22 visible checks (TV 5.4.3; R13-2497A 4.2.5.d)
45 CSR 13 – Records of the times and duration of all periods which the pilot flame was absent (TV 5.4.6; R13-2497A 4.2.4)
45 CSR 13 – Records of initial/annual AVOs, including any repairs made (TV 5.4.7; R13-2497A 4.2.7)
45 CSR 13 – Records of pollution control equipment inspection and/or preventative maintenance procedures (TV 5.4.8; R13-2497A 4.4.2)
45 CSR 13 – Records of malfunction of air pollution control equipment (TV 5.4.9; R13-2479A 4.4.3)

Reporting
45 CSR 13 – Reporting of deviations of visible emissions requirements (TV 5.5.1, R13-2497A 4.5.1)
45 CSR 13 – Reporting of any time the thermal oxidizer is not operating when emissions are vented to it (TV 5.5.3, R13-2479A 4.5.3)