Dominion Resources Services, Inc.
5000 Dominion Boulevard, Glen Allen, VA 23060

dom.com

January 8, 2016

BY: U.S. CERTIFIED MAIL, RETURN RECEIPT REQUESTED
9590 9401 0037 5168 3631 68

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

RE: Dominion Transmission, Inc. – Title V Renewal Application
Hastings Compressor Station – R30-10300006-2011

Dear Mr. Durham:

Enclosed please find the Title V Renewal Application for Dominion Transmission, Inc.'s (DTI) Hastings Compressor Station, Permit No. R30-10300006-2011. The renewal application also includes DTI facilities Mockingbird Hill Compressor Station and Lewis Wetzel Compressor Station. The enclosure consists of one hard copy and two cd copies of the application that includes all attachments.

A separate R13 Class I Administrative Update application for Hastings Station was sent into WVDEP on 1/8/16. The administrative update is to include AUX06 and all related requirements from Dominion Transmission, Inc.'s (DTI) Mockingbird Hill Compressor Station R13 permit (R13-2555B) to DTI's Hastings Compressor Station R13 permit (R13-3249). The emergency generator is actually located at DTI's Hastings Compressor Station, as stated per the original application submitted 6/5/12.

A separate Class II Administrative Update application for Mockingbird Hill Station was submitted to WVDEP on 1/8/16. The administrative update is to request the removal of AUX06 and all related requirements from the R13 permit (R13-2555B) and for the upgrade of two (2) microturbines (AUX02 and AUX03) from Capstone C-60 to Capstone C-65 units.

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

- Equipment removed from the facility
  - AUX01 – Reciprocating Engine/Auxiliary Generator; Waukesha F817G
  - TK1 – 10,000 gal Horizontal Aboveground Storage Tank (Engine Oil)
  - TK4 – 240 gal Horizontal Aboveground Storage Tank (Wastewater)
  - TK5 – 240 gal Horizontal Aboveground Storage Tank (Air Dryer Condensate)

- Equipment added to the facility:
    - TK8 – 240 gal Horizontal Aboveground Storage Tank (Wastewater)
    - TK9 – 220 gal Horizontal Aboveground Storage Tank (Ethylene Glycol)
- Correction to equipment at the facility:
    - Install dates for tanks TK2, TK3, and TK7 were added.
    - TK6 – This tank previously had the tank contents as "air dryer condensate", but the correct description is "glycol".

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

- Correction to equipment at the facility:
    - Boiler BLR02 – The model for this boiler was previously listed as MTF700-1250-60, but the correct description is MTF700-1250-50.

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

- Equipment added to the facility:
    - Seven (7) tanks were added to the equipment list.
- Correction to equipment at the facility:
    - Engine EN03 – The model for this boiler was previously listed as 3612, but the correct description is G3612TA.

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

- Title V Condition 3.1.9 and 3.5.10 – Greenhouse Gases

  We request that these conditions be removed as the WVDEP State Regulation 45 CSR 42 has been repealed as of 6/1/12.

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, Gas Environmental Services

HASTINGS COMPRESSOR STATION
DOMINION TRANSMISSION INC.
APPLICATION FOR TITLE V OPERATING PERMIT RENEWAL
TITLE V OPERATING PERMIT NO: R30-10300006-2011

Dominion Transmission, Inc.
Hastings Compressor Station
Route 20
Pine Grove, WV

JANUARY 2016

DOMINION TRANMISSION, INC.
HASTINGS COMPRESSOR STATION

TITLE V PERMIT RENEWAL APPLICATION

TABLE OF CONTENTS

ATTACHMENTS

****Note:** There is no Attachment 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:

Hastings Station is a natural gas compressor station used to compress natural gas for Dominion Transmission, Inc.'s transmission pipeline system in West Virginia. Hastings Station is located in Pine Grove, WV. The Title V operating permit also includes Mockingbird Hill Station and Lewis Wetzel Station.

Hastings Station has the potential to emit in excess of 100 tons per year of nitrogen oxides (NOx) and 100 tons per year of carbon monoxide (CO). The station is classified as a major stationary source under the 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. Hastings Station is also 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.

Hastings Station was originally issued a Title V Operating Permit (Permit No: R30-10300006-2006) in 2006 for a period of five (5) years, with an expiration date of October 19, 2011. Hastings Station is also subject to the underlying State Operating Permit (Rule 13 Permit No: R13-3249). Mockingbird Hill Station is also subject to the underlying State Operating Permit (Rule 13 Permit No: R13-2555B). Lewis Wetzel Station is also subject to the underlying State Operating Permit (Rule 13 Permit No: R13-2870A).

The Title V operating permit is for the operation of:

Hastings Station:

- two (2) 500 hp natural gas fired reciprocating engines (EN01 and EN02),
- one (1) 128 hp emergency generator (AUX06),
- one (1) dehydration unit reboiler (RBR02),
- one (1) glycol dehydrator system (004-02) with flare (DEHY1),
- one (1) 10.0 MMBtu/hr natural gas heater (HTR01),
- six (6) aboveground storage tanks of various sizes (TK2, TK3, TK6 – TK9)

Mockingbird Hill Station

- two (2) 87 hp microturbines (AUX02 and AUX03),
- one (1) 80 hp microturbine (AUX04)
- one (1) 1.25 MMBtu/hr natural gas boiler (BLR02)
- one (1) 8,175 hp turbine (TUR02)
- three (3) aboveground storage tanks of various sizes (TK1 – TK3)

Lewis Wetzel Station

- one (1) 3,550 hp natural gas fired reciprocating engine (EN03),
- one (1) 530 hp emergency generator (AUX05),
- one (1) 4.5 MMBtu/hr natural gas boiler (BLR05)
- six (6) aboveground storage tanks of various sizes (TK1 – TK6)

The last Title V renewal application was submitted in 2011, with the Title V Operating Permit Renewal being issued on July 11, 2011, with an expiration date of July 11, 2016.

PROCESS DESCRIPTION

Hastings Station is a compressor facility that services a natural gas pipeline system. The compressor engines (EN01 and EN02) 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 (004-02). The dehydration unit removes moisture and impurities from the gas stream. Emergency backup power is supplied by emergency generator (AUX06).

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 hydrocarbons, is regenerated in the still column (004-02) 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 flare (DEHY1) to combust the hydrocarbons; thereby, reducing overall emissions and odor. The flare is permitted with a destruction efficiency of 95%. The compressed, dehydrated gas then enters the pipeline.

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

Two (2) 500 hp Cooper GMXE-6 natural gas-fired reciprocating engines/integral compressors

- Emission unit ID: 001-01 and 001-02
- Emission point ID: EN01 and EN02

One (1) 128 hp Generac QT080 natural gas emergency generator

- Emission unit ID: 002-06
- Emission point ID: AUX06

One (1) 0.55 MMBtu/hr Inegral natural gas-fired dehydration unit reboiler

- Emission unit ID: 005-06
- Emission point ID: RBR02

One (1) 7.5 MMscf/day Inegral dehydration unit/still column

- Emission unit ID: 004-02
- Emission point ID: DEHY1

One (1) 2 MMBtu/hr Questor dehydration unit controlled flare

- Emission unit ID: DEHY1
- Emission point ID: DEHY1

One (1) 10.0 MMBtu/hr natural gas heater

- Emission unit ID: 005-01
- Emission point ID: HTR01

One (1) 5,000 gallon horizontal aboveground ethylene glycol and water storage tank

- Emission unit ID: TK2
- Emission point ID: TK2

One (1) 2000 gallon horizontal aboveground used oil storage tank

- Emission unit ID: TK3
- Emission point ID: TK3

One (1) 240 gallon horizontal aboveground glycol storage tank

- Emission unit ID: TK6
- Emission point ID: TK6

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

- Emission unit ID: TK7
- Emission point ID: TK7

One (1) 240 gallon horizontal aboveground wastewater storage tank

- Emission unit ID: TK8
- Emission point ID: TK8

One (1) 220 gallon horizontal aboveground ethylene glycol storage tank

- Emission unit ID: TK9
- Emission point ID: TK9

Listed below is a description of the equipment located at the Mockingbird Hill Station:

Two (2) 87 hp Capstone C-65 natural gas-fired microturbines

- Emission unit ID: AUX02 and AUX03
- Emission point ID: AUX02 and AUX03

One (1) 80 hp Capstone C-60 natural gas-fired microturbine

- Emission unit ID: AUX04
- Emission point ID: AUX04

One (1) 1.25 MMBtu/hr Cleaver Brooks MTF700-1250-50 natural gas boiler

- Emission unit ID: 005-04
- Emission point ID: BLR02

One (1) 8,175 hp Solar Taurus 60 natural gas turbine

- Emission unit ID: 006-02
- Emission point ID: TUR02

One (1) 1,000 gallon horizontal aboveground wastewater storage tank

- Emission unit ID: TK1
- Emission point ID: TK1

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

- Emission unit ID: TK2
- Emission point ID: TK2

One (1) 220 gallon horizontal aboveground ethylene glycol storage tank

- Emission unit ID: TK3
- Emission point ID: TK3

Listed below is a description of the equipment located at the Lewis Wetzel Station:

One (1) 3,550 hp Caterpillar G3612TA natural gas-fired reciprocating engines/integral compressor

- Emission unit ID: 001-03
- Emission point ID: EN03

One (1) 530 hp Cummins KTA19G natural gas emergency generator

- Emission unit ID: 002-05
- Emission point ID: AUX05

One (1) 4.5 MMBtu/hr Bryan RV450W-FDG natural gas boiler

- Emission unit ID: 005-05
- Emission point ID: BLR05

One (1) 2,000 gallon horizontal aboveground lube oil storage tank

- Emission unit ID: TK1
- Emission point ID: TK1

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

- Emission unit ID: TK2
- Emission point ID: TK2

One (1) 1,500 gallon horizontal aboveground wastewater storage tank

- Emission unit ID: TK3
- Emission point ID: TK3

One (1) 2,000 gallon horizontal aboveground used oil storage tank

- Emission unit ID: TK4
- Emission point ID: TK4

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

- Emission unit ID: TK5
- Emission point ID: TK5

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

- Emission unit ID: TK6
- Emission point ID: TK6

SECTION 2

Title V Renewal Permit 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:** Hastings Compressor Station (This application also includes Mockingbird Hill Compressor Station and Lewis Wetzel Compressor Station)
3. DAQ Plant ID No.: 1 0 3 — 0 0 0 0 6	**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? 1968
☒ Permit Renewal — What is the expiration date of the existing permit? 07/11/2016
☐ 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: 3	

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 20	**City:** Pine Grove	**County:** Wetzel
UTM Easting: 528.09 km	**UTM Northing:** 4,377.66 km	**Zone:** ☒ 17 or ☐ 18
Directions: Route 68 west from Parkersburg to intersection of Route 892. Continue west on Route 892 with the plant being on the north side about one mile from the intersection of Routes 68 and 892.		
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.

Hastings Station is a compressor facility that services a natural gas pipeline system. The purpose of the facility is to recompress natural gas flowing through a pipeline for transportation. The reciprocating engines (EN01 and EN02) at the facility receive natural gas from a valve on a pipeline and compress it to enable further transportation in the pipeline.

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.

40 CFR Subpart JJJJ – The compressor engines (EN01 and EN02) are not subject to this subpart since they were installed in 1968, 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 tanks, gas wells, centrifugal compressors, reciprocating compressors, 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".

40 CFR 64 CAM – The dehy unit (004-02) at Hastings Station 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 R13-3249 permit specifies a "continuous compliance determination method" condition (e.g. continuously monitoring the flare 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)). EN03 at Lewis Wetzel Station is not applicable to CAM since PTE emissions do not exceed 100 tons/yr.

****Note**: DTI interprets that the 3 stations are located on different surface sites and are not to be aggregated together for applicability to the NESHAP, but individually evaluated for major HAP source determination.

☐ 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 34 – Asbestos inspection and removal (TV 3.1.3)
State Only: 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) – The 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)
State Only: 45 CSR 17-3.1 – Fugitive particulate matter (TV 3.1.10)
45 CSR 13 – Minor source of HAP (TV 3.1.12; R13-2870 4.1.2)

☐ 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 34 – Prior to demolition/construction buildings will be inspected for asbestos (TV 3.1.3)
45 CSR 4 – Permittee shall maintain records of all odor complaints received (TV 3.1.4 and 3.4.3)
45 CSR 11 – Upon request by the Secretary, the permittee shall prepare a standby plan (TV 3.1.5)
WV 22-5-4 – The permittee shall submit annual emission inventory reports (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 emissions from the facility by burning only pipeline quality natural gas (TV 3.1.10)
45 CSR 13 – The permittee shall maintain minor source of HAP status (TV 3.1.11; R13-2870 4.1.2)
45 CSR 13 and WV Code 22-5-4 (a) (15) – Testing requirements (TV 3.3.1)
45 CSR 30 – Recordkeeping Requirements (TV 3.4)
45 CSR 30 – Reporting Requirements (TV 3.5)
45 CSR 30 - The permittee shall submit a certified emissions statement and pay fees annually (TV 3.5.4)
45 CSR 30 - 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)*
R13-2555B (Mockingbird Hill Station)	09/17/2012	N/A
R13-2870A (Lewis Wetzel Station)	08/30/2012	N/A
R13-3249 (Hastings Station)	10/13/2015	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)	135.12
Nitrogen Oxides (NO_X)	264.59
Lead (Pb)	N/A
Particulate Matter ($PM_{2.5}$)[1]	13.51
Particulate Matter (PM_{10})[1]	13.51
Total Particulate Matter (TSP)	15.47
Sulfur Dioxide (SO_2)	1.14
Volatile Organic Compounds (VOC)	58.02
Hazardous Air Pollutants[2]	Potential Emissions
Acetaldehyde	1.29
Acrolein	0.90
Benzene	0.21
Ethylbenzene	0.03
Formaldehyde	10.54
Hexane	0.41
Toluene	0.38
Xylene	0.54
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: 01/04/2016
(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


Family Dollar
Valley Diner
Shortline Hwy
State Hwy 20
Piney Fork
Piney Fork Rd
Piney Fork
Mockingbird Hill Rd
Lower Run
South Fork Fishing Creek
Map
Google

Attachment B

Plot Plan

GALMISH LOADING AREA
SEE FIGURE 1–4F

HASTINGS EXTRACTION PLANT
SEE FIGURE 1–4B

HASTINGS ELECTRIC COMPRESSOR STATION
SEE FIGURE 1–4D

HASTINGS COMPRESSOR STATION
AND LEWIS WETZEL COMPRESSOR STATION
SEE FIGURES 1–4C AND 1–4G

HASTINGS PIG TRAP AND SLUG CATCHER AREA
SEE FIGURE 1–4E

QUADRANGLE LOCATION

REFERENCE: USGS 7.5' QUADRANGLE MAP OF: PINE GROVE, WEST VIRGINIA; DATED 1960, PHOTOREVISED 1976.

DRAWN BY	DJF
DATE	7/18/12
CHECKED BY	RAD
SET JOB NO.	212084
SET DWG FILE	HASTINGS SITEm01.dwg
DRAWING SCALE	1"=1200'

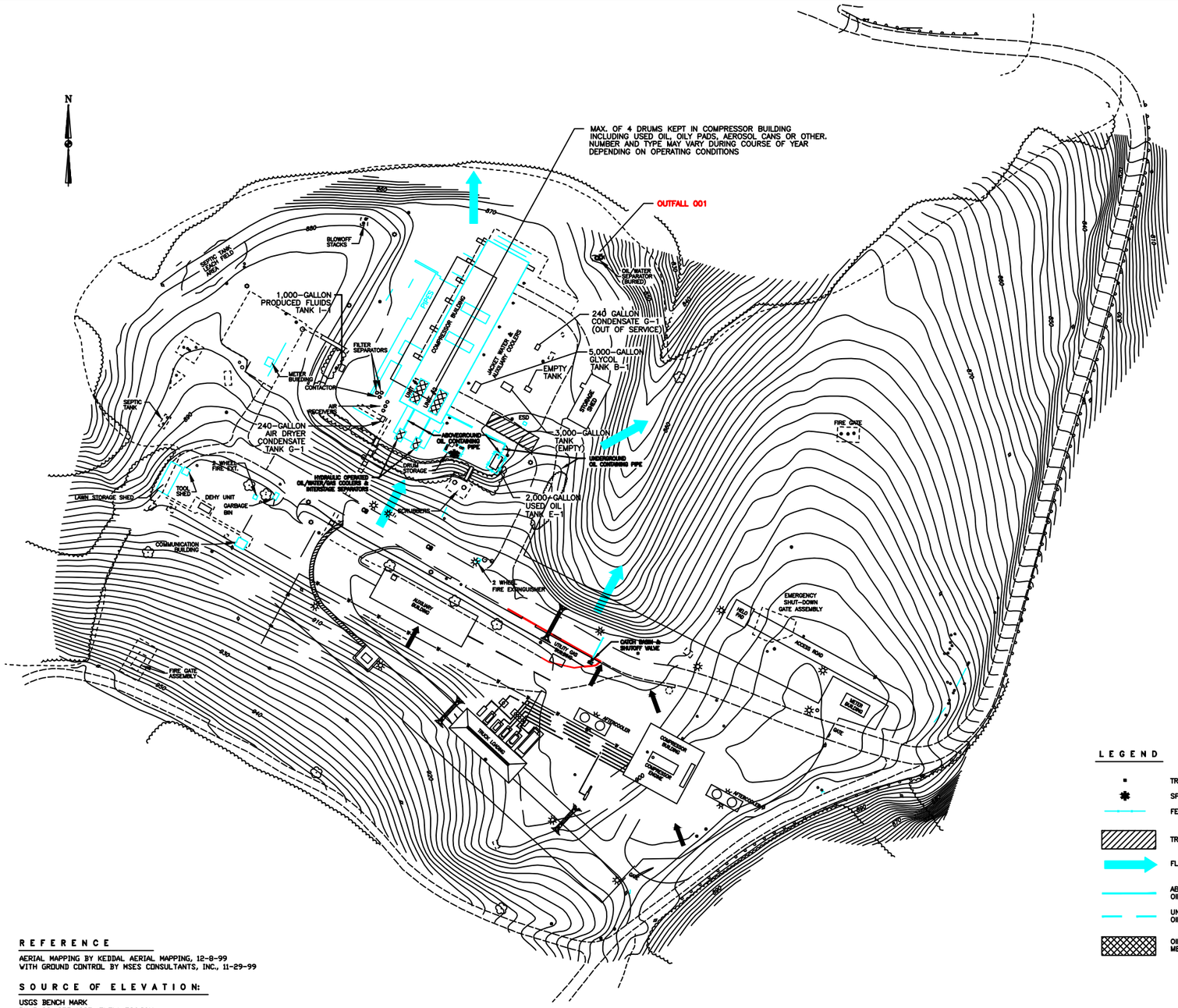
SE TECHNOLOGIES
98 Vanadium Road Bridgeville, PA 15017 (412) 221-1100

DOMINION TRANSMISSION

HASTINGS COMPLEX
WETSEL COUNTY, WEST VIRGINIA
SITE LOCATION MAP

DRAWING NAME	REV.
FIGURES 1–4A & C–10	1

Plot: env045 08/22/2012 10:45 G:\DOMINION\212084\HASTINGS SITE 1–4Am01.dwg



ABOVE GROUND STORAGE TANKS IDENTIFICATION & INFORMATION

TANK IDENTIFICATION	MATERIAL STORED	TANK CAPACITY	TYPE OF SECONDARY CONTAINMENT	SECONDARY CONTAINMENT CAPACITIES
B-1	ETHYLENE GLYCOL AND WATER	5,000 GAL.	DOUBLE-WALLED	>1,000-GALLONS (DOUBLE WALLED)
E-1	USED OIL	2,000 GAL.	SELF DIKED TANK	2,592-GALLONS (130%)
G-1	AIR DRYER CONDENSATE	240 GAL.	SELF DIKED TANK	300-GALLONS (125%)
I-1	PRODUCED FLUIDS	1,000 GAL.	DOUBLE-WALLED	>1,000-GALLONS (DOUBLE WALLED)
EMPTY	VARIOUS	3,000 GAL.	DOUBLE-WALLED	>5,000-GALLONS (DOUBLE WALLED)

OIL CONTAINING ELECTRICAL EQUIPMENT

QUANTITY	DESCRIPTION	LOCATION
349-GALLONS	SPARE TRANSFORMER	OLD COMPRESSOR BUILDING

OIL CONTAINING MECHANICAL EQUIPMENT *

QUANTITY	DESCRIPTION	LOCATION
71-GALLON EACH	(2) COOPER GMXE COMPRESSORS	COMPRESSOR BUILDING
APPROX. 75-GALLON EACH	(2) HYDRAULIC FAN DRIVE FOR GMXE	SOUTH OF COMPRESSOR BUILDING
1007-GALLON	FIELD SUCTION SCRUBBER	HILLSIDE ABOVE USED OIL TANK E-1
397-GALLON (DISCONNECTED)	OLD CARBIDE SCRUBBER	HILLSIDE ABOVE USED OIL TANK E-1
87-GALLON	PECO FILTER SEPARATOR	SOUTHWEST OF COMPRESSOR BUILDING NEAR AIR RECEIVERS
88-GALLON	KING TOOL FILTER SEPARATOR	SOUTHWEST OF COMPRESSOR BUILDING NEAR AIR RECEIVERS
157-GALLON EACH	(2) INTERSTAGE SEPARATORS	COOLER SKID SOUTH OF COMPRESSOR BUILDING ONE FOR No.1 ENGINE ONE FOR No.2 ENGINE
84-GALLON EACH	(2) ENGINE OIL COOLERS	SOUTH OF COMPRESSOR BUILDING

NOTE:
* OIL FILLED MECHANICAL EQUIPMENT INCLUDES ALL OIL FILLED MANUFACTURING EQUIPMENT AND NON-ELECTRICAL OIL FILLED OPERATIONAL EQUIPMENT.

NOTE:
THERE MAY BE OTHER TEMPORARY TANKS OR DRUMS AT THIS LOCATION DURING THE COURSE OF THE YEAR (LOCATIONS ON SITE MAY VARY). THIS DRAWING IS DESIGNED TO SHOW THOSE TANKS THAT ARE MORE PERMANENT.

LEGEND

- TRANSFORMER LOCATION
- SPILL KIT LOCATION (2)
- FENCE LINE
- TRUCK LOADING AREA
- FLOW ARROW
- ABOVEGROUND OIL CONTAINING PIPE
- UNDERGROUND OIL CONTAINING PIPE
- OIL FILLED MECHANICAL EQUIPMENT

REFERENCE

AERIAL MAPPING BY KEDDAL AERIAL MAPPING, 12-8-99
WITH GROUND CONTROL BY MSES CONSULTANTS, INC., 11-29-99

SOURCE OF ELEVATION:

USGS BENCH MARK
BM T-23, SET 1935, ELEV. 726.301'

NOTE: REFERENCE FIGURE 1-4C

SYM.	DATE	BY	REVISION DESCRIPTION	PRJ/TSK	APP.
1	04/29/2014	JRB	INCORPORATE DOMINION BORDER AND MARK-UPS PER TIM JACKSON		

SCALE	N.T.S.	DATE
DRAWN	SE TECH (DJF)	11/28/2012
CHECKED	SE TECH (JSS)	
APP. FOR BID		
APP. FOR CONST.		
TOWN:	COUNTY:	WETZEL, WV

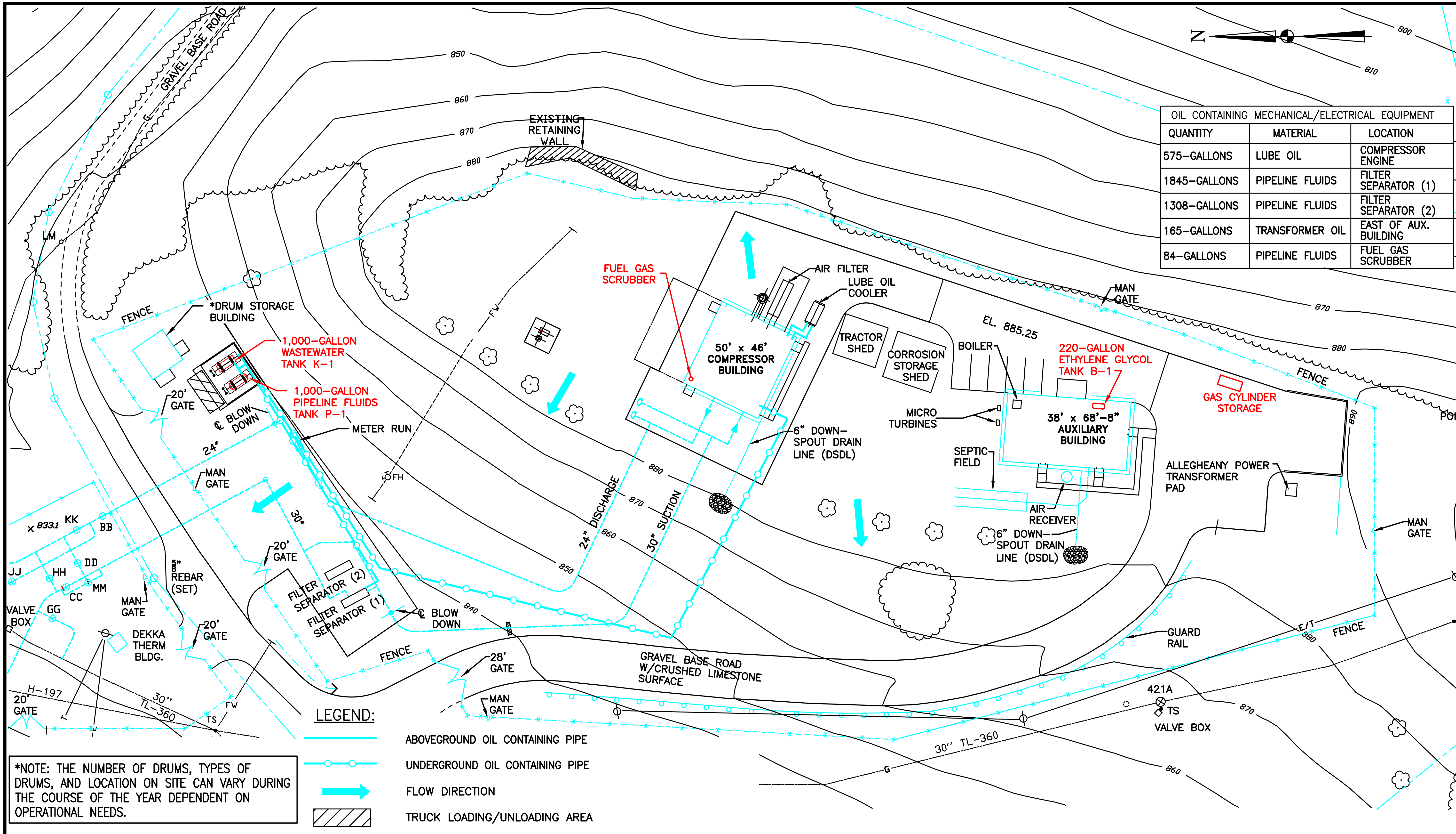
Dominion Transmission, Inc.
445 West Main St. Clarksburg, West Virginia 26301 / Phone: (304) 623-8000

FOR: HASTINGS COMPRESSOR STATION

TITLE: ENVIRONMENTAL EMERGENCY SITE PLAN (FACILITY DIAGRAM)

DIR:		GROUP	DWG. NO.	REV.
FILE:	PRJ/TSK:	PD	X7274C	1

Printed: Apr 29, 2014 @08:05, By: jaso400, Filename: PDX7274C.dwg



OIL CONTAINING MECHANICAL/ELECTRICAL EQUIPMENT		
QUANTITY	MATERIAL	LOCATION
575–GALLONS	LUBE OIL	COMPRESSOR ENGINE
1845–GALLONS	PIPELINE FLUIDS	FILTER SEPARATOR (1)
1308–GALLONS	PIPELINE FLUIDS	FILTER SEPARATOR (2)
165–GALLONS	TRANSFORMER OIL	EAST OF AUX. BUILDING
84–GALLONS	PIPELINE FLUIDS	FUEL GAS SCRUBBER

LEGEND:

- ABOVEGROUND OIL CONTAINING PIPE
- UNDERGROUND OIL CONTAINING PIPE
- FLOW DIRECTION
- TRUCK LOADING/UNLOADING AREA

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

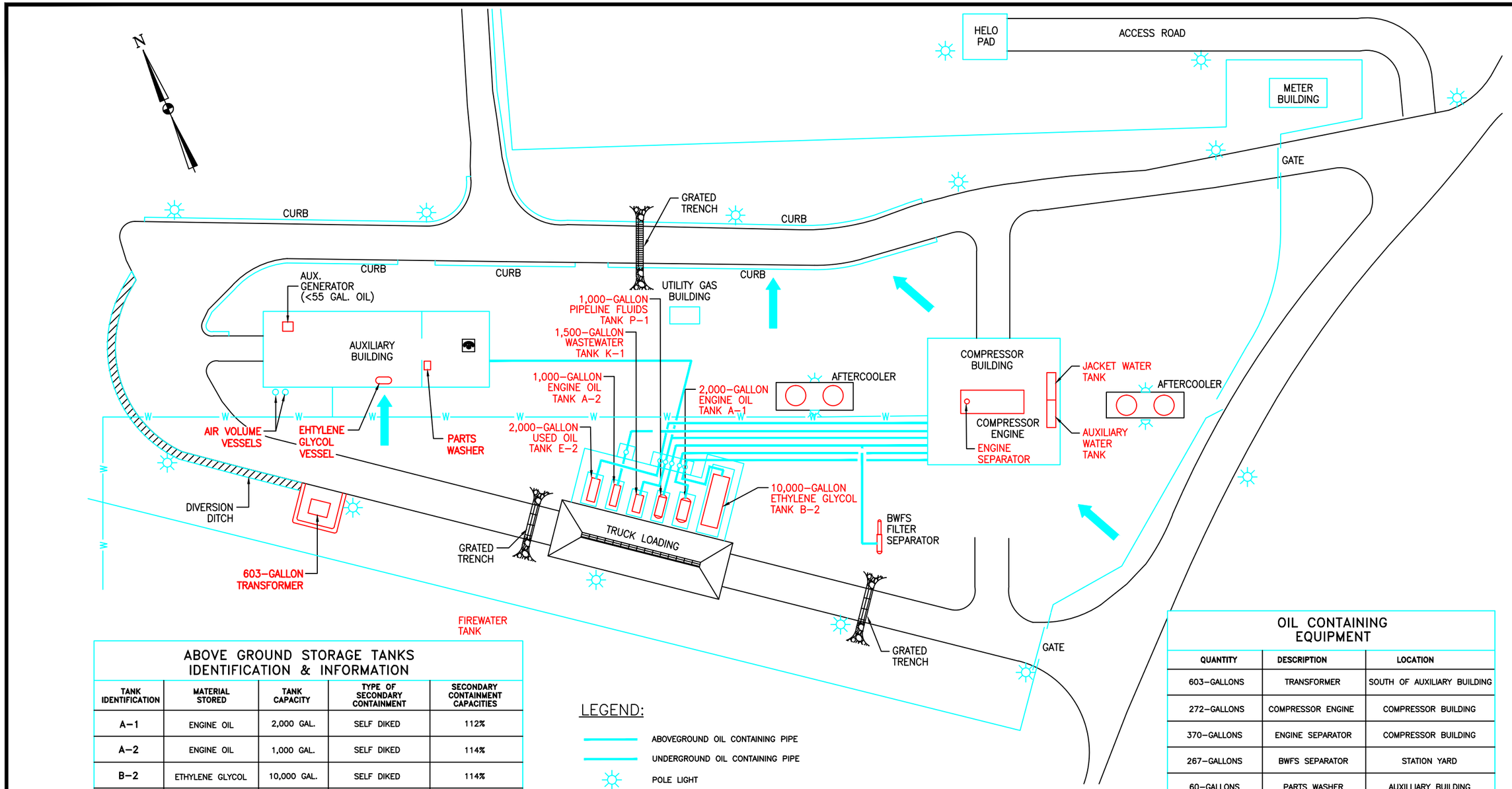
SYM.	DATE	BY	REVISION DESCRIPTION	PRJ/TSK	APP.
3	03/19/15	TBB	RELOCATED ETHYLENE GLYCOL TANK B–1 PER TIM JACKSON		
2	06/30/14	TBB	REVISED PER TIM JACKSON MARK UPS		
1	03/28/10	JDB	REVISED PER RUSS EVANS MARK UPS		

SCALE	N.T.S.	DATE
DRAWN	DJF	11/5/09
CHECKED	RRE	

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

TITLE: MOCKINGBIRD HILL COMPRESSOR STATION
WETZEL COUNTY, WEST VIRGINIA
ENVIRONMENTAL EMERGENCY PLOT PLAN

DIR:		GROUP	DWG. NO.	REV.
FILE:	PRJ/TSK:	PD	X2520G	3



ABOVE GROUND STORAGE TANKS IDENTIFICATION & INFORMATION

TANK IDENTIFICATION	MATERIAL STORED	TANK CAPACITY	TYPE OF SECONDARY CONTAINMENT	SECONDARY CONTAINMENT CAPACITIES
A-1	ENGINE OIL	2,000 GAL.	SELF DIKED	112%
A-2	ENGINE OIL	1,000 GAL.	SELF DIKED	114%
B-2	ETHYLENE GLYCOL	10,000 GAL.	SELF DIKED	114%
E-2	USED OIL	2,000 GAL.	SELF DIKED	112%
K-1	WASTEWATER	1,500 GAL.	SELF DIKED	128%
P-1	PIPELINE FLUIDS	1,000 GAL.	SELF DIKED	114%

NOTE:
E-1 IS LOCATED IN AREA OF OLD HASTINGS STATION.

LEGEND:

- ABOVEGROUND OIL CONTAINING PIPE
- UNDERGROUND OIL CONTAINING PIPE
- POLE LIGHT
- WALL MOUNTED LIGHT
- FLOW ARROW
- PHONE

OIL CONTAINING EQUIPMENT

QUANTITY	DESCRIPTION	LOCATION
603-GALLONS	TRANSFORMER	SOUTH OF AUXILIARY BUILDING
272-GALLONS	COMPRESSOR ENGINE	COMPRESSOR BUILDING
370-GALLONS	ENGINE SEPARATOR	COMPRESSOR BUILDING
267-GALLONS	BWFS SEPARATOR	STATION YARD
60-GALLONS	PARTS WASHER	AUXILLIARY BUILDING

NOTE: REFERENCE FIGURE 1-4G

SYM.	DATE	BY	REVISION DESCRIPTION	PRJ/TSK	APP.
1	04/29/2014	JRB	INCORPORATE DOMINION BORDER AND MARK-UPS PER TIM JACKSON		

SCALE	N.T.S.	DATE
DRAWN	SE TECH (DJF)	11/27/2012
CHECKED	SE TECH (JSS)	
APP. FOR BID		
APP. FOR CONST.		
TOWN:	COUNTY: WETZEL, WV	

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

FOR: LEWIS WETZEL COMPRESSOR STATION

TITLE: ENVIRONMENTAL EMERGENCY SITE PLAN (FACILITY DIAGRAM)

DIR:		GROUP	DWG. NO.	REV.
FILE:	PRJ/TSK:	PD	X7274G	1

Printed: Apr 29, 2014 @09:25, By: jaso400, Filename: PDX7274G.dwg

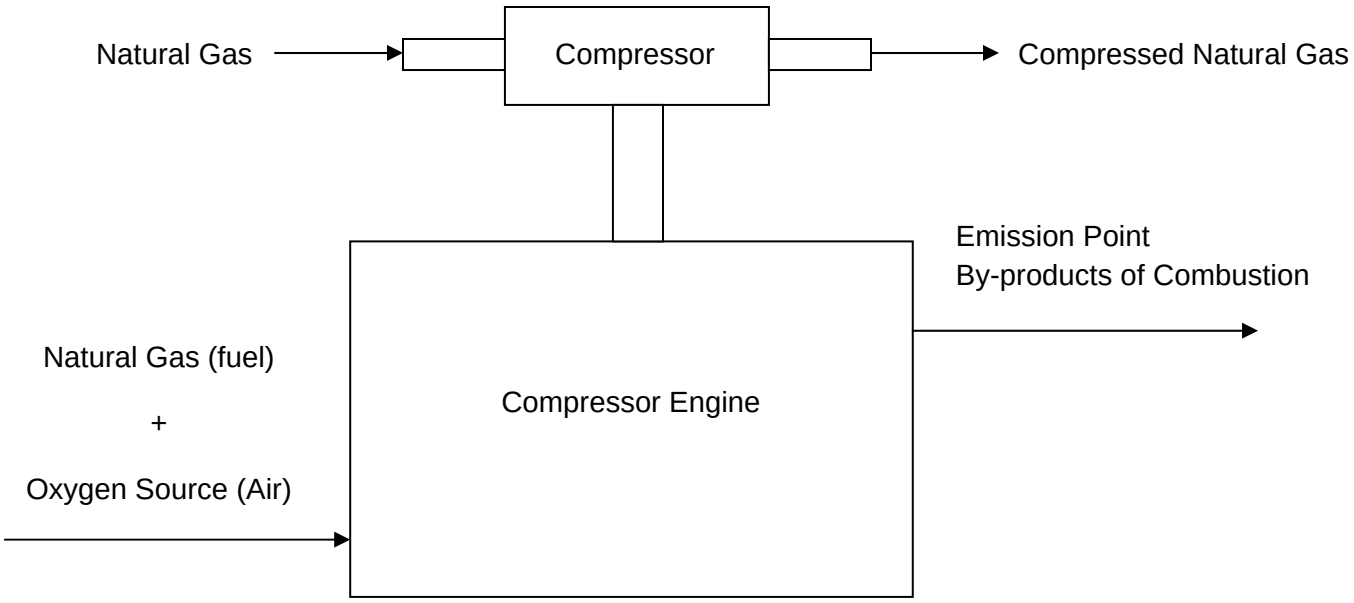
Attachment C

Process Flow Diagrams

Dominion Transmission, Inc.

Hastings Compressor Station

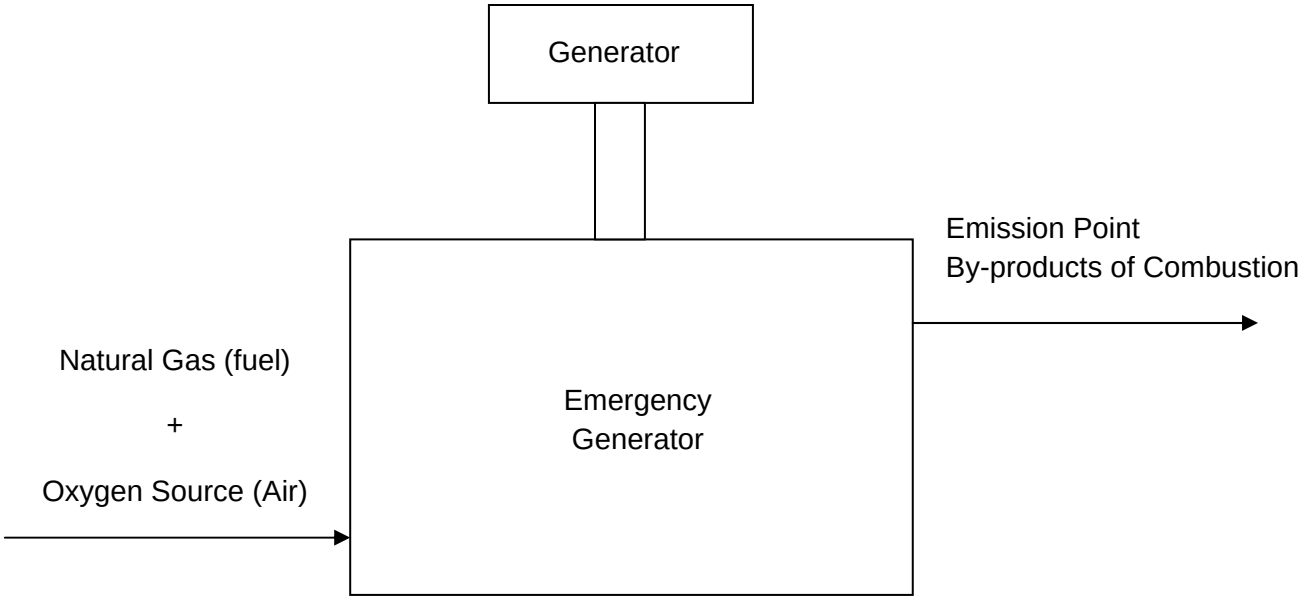
Compressor Engines (EN01 and EN02) Process Flow Diagram



Dominion Transmission, Inc.

Hastings Compressor Station

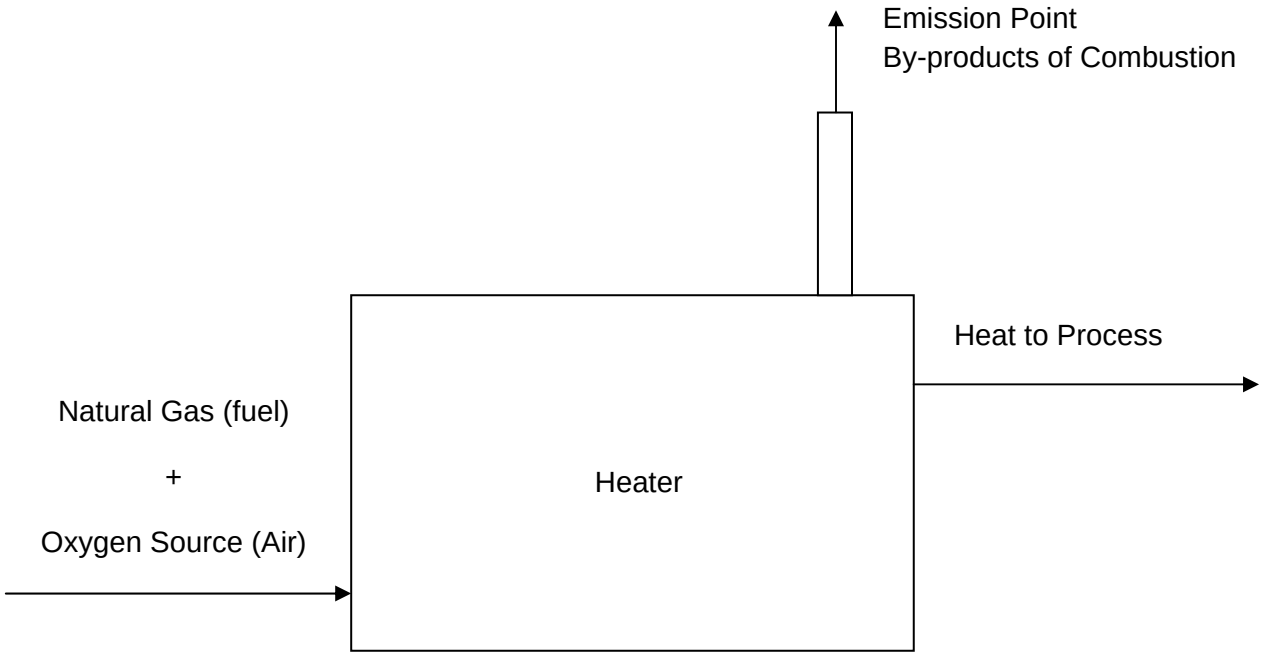
Emergency Generator (AUX06) Process Flow Diagram



Dominion Transmission, Inc.

Hastings Compressor Station

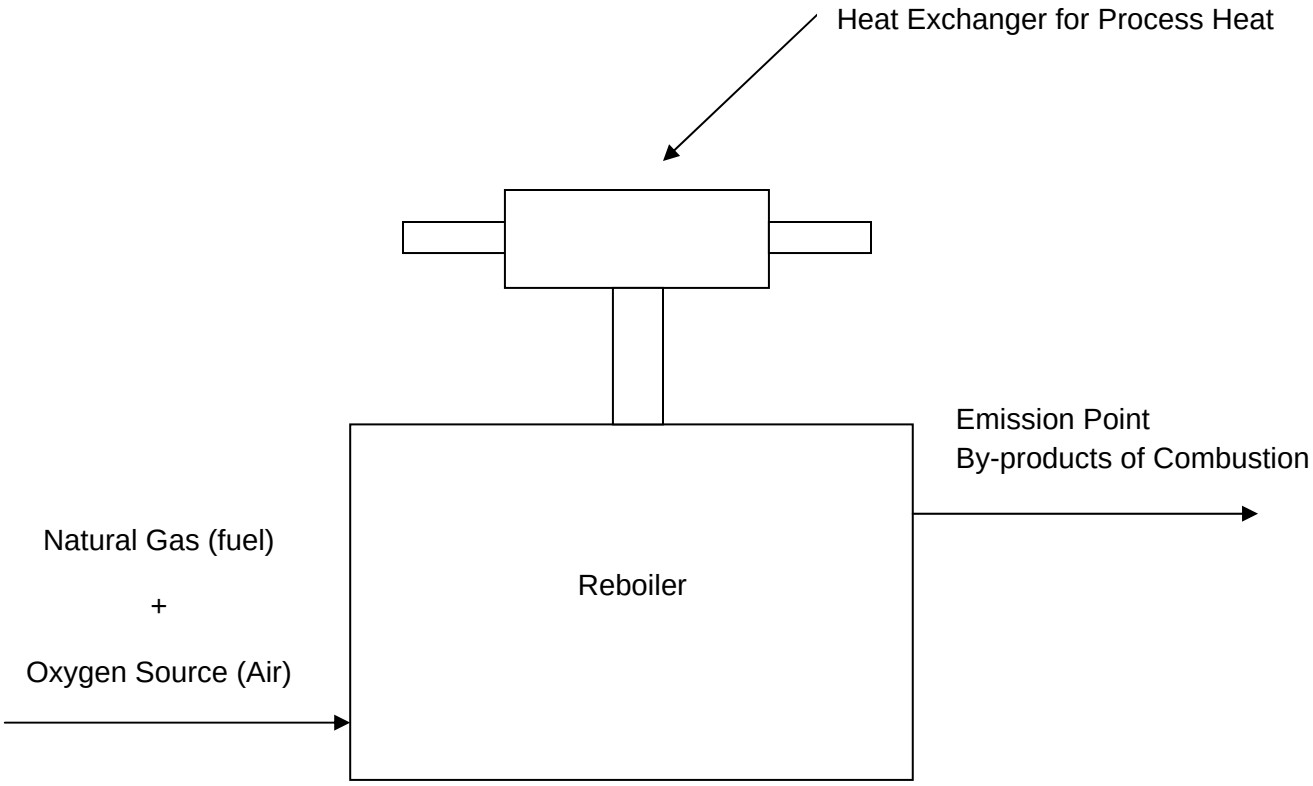
Heater (HTR01) Process Flow Diagram



Dominion Transmission, Inc.

Hastings Compressor Station

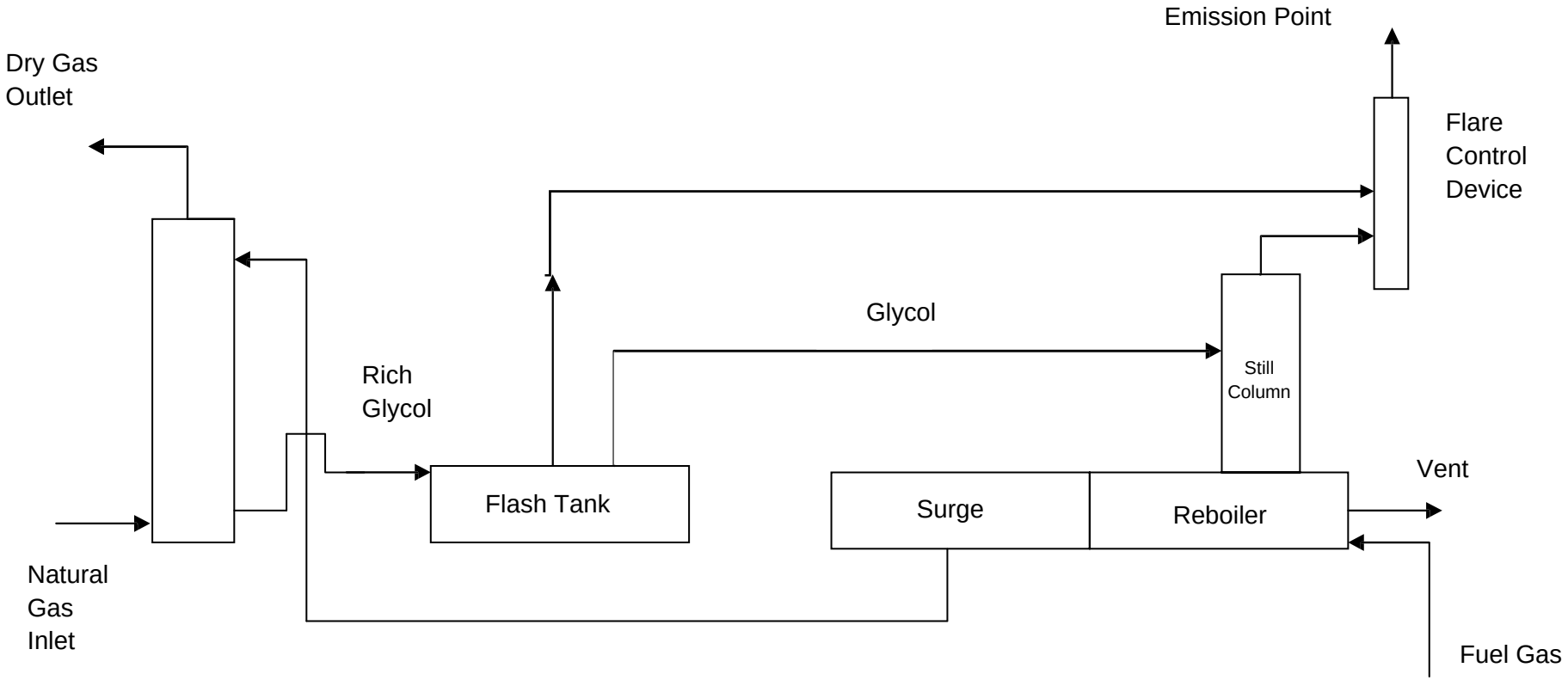
Reboiler (RBR02) Process Flow Diagram



Dominion Transmission, Inc.

Hastings Compressor Station

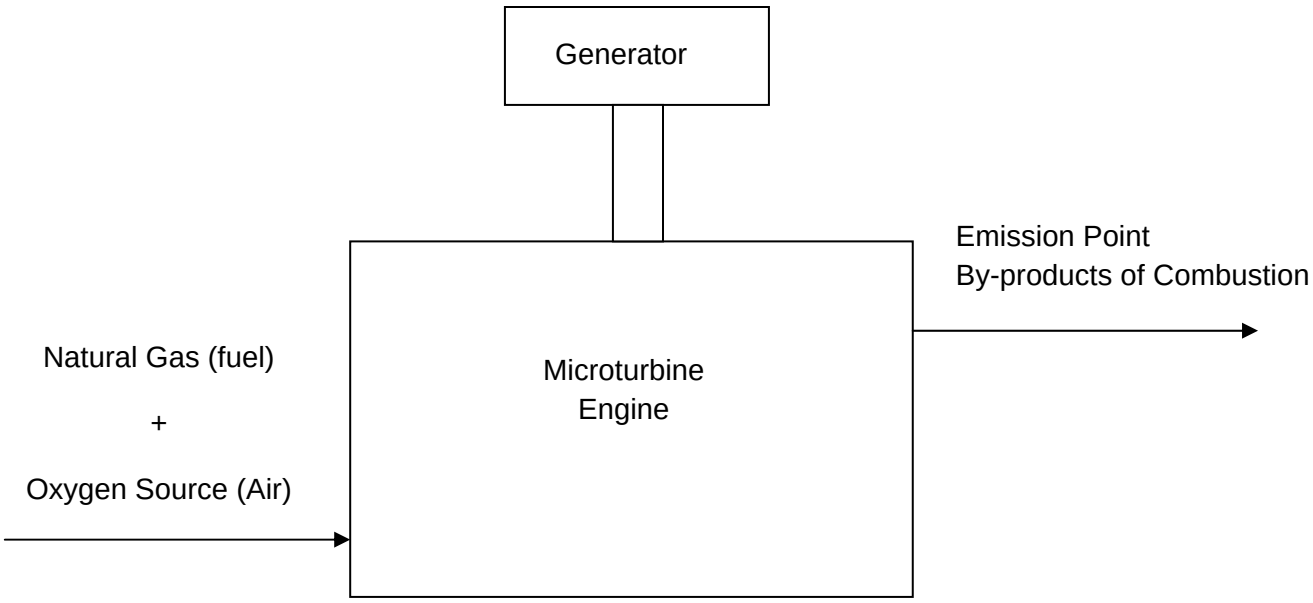
Dehydration Unit (DEHY, 004-02, and RBR02) Process Flow Diagram



Dominion Transmission, Inc.

Mockingbird Hill Compressor Station

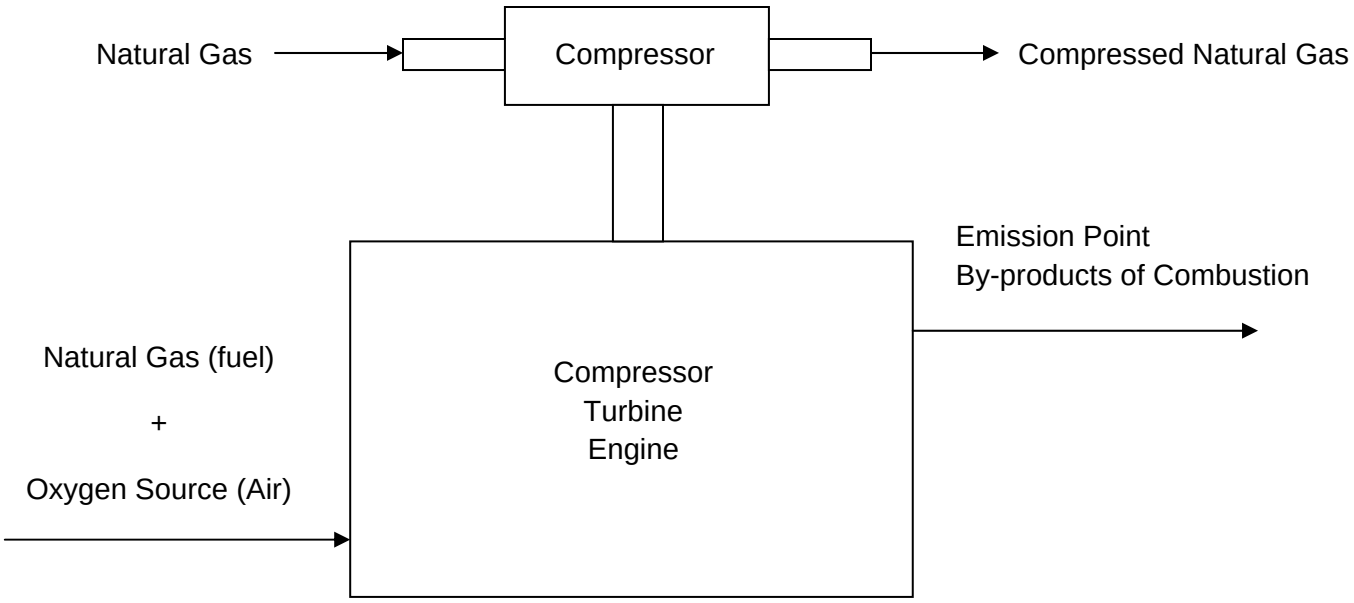
Microturbines (AUX02 – AUX04) Process Flow Diagram



Dominion Transmission, Inc.

Mockingbird Hill Compressor Station

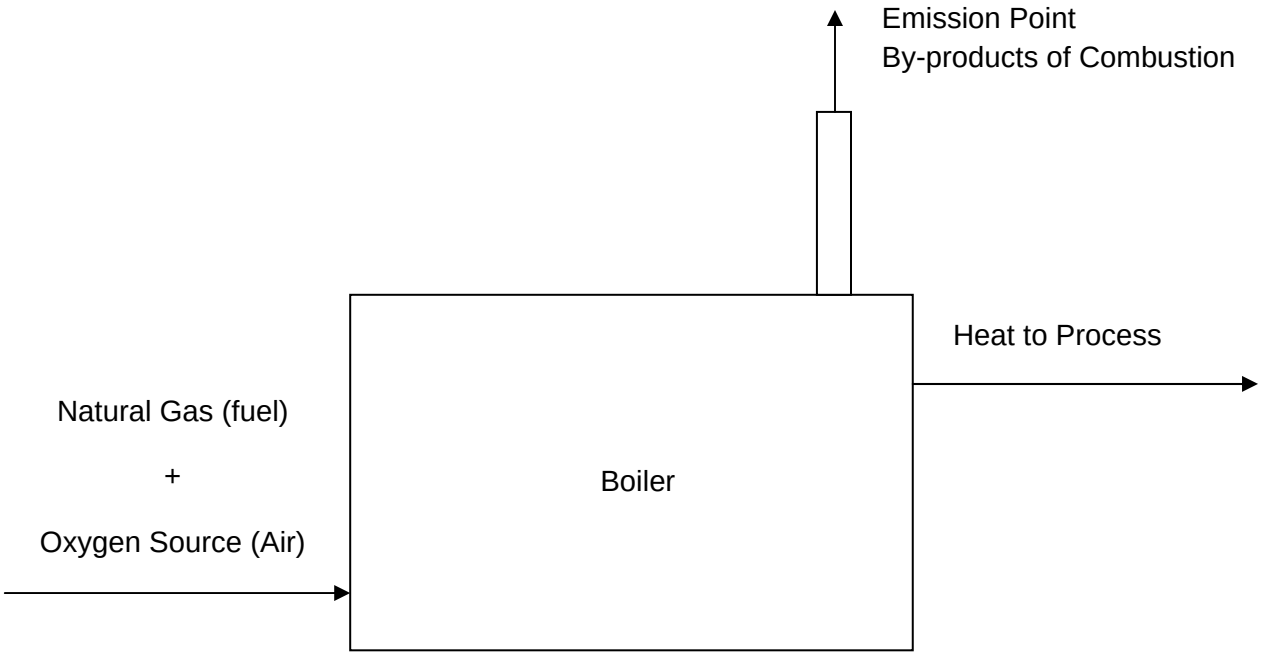
Turbine (TUR02) Process Flow Diagram



Dominion Transmission, Inc.

Mockingbird Hill Compressor Station

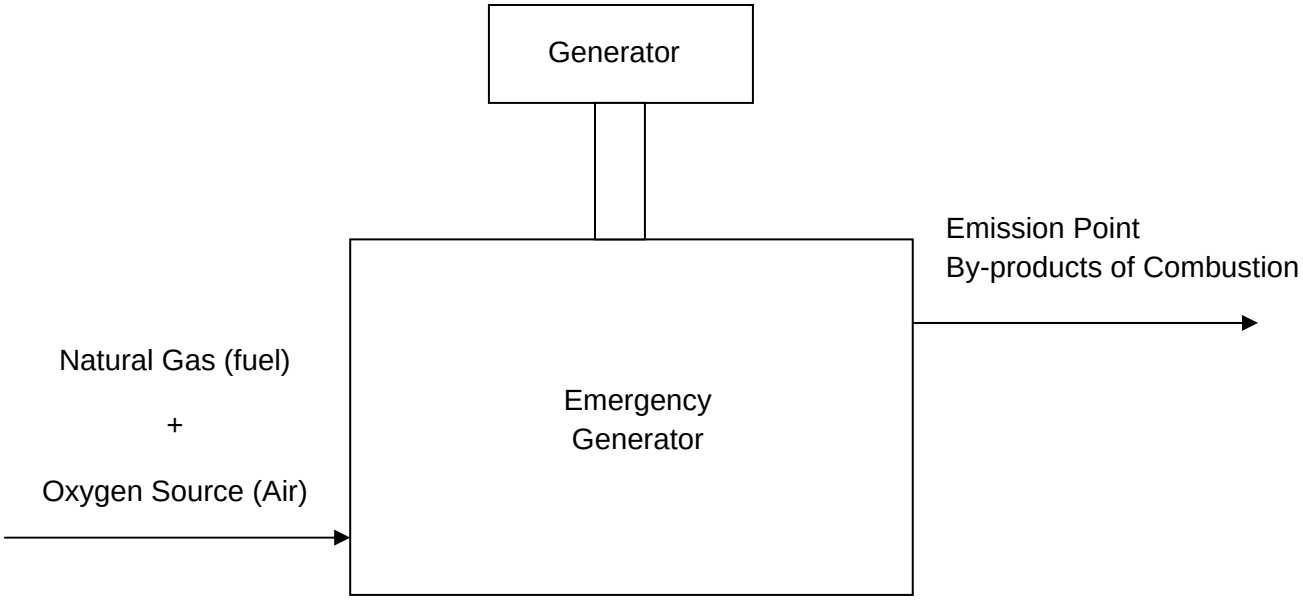
Boiler (BLR02) Process Flow Diagram



Dominion Transmission, Inc.

Lewis Wetzel Compressor Station

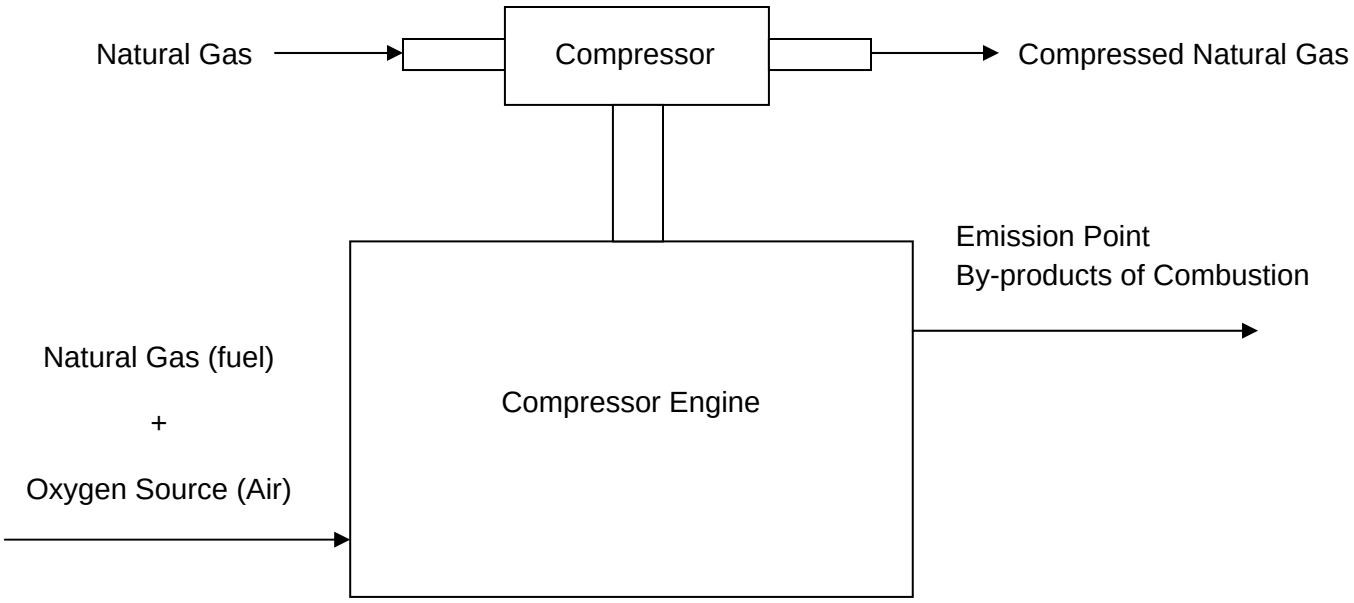
Emergency Generator (AUX05) Process Flow Diagram



Dominion Transmission, Inc.

Lewis Wetzel Compressor Station

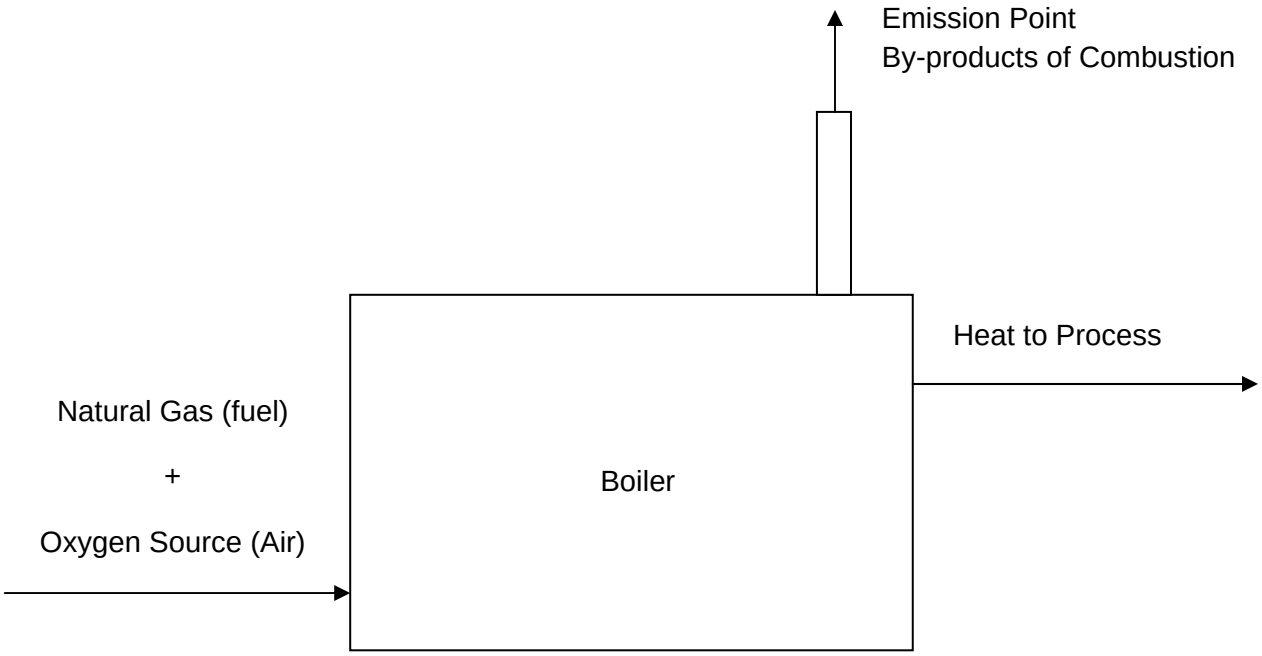
Compressor Engine (EN03) Process Flow Diagram



Dominion Transmission, Inc.

Lewis Wetzel Compressor Station

Boiler (BLR05) 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
Hastings Station					
EN01	N/A	001-01	Reciprocating Engine/Integral Compressor; Cooper GMXE-6	500 hp	1968
EN02	N/A	001-02	Reciprocating Engine/Integral Compressor; Cooper GMXE-6	500 hp	1968
AUX06	N/A	002-06	Generac Model QT080 Natural Gas-Fired Emergency Generator; SI 4-stroke lean-burn	80 kW (128 hp)	2012
DEHY1	DEHY1	004-02	TEG Dehydration Unit with Flash Tank	7.5 MMscf/day	~ 2016
RBR02	N/A	005-06	Reboiler for Glycol Regenerator	0.55 MMBtu/hr	~ 2016
DEHY1	N/A	DEHY1	Enclosed Combustion Device – Questor Q50	2 MMBtu/hr	~ 2016
HTR01	N/A	005-01	Heater; NATCO 96x30	10.0 MMBtu/hr	1977
TK2	N/A	TK2	Horizontal Aboveground Tank Containing Ethylene Glycol and Water	5,000 Gallons	2008
TK3	N/A	TK3	Horizontal Aboveground Tank Containing Used Oil	2,000 Gallons	1996
TK6	N/A	TK6	Horizontal Aboveground Tank Containing Glycol (correction)	240 Gallons	Unknown
TK7	N/A	TK7	Horizontal Aboveground Tank Containing Produced Fluids	1,000 Gallons	2006
New units (updates) to equipment list: ****NOTE:** These tanks will be removed when the new dehy unit is installed (004-02)					
TK8	N/A	TK8	Horizontal Aboveground Tank Containing Wastewater	240 Gallons	2004
TK9	N/A	TK9	Horizontal Aboveground Tank Containing Ethylene Glycol	220 Gallons	2004
Units that have been removed:					
AUX01	N/A	002-01	Reciprocating Engine/Auxiliary Generator; Waukesha F817G	350 hp	1968
TK1	N/A	TK1	Horizontal Aboveground Tank Containing Engine Oil	10,000 Gallons	Unknown
TK4	N/A	TK4	Horizontal Aboveground Tank Containing Wastewater	240 Gallons	Unknown
TK5	N/A	TK5	Horizontal Aboveground Tank Containing Air Dryer Condensate	240 Gallons	Unknown

[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 D - Title V Equipment Table (Continued)

(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
Mockingbird Hill Station					
AUX04 (Aux Gen. 04)	N/A	002-04	Auxiliary Generator; Capstone Microturbine	80 hp	2004
BLR02 (Boiler 02)	N/A	005-04	Boiler; Cleaver Brooks MTF700-1250-50	1.25 MMBtu/hr	2004
TUR02	N/A	006-02	Solar Taurus 60 Turbine	8,175 hp	2008
TK1	N/A	TK1	Horizontal Aboveground Tank Containing Wastewater	1,000 Gallons	2004
TK2	N/A	TK2	Horizontal Aboveground Tank Containing Pipeline Fluids	1,000 Gallons	2004
TK3	N/A	TK3	Horizontal Aboveground Tank Containing Ethylene Glycol	220 Gallons	2004
New units (updates) to equipment list:					
AUX02 (Aux Gen. 02)	N/A	002-02	Auxiliary Generator; Capstone Microturbine	87 hp	2015
AUX03 (Aux Gen. 03)	N/A	002-03	Auxiliary Generator; Capstone Microturbine	87 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 D - Title V Equipment Table (Continued)

(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
Lewis Wetzel Station					
EN03	CC1	001-03	Caterpillar Model G3612TA Compressor Engine	3,550 hp	2011
AUX05	N/A	002-05	Cummins Model KTA19G Auxiliary Generator	530 hp	2011
BLR05	N/A	005-05	Bryan Model RV 450W-FDG Boiler	4.5 MMBtu/hr	2011
CC1	N/A	CC1	Catalytic Converter	N/A	2011
New units (updates) to equipment list:					
TK1	N/A	TK1	Horizontal Aboveground Tank Containing Lube Oil	2,000 Gallons	2012
TK2	N/A	TK2	Horizontal Aboveground Tank Containing Lube Oil	1,000 Gallons	2012
TK3	N/A	TK3	Horizontal Aboveground Tank Containing Wastewater	1,500 Gallons	2012
TK4	N/A	TK4	Horizontal Aboveground Tank Containing Used Oil	2,000 Gallons	2012
TK5	N/A	TK5	Horizontal Aboveground Tank Containing Pipeline Fluids	1,000 Gallons	2012
TK6	N/A	TK6	Horizontal Aboveground Tank Containing Ethylene Glycol/Water	10,000 Gallons	2012

[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
(HASTINGS COMPRESSOR STATION)

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
001-01	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:**
Cooper	GMXE-6	47011
Construction date:	**Installation date:**	**Modification date(s):**
	1968	N/A

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

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
0.0041 MMscf/hr	35.92 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: 500 hp	**Type and Btu/hr rating of burners:** 0.0041 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 = 0.0041 MMscf/hr
- Maximum annual fuel usage = 35.92 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)	3.20	14.02
Nitrogen Oxides (NO_X)	24.55	107.53
Lead (Pb)	N/A	N/A
Particulate Matter ($PM_{2.5}$)	0.16	0.69
Particulate Matter (PM_{10})	0.16	0.69
Total Particulate Matter (TSP)	0.20	0.87
Sulfur Dioxide (SO_2)	< 0.01	0.01
Volatile Organic Compounds (VOC)	2.54	11.13
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Acetaldehyde	0.03	0.14
Acrolein	0.03	0.14
Benzene	0.01	0.04
Ethylbenzene	< 0.01	< 0.01
Formaldehyde	0.23	0.99
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.

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 6.1.1)
40 CFR Part 63 Subpart ZZZZ – NESHAP general requirements/provisions (TV 6.1.1)
40 CFR Part 63 Subpart ZZZZ – NESHAP monitoring requirements (TV 6.2.1)
40 CFR Part 63 Subpart ZZZZ – NESHAP recordkeeping requirements (TV 6.4.1)

____ 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.)

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 comes first (TV 6.1.1)
40 CFR Part 63 Subpart ZZZZ – Comply with all applicable general requirements/provisions (TV 6.1.1)
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 6.1.1 and 6.4.1)
40 CFR Part 63 Subpart ZZZZ – Comply with all applicable monitoring and recordkeeping requirements (TV 6.2.1 and 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
(HASTINGS COMPRESSOR STATION)

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
001-02	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:**
Cooper	GMXE-6	47012
Construction date:	**Installation date:**	**Modification date(s):**
	1968	N/A

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

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
0.0041 MMscf/hr	35.92 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: 500 hp	**Type and Btu/hr rating of burners:** 0.0041 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 = 0.0041 MMscf/hr
- Maximum annual fuel usage = 35.92 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)	3.20	14.02
Nitrogen Oxides (NO_X)	24.55	107.53
Lead (Pb)	N/A	N/A
Particulate Matter ($PM_{2.5}$)	0.16	0.69
Particulate Matter (PM_{10})	0.16	0.69
Total Particulate Matter (TSP)	0.20	0.87
Sulfur Dioxide (SO_2)	< 0.01	0.01
Volatile Organic Compounds (VOC)	2.54	11.13
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Acetaldehyde	0.03	0.14
Acrolein	0.03	0.14
Benzene	0.01	0.04
Ethylbenzene	< 0.01	< 0.01
Formaldehyde	0.23	0.99
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.

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 6.1.1)
40 CFR Part 63 Subpart ZZZZ – NESHAP general requirements/provisions (TV 6.1.1)
40 CFR Part 63 Subpart ZZZZ – NESHAP monitoring requirements (TV 6.2.1)
40 CFR Part 63 Subpart ZZZZ – NESHAP recordkeeping requirements (TV 6.4.1)

____ 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.)

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 comes first (TV 6.1.1)
40 CFR Part 63 Subpart ZZZZ – Comply with all applicable general requirements/provisions (TV 6.1.1)
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 6.1.1 and 6.4.1)
40 CFR Part 63 Subpart ZZZZ – Comply with all applicable monitoring and recordkeeping requirements (TV 6.2.1 and 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
(HASTINGS COMPRESSOR STATION)

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
002-06	AUX06 Emergency Generator	N/A

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:**
Generac	QT080	QT08046KNAX
Construction date:	**Installation date:**	**Modification date(s):**
2011	2012	N/A

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

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
1,154 cf/hr	0.58 MMcf/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: 128 hp	**Type and Btu/hr rating of burners:** 1.18 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 = 1,154 cf/hr
- Maximum annual fuel usage = 0.58 MMcf/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	1,020 Btu/cf

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	20.56	5.14
Nitrogen Oxides (NO_X)	1.14	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	< 0.01
Sulfur Dioxide (SO_2)	< 0.01	< 0.01
Volatile Organic Compounds (VOC)	0.39	0.10
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Acetaldehyde	0.01	< 0.01
Acrolein	0.01	< 0.01
Benzene	< 0.01	< 0.01
Ethylbenzene	< 0.01	< 0.01
Formaldehyde	0.06	0.02
Toluene	< 0.01	< 0.01
Xylene	< 0.01	< 0.01
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

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 – Sulfur content of natural gas shall not exceed 0.2 gr/100 scf (TV 7.1.5; R13-2555B 4.1.5)
45 CSR 13 – Shall be a 128 hp unit and shall not operate more than 500 hrs/yr (TV 7.1.9.a; R13-2555B 4.1.6.a)
45 CSR 13 – Emission limits (TV 7.1.9.b; R13-2555B 4.1.6.b)
45 CSR 13 and 16 and 40 CFR 60.4248 – Meet the definition of "emergency" in NSPS Subpart JJJJ (TV 7.1.9.c; R13-2555B 4.1.6.d)
40 CFR Part 63.6590(c) – Compliance with NSPS Subpart JJJJ shows compliance with NESHAP Subpart ZZZZ. (TV 7.1.10)
45 CSR 13 and 16 and 40 CFR Part 60.4233(e) – NSPS Subpart JJJJ emission limits (TV 7.1.11; R13-4.1.6.c)
45 CSR 16 and 40 CFR Part 60.4243(d) and (e) – NSPS emergency definition; limitation on maintenance and readiness testing to 100 hrs/yr (TV 7.1.11)

____ 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 – The permittee shall comply with the sulfur content of natural gas (TV 7.1.5; R13-2555B 4.1.5)
45 CSR 16 and 40 CFR Part 60.4237(c) – Install non-resettable hour meter (TV 7.1.11)
45 CSR 16 and 40 CFR Part 60.4243(a)(1) and (b)(1) - Purchase a certified engine to meet NSPS emission limits, operate/maintain the engine according to the manufacturer's emission related instructions, and keep records of conducted maintenance (TV 7.1.11; R13-2555B 4.2.2 and 4.2.3)
45 CSR 13 – Maintain monthly records of hours of operation; include emergency vs non-emergency hours (TV 7.2.1; R13-2555B 4.2.1)
45 CSR 13 and 16 and 40 CFR Part 60.4245(a, b) – Comply with all applicable recordkeeping requirements (TV 7.4.2; R13-2555B 4.4.5)
45 CSR 13 and 16 and 40 CFR Part 60.4245(d) – Comply with all applicable reporting requirements (TV 7.5.3; R13-2555B 4.5.3)

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
(HASTINGS COMPRESSOR STATION)

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
004-02	004-02 Dehydration Unit	DEHY1

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):
7.5 MMscf /day

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
7.5 MMscf /day	2,737.5 MMscf/yr	8760 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 hourly wet gas usage = 7.5 MMscf/day
- Maximum annual wet gas usage = 2,737.5 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)	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)	1.64	7.17
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Benzene	0.02	0.09
Ethylbenzene	< 0.01	0.01
n-Hexane	0.03	0.13
Toluene	0.06	0.26
Xylenes	0.11	0.49
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.).

VOC and HAP emission rates for the dehydration unit were obtained from GRI GLYCalc V4.0 with a 95% destruction efficiency

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 shall not exceed 7.5 MMcf/day (R13-3249 4.1.1.a)
45 CSR 13 – The flash tank and still vent effluent shall be routed through a closed vent system to the control device (R13-3249 4.1.1.b, c)
45 CSR 13 – Maximum emission limits (R13-3249 4.1.2.a, b, d, e)
45 CSR 13 – Implement a leak detection and repair (LDAR) program for the dehydration unit (R13-3249 4.1.4)

____ 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 VOC and HAP emission limits will be demonstrated by using GLYCalc V3 or higher; keep records (R13-3249 4.1.2.c and 4.4.4)
45 CSR 13 and 45 CSR 6-4.3 – Compliance with PM emission limits will be demonstrated by burning natural gas (R13-3249 4.1.2.d)
45 CSR 13and 45 CSR 10-5.1 – Compliance with H2S emission limits will be demonstrated by limiting the natural gas to no greater than 10 gr H2S/100 cf (R13-3249 4.1.2.e)
45 CSR 13 – The permittee will implement a LDAR program (R13-3249 4.1.4)
45 CSR 13, 40 CFR 63.774(d)(1), and 40 CFR 63.772(b)(1)(i) - Wet gas throughput shall be monitored on a daily basis, days the dehydration unit operated, and annual natural gas flowrate (R13-3249 4.2.1.a, b)
45 CSR 13, 40 CFR 63.772(b)(2)(i), and 40 CFR 63.774(d)(1)(ii) - Procedures for determining benzene emissions for exemption under 40 CFR 63.764(e)(1) (R13-3249 4.2.1.d)
45 CSR 10-8.3.a – H_2S emissions shall be complied with by annual sampling of inlet natural gas stream (R13-3249 4.2.2)
45 CSR 13 – The permittee will conduct an initial and annual AVO inspection for defects on the dehydration unit (R13-3249 4.2.5)

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
(HASTINGS COMPRESSOR STATION)

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
005-06	RBR02 Dehydration Unit Reboiler	N/A

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

A natural gas fired boiler used to reheat glycol within the dehydration unit.

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):
0.55 MMBtu/hr

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
0.00055 MMcf/hr	4.82 MMcf/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: 0.55 MMBtu/hr	**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 hourly fuel usage = 0.00055 MMcf/hr
- Maximum annual fuel usage = 4.82 MMcf/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)	0.05	0.20
Nitrogen Oxides (NO_X)	0.06	0.24
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	0.01
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Benzene	< 0.01	< 0.01
Ethylbenzene	< 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.).

- NOx and CO emission factors from AP-42, Section 1.4, Natural Gas Combustion, Table 1.4-1, 7/98
- PM, PM10, PM2.5, SO2, and VOC 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 13 and 45 CSR 2-3.1 – Visible emission limits (R13-3249 4.1.3.a)

____ 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 45 CSR 2-3.1 – Compliance with 4.1.3.a is demonstrated by combusting natural gas (R13-3249 4.1.3.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
(HASTINGS COMPRESSOR STATION)

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
DEHY1	DEHY1 Dehydration Unit Flare	N/A

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

Dehydration Unit Enclosed Flare

Manufacturer:	**Model number:**	**Serial number:**
Questor	Q50	

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

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
Combustor Rating: 2.0 MMBtu/hr
Pilot Burner: 30,000 Btu/hr

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Fuel to pilot flame: 24.3 scf/hr	Fuel to pilot flame: 0.213MMscf/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: Pilot Burner: 30,000 Btu/hr	**Type and Btu/hr rating of burners:** Pilot Burner: 30,000 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 = 24.3 scf/hr
- Maximum annual fuel to pilot throughput = 0.213 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 (FLARE01)		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.18	0.78
Nitrogen Oxides (NO_X)	0.04	0.18
Lead (Pb)	N/A	N/A
Particulate Matter ($PM_{2.5}$)	0.01	0.02
Particulate Matter (PM_{10})	0.01	0.02
Total Particulate Matter (TSP)	0.01	0.02
Sulfur Dioxide (SO_2)	< 0.01	< 0.01
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 thru 3. 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
(HASTINGS COMPRESSOR STATION)

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
005-01	HTR01 Heater	N/A

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

Natural gas-fired heater

Manufacturer:	**Model number:**	**Serial number:**
NATCO	96x30	

Construction date:	**Installation date:**	**Modification date(s):**
	1977	N/A

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

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
0.010 MMscf/hr	87.6 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: 10.0 MMBtu/hr	**Type and Btu/hr rating of burners:** 0.010 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 = 0.010 MMscf/hr
- Maximum annual fuel usage = 87.6 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)	0.84	3.68
Nitrogen Oxides (NO_X)	1.00	4.38
Lead (Pb)	N/A	N/A
Particulate Matter ($PM_{2.5}$)	0.02	0.08
Particulate Matter (PM_{10})	0.02	0.08
Total Particulate Matter (TSP)	0.08	0.33
Sulfur Dioxide (SO_2)	0.01	0.03
Volatile Organic Compounds (VOC)	0.06	0.24
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Benzene	< 0.01	< 0.01
Formaldehyde	< 0.01	< 0.01
Hexane	0.02	0.08
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, SO2, and VOC 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% (TV 3.1.11)
45 CSR 2-4.1.b – Particulate matter discharge shall not exceed 0.90 lbs/hr (TV 4.1.2)
45 CSR 10-3.1.e – Sulfur dioxide discharge shall not exceed 31.0 lbs/hr (TV 4.1.3)

____ 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 2-3.1 – The permittee shall comply with the opacity limit (TV 3.1.11)
45 CSR 2-4.1.b – The permittee shall comply with the PM emission limit (TV 4.1.2)
45 CSR 10-3.1.e – The permittee shall comply with the SO_2 emission limit (TV 4.1.3)
45 CSR 2-8.3.c – Maintain records of the amount of natural gas consumed (TV 4.4.1)

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
(MOCKINGBIRD HILL COMPRESSOR STATION)

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
002-02	AUX02 Microturbine	N/A

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

Natural gas-fired microturbine

Manufacturer:	**Model number:**	**Serial number:**
Capstone	C-65	3151
Construction date:	**Installation date:**	**Modification date(s):**
2004	2004	5/21/15

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

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
842 cf/hr	7.38 MMcf/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: 87 hp	**Type and Btu/hr rating of burners:** 0.842 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 = 842 cf/hr
- Maximum annual fuel usage = 7.38 MMcf/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)	0.08	0.35
Nitrogen Oxides (NO_X)	0.03	0.13
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	0.03
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, CO, and VOC data taken from manufacturer's technical data sheet.
- PM and SO2 emission factors based on AP-42, Section 3.1, Table 3.1-2.
- HAP emission factors based on AP-42, Section 3.1, Stationary Gas Turbines, Table 3.1-3.

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 7.1.1; R13-2555B 4.1.1)
45 CSR 13 – Fuel throughput limit (TV 7.1.3; R13-2555B 4.1.3)
45 CSR 13 – Sulfur content of natural gas shall not exceed 0.2 gr/100 scf (TV 7.1.5; R13-2555B 4.1.5)

____ 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 – The permittee shall comply with emission limits (TV 7.1.1; R13-2555B 4.1.1)
45 CSR 13 – The permittee shall comply with the fuel throughput limit by maintaining monthly records of the quantity of fuel burned (TV 3.4.4 and 7.1.3; R13-2555B 4.1.3 and 4.4.4)
45 CSR 13 – The permittee shall comply with the sulfur content of natural gas (TV 7.1.5; R13-2555B 4.1.5)

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
(MOCKINGBIRD HILL COMPRESSOR STATION)

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
002-03	AUX03 Microturbine	N/A

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

Natural gas-fired microturbine

Manufacturer:	**Model number:**	**Serial number:**
Capstone	C-65	3152
Construction date:	**Installation date:**	**Modification date(s):**
2004	2004	2/15/11

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

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
842 cf/hr	7.38 MMcf/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: 87 hp	**Type and Btu/hr rating of burners:** 0.842 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 = 842 cf/hr
- Maximum annual fuel usage = 7.38 MMcf/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)	0.08	0.35
Nitrogen Oxides (NO_X)	0.03	0.13
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	0.03
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, CO, and VOC data taken from manufacturer's technical data sheet.
- PM and SO2 emission factors based on AP-42, Section 3.1, Table 3.1-2.
- HAP emission factors based on AP-42, Section 3.1, Stationary Gas Turbines, Table 3.1-3.

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 7.1.1; R13-2555B 4.1.1)
45 CSR 13 – Fuel throughput limit (TV 7.1.3; R13-2555B 4.1.3)
45 CSR 13 – Sulfur content of natural gas shall not exceed 0.2 gr/100 scf (TV 7.1.5; R13-2555B 4.1.5)

____ 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 – The permittee shall comply with emission limits (TV 7.1.1; R13-2555B 4.1.1)
45 CSR 13 – The permittee shall comply with the fuel throughput limit by maintaining monthly records of the quantity of fuel burned (TV 3.4.4 and 7.1.3; R13-2555B 4.1.3 and 4.4.4)
45 CSR 13 – The permittee shall comply with the sulfur content of natural gas (TV 7.1.5; R13-2555B 4.1.5)

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
(MOCKINGBIRD HILL COMPRESSOR STATION)

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
002-04	AUX04 Microturbine	N/A

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

Natural gas-fired microturbine

Manufacturer:	**Model number:**	**Serial number:**
Capstone	C-60	3150
Construction date:	**Installation date:**	**Modification date(s):**
2004	2004	N/A

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

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
811 cf/hr	7.10 MMcf/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: 80 hp	**Type and Btu/hr rating of burners:** 0.811 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 = 811 cf/hr
- Maximum annual fuel usage = 7.10 MMcf/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)	0.08	0.35
Nitrogen Oxides (NO_X)	0.03	0.13
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	< 0.01
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, CO, and VOC data taken from manufacturer's technical data sheet.
- PM and SO2 emission factors based on AP-42, Section 3.1, Table 3.1-2.
- HAP emission factors based on AP-42, Section 3.1, Stationary Gas Turbines, Table 3.1-3.

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 7.1.1; R13-2555B 4.1.1)
45 CSR 13 – Fuel throughput limit (TV 7.1.3; R13-2555B 4.1.3)
45 CSR 13 – Sulfur content of natural gas shall not exceed 0.2 gr/100 scf (TV 7.1.5; R13-2555B 4.1.5)

____ 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 – The permittee shall comply with emission limits (TV 7.1.1; R13-2555B 4.1.1)
45 CSR 13 – The permittee shall comply with the fuel throughput limit by maintaining monthly records of the quantity of fuel burned (TV 3.4.4 and 7.1.3; R13-2555B 4.1.3 and 4.4.4)
45 CSR 13 – The permittee shall comply with the sulfur content of natural gas (TV 7.1.5; R13-2555B 4.1.5)

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
(MOCKINGBIRD HILL COMPRESSOR STATION)

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
005-04	BLR02 Boiler	N/A

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

Natural gas-fired boiler

Manufacturer:	**Model number:**	**Serial number:**
Cleaver Brooks	MTF700-1250-50	MB000287
Construction date:	**Installation date:**	**Modification date(s):**
	2004	N/A

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

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
0.0013 MMscf/hr	10.95 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: 1.25 MMBtu/hr	**Type and Btu/hr rating of burners:** 0.0013 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 = 0.0013 MMscf/hr
- Maximum annual fuel usage = 10.95 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)	0.18	0.81
Nitrogen Oxides (NO_X)	0.46	2.02
Lead (Pb)	N/A	N/A
Particulate Matter ($PM_{2.5}$)	0.04	0.17
Particulate Matter (PM_{10})	0.04	0.17
Total Particulate Matter (TSP)	0.04	0.17
Sulfur Dioxide (SO_2)	< 0.01	0.01
Volatile Organic Compounds (VOC)	0.08	0.36
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Benzene	< 0.01	< 0.01
Formaldehyde	< 0.01	< 0.01
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.).

- PM, PM10, PM2.5, SO2, CO, NOx, and VOC emission factors from permit limits in the R13-2555B permit.
- 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 13 and 45 CSR 2-3.1 – Opacity limit of 10% (TV 3.1.11; R13-2555B 4.1.7)
45 CSR 13 – Emission limits (TV 7.1.1; R13-2555B 4.1.1)
45 CSR 13 – Fuel throughput limit (TV 7.1.4; R13-2555B 4.1.4)
45 CSR 13 – Sulfur content of natural gas shall not exceed 0.2 gr/100 scf (TV 7.1.5; R13-2555B 4.1.5)

____ 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 45 CSR 2-3.1 – The permittee shall comply with the opacity limit (TV 3.1.11; R13-2555B 4.1.7)
45 CSR 13 – The permittee shall comply with emission limits (TV 7.1.1; R13-2555B 4.1.1)
45 CSR 13 – The permittee shall comply with the fuel throughput limit by maintaining monthly records of the quantity of fuel burned (TV 3.4.4 and 7.1.4; R13-2555B 4.1.4 and 4.4.4)
45 CSR 13 – The permittee shall comply with the sulfur content of natural gas (TV 7.1.5; R13-2555B 4.1.5)

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
(MOCKINGBIRD HILL COMPRESSOR STATION)

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
006-02	TUR02 Turbine	N/A

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

Natural gas-fired turbine

Manufacturer:	**Model number:**	**Serial number:**
Solar	Taurus 60	

Construction date:	**Installation date:**	**Modification date(s):**
	2008	N/A

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
8,175 hp

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
0.0642 MMscf/hr	562.6 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: 8,175 hp	**Type and Btu/hr rating of burners:** 7,856 Btu/hp-hr 64.22 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 = 0.0642 MMscf/hr
- Maximum annual fuel usage = 562.6 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)	6.24	27.33
Nitrogen Oxides (NO_X)	5.12	22.43
Lead (Pb)	N/A	N/A
Particulate Matter ($PM_{2.5}$)	2.69	11.79
Particulate Matter (PM_{10})	2.69	11.79
Total Particulate Matter (TSP)	2.69	11.79
Sulfur Dioxide (SO_2)	0.22	0.96
Volatile Organic Compounds (VOC)	1.79	7.84
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	0.05	0.20
Toluene	0.01	0.04
Xylene	< 0.01	0.02
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 manufacturer's technical data sheet. VOC emissions are estimated at 20% of UHC emissions from Solar data sheets.
- PM emission factor based on October 1996 AP-42 version basedon Solar recommendation.
- SO2 emission factor based on AP-42, Section 3.1, Stationary Gas Turbines, Table 3.1-2.
- HAP emission factors based on AP-42, Section 3.1, Table 3.1-3.

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 7.1.1; R13-2555B 4.1.1)
45 CSR 13 – Fuel throughput limit (TV 7.1.2; R13-2555B 4.1.2)
45 CSR 13 – Sulfur content of natural gas shall not exceed 0.2 gr/100 scf (TV 7.1.5; R13-2555B 4.1.5)
45 CSR 13 and 16 and 40 CFR 60.4320 – Shall not exceed 25 ppm NOx at 15% oxygen (TV 7.1.6; R13-2555B 4.1.10)
45 CSR 13 and 16 and 40 CFR 60.4333(a) – Operate and maintain the turbine in a manner consistent with good air pollution control practices (TV 7.1.7; R13-2555B 4.1.11)
45 CSR 13 and 16 and 40 CFR 60.4365(a) – Maintain fuel quality characteristics in a valid tariff sheet (TV 7.1.8; R13-2555B 4.1.12)

____ 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 – The permittee shall comply with emission limits (TV 7.1.1; R13-2555B 4.1.1)
45 CSR 13 – The permittee shall comply with the fuel throughput limit by maintaining monthly records of the quantity of fuel burned (TV 3.4.4 and 7.1.3; R13-2555B 4.1.3 and 4.4.4)
45 CSR 13 – The permittee shall comply with the sulfur content of natural gas (TV 7.1.5; R13-2555B 4.1.5)
45 CSR 13 and 16, 40 CFR 60.4340(a), and 40 CFR 60.4400– Annual/Biennial performance tests (TV 7.3.1 and 7.3.3; R13-2555B 4.3.2 and 4.3.4)
45 CSR 13 and 16 and 40 CFR 60.4375(b) – Submit a report of the performance test results within 60 days of the test date (TV 7.5.1; R13-2555B 4.5.1)

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
(LEWIS WETZEL COMPRESSOR STATION)

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
001-03	EN03 Reciprocating Engine/Integral Compressor	CC1 Catalytic Converter

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	G3612TA	BKE00574

Construction date:	**Installation date:**	**Modification date(s):**
2011	2011	N/A

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
3,550 hp

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
0.0278 MMscf/hr	243.9 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: 3,550 hp	**Type and Btu/hr rating of burners:** 7,529 Btu/hp-hr 0.0278 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 = 0.0278 MMscf/hr
- Maximum annual fuel usage = 243.9 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	960 Btu/cf

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	15.05	65.93
Nitrogen Oxides (NO_X)	3.91	17.12
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)	0.27	1.17
Sulfur Dioxide (SO_2)	2.97	13.01
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Acetaldehyde	0.22	0.98
Acrolein	0.14	0.60
Benzene	0.01	0.05
Ethylbenzene	< 0.01	< 0.01
Formaldehyde	1.88	8.23
Hexane	0.03	0.13
Toluene	0.01	0.05
Xylene	0.01	0.02
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 manufacturer specs. CO, VOC, and Formaldehyde emissions factor rate taken from oxidation catalyst 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 – Fuel throughput limit (TV 8.1.1; R13-2870A 5.1.1)
45 CSR 13 – Emission limits (TV 8.1.3; R13-2870A 5.1.3)
45 CSR 13 – Requirements for use of a catalytic converter (TV 8.1.5; R13-2870A 5.1.5)
45 CSR 13 – Operation and maintenance of air pollution control equipment (TV 8.1.6; R13-2870A 4.1.3)
40 CFR Part 63.6590(c) – Compliance with NSPS Subpart JJJJ shows compliance with NESHAP Subpart ZZZZ (TV 8.1.7)
45 CSR 13 and 16 and 40 CFR Part 60.4233(e and h) – NSPS Subpart JJJJ emission limits (TV 8.1.8; R13-2870A 7.2.1 and 7.2.3)
45 CSR 13 and 16 and 40 CFR Part 60.4234 – Meet emission standards for the entire life of the engine (TV 8.1.8; R13-2870A 7.2.4)
45 CSR 13 and 16 and 40 CFR Part 4236(b) – Deadline for importing/installing (TV 8.1.8; R13-2870A 7.3.1)
45 CSR 13 and 16 and 40 CFR Part 60.4243(d) – NSPS emergency definition; limitation on maintenance and readiness testing to 100 hrs/yr (TV 8.1.8; R13-2870A 7.4.3)

____ 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 and 16 and 40 CFR Part 60.4243(b) - Purchase a certified engine to meet NSPS emission limits, operate/maintain the engine according to the manufacturer's emission related instructions, and keep records of conducted maintenance (TV 8.1.8; R13-2870A 7.4.1)
45 CSR 13 and 40 CFR Part 60.4243(g) - AFR controller must be maintained and operated appropriately (TV 8.1.8; R13-2870A 7.4.5)
45 CSR 13 – Regularly inspect, properly maintain and/or replace catalytic reduction devices (TV 8.2.1; R1302870A 5.2.1)
45 CSR 13 and 16 and 40 CFR Part 60.4237(a) – Install non-resettable hour meter (TV 8.2.2; R1302870A 7.3.4)
45 CSR 13 – Maintain monthly records of hours of operation (include emergency vs non-emergency hours) and fuel consumed (TV 8.4.1; R1302870A 5.4.1)
45 CSR 13 – Records of malfunctions of control equipment (TV 8.4.2; R1302870A 4.1.4)
45 CSR 13 and 16 and 40 CFR Part 60.4245(a, b) – Comply with all applicable recordkeeping requirements (TV 8.4.3; R1302870A 7.6.1)
45 CSR 13 and 16 and 40 CFR Part 60.4245(c, d) – Comply with all applicable reporting requirements (TV 8.5.2; R1302870A 7.6.1)

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
(LEWIS WETZEL COMPRESSOR STATION)

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
002-05	AUX05 Emergency Generator	N/A

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:**
Cummins	KTA19G	1M11E207317
Construction date:	**Installation date:**	**Modification date(s):**
2011	2011	N/A

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

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
4,351 cf/hr	2.18 MMcf/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: 530 hp	**Type and Btu/hr rating of burners:** 4.18 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 = 4,351 cf/hr
- Maximum annual fuel usage = 2.18 MMcf/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	960 Btu/cf

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	1.75	0.44
Nitrogen Oxides (NO_X)	1.69	0.42
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)	0.04	0.01
Sulfur Dioxide (SO_2)	< 0.01	< 0.01
Volatile Organic Compounds (VOC)	0.21	0.05
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Acetaldehyde	0.04	0.02
Acrolein	0.02	0.01
Benzene	< 0.01	< 0.01
Ethylbenzene	< 0.01	< 0.01
Formaldehyde	0.22	0.11
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 – Fuel throughput limit (TV 8.1.2; R13-2870A 5.1.2)
45 CSR 13 – Emission limits (TV 8.1.4; R13-2870A 5.1.4)
40 CFR Part 63.6590(c) – Compliance with NSPS Subpart JJJJ shows compliance with NESHAP Subpart ZZZZ (TV 8.1.7)
45 CSR 13 and 40 CFR Part 60.4233(e and h) – NSPS Subpart JJJJ emission limits (TV 8.1.8; R13-2870A 7.2.1 and 7.2.3)
45 CSR 13 and 16 and 40 CFR Part 60.4234 – Meet emission standards for the entire life of the engine (TV 8.1.8; R13-2870A 7.2.4)
45 CSR 13 and 16 and 40 CFR Part 4236(c) – Deadline for importing/installing (TV 8.1.8; R13-2870A 7.3.2)
45 CSR 13 and 16 and 40 CFR Part 60.4243(d) – NSPS emergency definition; limitation on maintenance and readiness testing to 100 hrs/yr (TV 8.1.8; R13-2870A 7.4.3)

____ 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 13and 16 and 40 CFR Part 60.4243(b) - Purchase a certified engine to meet NSPS emission limits, operate/maintain the engine according to the manufacturer's emission related instructions, and keep records of conducted maintenance (TV 8.1.8; R13-2870A 7.4.1)
45 CSR 13 and 16 and 40 CFR Part 60.4237(a) – Install non-resettable hour meter (TV 8.2.2; R1302870A 7.3.4)
45 CSR 13 – Maintain monthly records of hours of operation (include emergency vs non-emergency hours) and fuel consumed (TV 8.4.1; R1302870A 5.4.1)
45 CSR 13 and 16 and 40 CFR Part 60.4245(a, b) – Comply with all applicable recordkeeping requirements (TV 8.4.3; R1302870A 7.6.1)
45 CSR 13 and 16 and 40 CFR Part 60.4245(c, d) – Comply with all applicable reporting requirements (TV 8.5.2; R1302870A 7.6.1)

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
(LEWIS WETZEL COMPRESSOR STATION)

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
005-05	BLR05 Boiler	N/A

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

Natural gas-fired boiler

Manufacturer:	**Model number:**	**Serial number:**
Bryan	RV 450W-FDG	98538
Construction date:	**Installation date:**	**Modification date(s):**
2011	2011	N/A

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

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
0.005 MMscf/hr	41.1 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: 4.5 MMBtu/hr	**Type and Btu/hr rating of burners:** 0.005 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 = 0.005 MMscf/hr
- Maximum annual fuel usage = 41.1 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	960 Btu/cf

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.39	1.72
Nitrogen Oxides (NO_X)	0.47	2.05
Lead (Pb)	N/A	N/A
Particulate Matter ($PM_{2.5}$)	< 0.01	0.04
Particulate Matter (PM_{10})	< 0.01	0.04
Total Particulate Matter (TSP)	0.04	0.16
Sulfur Dioxide (SO_2)	< 0.01	0.01
Volatile Organic Compounds (VOC)	0.03	0.11
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Benzene	< 0.01	< 0.01
Formaldehyde	< 0.01	< 0.01
Hexane	< 0.01	0.04
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, SO2, and VOC 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 13 and 45 CSR 2-3.1 – Opacity limit of 10% (TV 3.1.11; R13-2870A 6.1.1)
45 CSR 13 – Maximum design heat input shall not exceed 4.5 MMBtu/hr (TV 9.1.1; R13-2870A 6.1.3)
45 CSR 13 – Emission limits (TV 9.1.2; R13-2870A 6.1.4)
45 CSR 30-12.7 – Fuel throughput limit (TV 9.1.3)

____ 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 and 45 CSR 2-3.1 – The permittee shall comply with the opacity limit (TV 3.1.11; R13-2870A 6.1.1)
45 CSR 13 – The permittee shall comply with emission limits (TV 9.1.2; R13-2870A 6.1.4)
45 CSR 13 and 45 CSR 30-5.1.c – The permittee shall comply with the fuel throughput limit by maintaining monthly records of the quantity of fuel burned (TV 3.4.4 and 9.1.3)

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: DEHY1	**List all emission units associated with this control device.** 004-02 (Dehydration Unit)	
Manufacturer: Inegral	**Model number:**	**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
___ 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.).

Inegral dehydration unit controlled flare
2 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 (004-02) 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 (R13-3249) specifies a "continuous compliance determination method" condition (e.g. continuously monitoring the flare to detect the presence of a flame) and that R13 condition will be 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 13 – Closed vent requirements (R13-3249 4.1.1.f)
45 CSR 13 – Emission limits (R13-3249 4.1.2.a-e)
45 CSR 13 – The flare shall not exhibit any visible emissions (R13-3249 4.1.2.f.i)
45 CSR 13 – The pilot flame shall be lit at all times when the dehydration unit is operating. The fuel source for the pilot light shall be either natural gas, flash tank off gas, or a combination of the two fuels (R13-3249 4.1.2.f.ii)
45 CSR 13 – Actual flowrate of effluent shall not exceed 35 scf/m (R13-3249 4.1.2.f.iii)
45 CSR 13 – Operation and design of the thermal oxidizer to meet a 95.0% control (R13-3249 4.1.2.g)

Monitoring
45 CSR 13 - Continuously monitoring the flare to detect the presence of a flame (R13-3249 4.2.1.c)
45 CSR 10-8.3.a – H_2S emissions shall be complied with by annual sampling of inlet natural gas stream (R13-3249 4.2.2)
45 CSR 13 – Conduct a visible emission observation using Section 11 of Method 22 for one hour every calendar quarter in which the dehydration operates (R13-3249 4.2.3)
45 CSR 13 – Compliance with the closed vent requirements shall be demonstrated by an initial AVO and annual AVOs (R13-3249 4.2.4)

Testing
45 CSR 13 –Conduct an initial Method 22 (R13-3249 4.3.1)

Recordkeeping
45 CSR 13 – Records of monitoring (R13-3249 4.4.1)
45 CSR 13 – Records of maintenance of air pollution control equipment (R13-3249 4.4.2)
45 CSR 13 – Records of malfunctions of air pollution control equipment (R13-3249 4.4.3)
45 CSR 13 – Records of analysis to show compliance with Condition 4.1.2 (R13-3249 4.4.4)

Reporting
45 CSR 13 – Reporting of any leaks of the closed vent system that were not repaired in accordance with Condition 4.1.1 (R13-3249 4.5.1)