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

dom.com

January 18, 2017

BY: U.S. CERTIFIED MAIL, RETURN RECEIPT REQUESTED
7015 0640 0001 0352 4390

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

RE: Dominion Transmission, Inc. – Title V Renewal Application
Lightburn Compressor Station – R30-04100013-2012

Dear Mr. Durham:

Enclosed please find the Title V Renewal Application for Dominion Transmission, Inc.'s (DTI) Lightburn Compressor Station, Permit No. R30-04100013-2012. The renewal application also includes the Lightburn Extraction Plant. The enclosure consists of one hard copy and two cd copies of the application that includes all attachments.

A separate R13 Class II Administrative Update application for Lightburn Station's R13-2823D permit was sent into WVDEP on 1/18/17. The administrative update includes the specified changes listed below.

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

- Correction to equipment at the facility:
  - BLR01 – This boiler was previously listed as having a manufacturer model number of CB786-250, but the correct model number is CB-700X-250-15ST.
  - HTR01 – This unit was previously listed a boiler, but the correct description is a heater. The heater was previously listed as having a manufacturer model number of 4X6-27Y, but the correct model number is DWG.A-14724

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

- Section 3.0
  - Permit Conditions 3.1.9, 3.1.10, 3.1.11, 3.1.12, 3.1.13, 3.2.1, 3.2.2, 3.3.2, and 3.4.4 should be removed from the facility-wide section (Section 3) and moved to a source-specific section of the permit because they are source-specific requirements.

- Condition 3.1.15 – Request to remove this condition as this requirement does not apply to the auxiliary generator (AUX02). Per §63.6590(b)(3)(iii), AUX02 does not have to meet the requirements of 40 CFR 63 Subpart ZZZZ since it is a 1,085 hp existing RICE located at a major source.

- Appendices A and B

  We request to delete the appendices and to place all applicable, current, and valid requirements into the Title V permit source-specific section (Section 5) for the dehydration units (DEHY01 and DEHY02) and flares (enclosed combustion devices) (F1 and F2).

  In addition, we request to correct and incorporate the applicable requirements from Appendix A and B that apply to the Lightburn Station.

  - Appendix A – The two (2) dehydration units are subject to NESHAP Subpart HHH and have installed two (2) enclosed combustion devices per §63.1281(d)(1)(i)(A). Since F1 and F2 are "enclosed combustion devices," they do not meet the definition of "flare" as defined in §63.1271:

    Flare means a thermal oxidation system using an open flame (i.e. without enclosure).

    Therefore, we request to remove all "flare" requirements and to include all "enclosed combustion device" requirements.

  - Appendix B – Since F1 and F2 are considered "enclosed combustion devices" per NESHAP Subpart HHH, 63.11 flare conditions do not apply. We request to remove these requirements.

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

- Equipment removed from the facility:

  - 014-03 – Methanol Storage Tank for De-icing

- Section 7.0 – Compressor Engines (EN08 and EN09), Diesel Fire Pumps (EN10 and EN11), and Emergency Generator (AUX03)

  For NESHAP and NSPS Requirements - We request to only put in applicable and current requirements that apply to the specific emission unit(s) mentioned in this section to improve clarity and ensure compliance.

  ***Note:** This permit action has also been requested in the R13-2823D application submitted 1/18/17.

- Section 9.0 – Non-Fractionating Processing Plant

  We request to (1) only put in applicable and current requirements that apply to the non-fractionating processing plant and (2) spell out the federal requirements (and not just list citations), to improve clarity and ensure compliance.

- Section 11.0 – Emergency and Maintenance Flare (FLARE3)

  Permit Condition 11.1.3, 11.3.3, 11.4.3, and 11.4.6 are referencing that the emergency and maintenance flare (FLARE3) is subject to either NESHAP Subpart HH or HHH. To be subject to one of these NESHAP rules, a glycol dehydration unit must be installed at the facility. FLARE3 is not subject to either NESHAP regulation as there is not a glycol dehydration unit installed at the Lightburn Extraction Plant. FLARE3 is at the facility to control VOC emissions from emergency venting and during various non-routine maintenance activities of four (4) tanks (008-01 thru 008-04) and two (2) loading racks (009-01 and 009-02). Therefore, we request that these conditions (and any conditions placed in the permit because of this assumption) be removed from the permit.

  ***Note:** This permit action has also been requested in the R13-2823D application submitted 1/18/17.

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

Sincerely,

Amanda B. Tornabene
Director, Energy Infrastructure Environmental Services

Cc: Rebekah Kiss

Enclosure: Title V Renewal Application

LIGHTBURN COMPRESSOR STATION
DOMINION TRANSMISSION, INC.
APPLICATION FOR TITLE V OPERATING PERMIT RENEWAL
TITLE V OPERATING PERMIT NO: R30-04100013-2012

Dominion Transmission, Inc.
Lightburn Compressor Station
6486 Old Mill Road
Jane Lew, WV 26378

JANUARY 2017

DOMINION TRANMISSION, INC.
LIGHTBURN COMPRESSOR STATION

TITLE V OPERATING PERMIT RENEWAL APPLICATION

TABLE OF CONTENTS

ATTACHMENTS

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

TITLE V PERMIT APPLICATION CHECKLIST FOR ADMINISTRATIVE COMPLETENESS

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

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

SECTION 1

Introduction

INTRODUCTION:

Lightburn Station is a natural gas storage compressor station that services a natural gas storage pool and pipeline system for Dominion Transmission, Inc.'s transmission pipeline system in West Virginia. Lightburn Station is located in Jane Lew, Lewis County, West Virginia.

The Title V operating permit also includes the Lightburn Extraction Plant (LEP). The LEP is a natural gas liquids extraction facility. LEP is located adjacent to the Lightburn Compressor Station, on contiguous property, and under the same operational control. The facilities do not belong to the same industrial grouping (SIC). The Lightburn Compressor Station operates under the SIC Code 4922 (Pipeline Transmission of Natural Gas) and the LEP operates under SIC Code 1321 (Natural Gas Liquid Extraction).

Lightburn Station has the potential to emit in excess of 100 tons per year of nitrogen oxides (NOx), carbon monoxide (CO), and volatile organic compounds (VOC). The station is classified as a major stationary source under West Virginia Department of Environmental Protection (WVDEP) Regulation (45 CSR Part 30) and is subject to the Title V Operating Permit provisions of Part 30. Lightburn Station is also a major source of hazardous air pollutants (HAPs) since the potential to emit is more than 10 tons per year for individual HAPs and more than 25 tons per year of combined HAPs.

The last Title V Operating Permit renewal application was submitted in July 2011, and the renewed Title V Operating Permit was issued on July 24, 2012, with an expiration date of July 24, 2017. Lightburn Station is also subject to the underlying State Operating Permits (Rule 13 Permit Nos: R13-2823D and R14-0009E). The Title V operating permit is for the operation of:

Lightburn Station:

- two (2) 2,000 hp natural gas fired reciprocating engines (EN01 and EN02),
- three (3) 4,000 hp natural gas fired reciprocating engines (EN03 – EN05),
- two (2) 6,060 hp natural gas fired reciprocating engines (EN06 and EN07),
- one (1) 1,085 hp natural gas fired emergency generator (AUX02),
- two (2) dehydration units (DEHY01 and DEHY02) with enclosed combustion devices (F1 and F2),
- two (2) dehydration unit reboilers (RBR01 and RBR02),
- one (1) 10.461 MMBtu/hr natural gas boiler (BLR01)
- one (1) 5.5 MMBtu/hr natural gas boiler (BLR02)
- one (1) 4.0 MMBtu/hr natural gas heater (HTR01),
- twenty six (26) aboveground storage tanks of various sizes (TK01 – TK26)

Lightburn Extraction Plant:

- two (2) 3,550 hp natural gas fired reciprocating engines (EN08 and EN09),
- two (2) 216 hp diesel fire pump engines (EN10 and EN11)
- one (1) 254 hp natural gas fired emergency generator (AUX03),
- two (2) 400 gpm natural gas liquid loading racks (009-01 and 009-02)
- one (1) 94,000 lb/hr emergency and maintenance flare (FLARE3)
- four (4) 60,000 gal natural gas liquid storage tanks (008-01 – 008-04)
- two (2) 290 gal diesel fuel tanks (014-01 and 014-02)
- eleven (11) aboveground storage tanks of various sizes (TK07 – TK17)

PROCESS DESCRIPTION

Lightburn Station is a natural gas storage compressor station that services a natural gas storage pool and pipeline system. The purpose of the facility is to alternately inject or withdraw the natural gas from the storage pool depending on demand. The reciprocating engines at the facility receive natural gas from a valve on a pipeline and compress it into the pool or withdraw and compress the gas to enable further transportation in the pipeline. Prior to exiting the facility through the pipeline, the compressed natural gas is processed by the dehydration unit (DEHY01 and DEH02). The dehydration unit removes moisture and impurities from the gas stream.

The dehydration process begins with the compressed natural gas entering the unit and then being passed through a triethylene glycol dehydration system consisting of a contactor bed, a reboiler (RBR01 and RBR02), and associated equipment. As a result of this process, the natural gas is stripped of moisture and impurities, along with a small amount of hydrocarbons. The wet gas enters the contactor where moisture and some hydrocarbons are absorbed into the lean glycol. The glycol, which has become rich with absorbed moisture and some hydrocarbons, is regenerated in the still column (DEHY01 and DEHY02) using the heat generated from the natural gas-fired reboiler (RBR01 and RBR02) to liberate the moisture and hydrocarbon vapors. The regenerator vapors are vented to the enclosed combustion device (F1 and F2) to combust the hydrocarbons; thereby, reducing overall emissions and odor. The compressed, dehydrated gas then enters the pipeline.

The LEP is a natural gas liquids extraction facility. Propane and heavier components of natural gas are removed through a turbo-expander cryogenic process.

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

Two (2) 2,000 hp Clark TLA-6 natural gas-fired reciprocating engines/integral compressors

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

Three (3) 4,000 hp Clark TCV-12 natural gas-fired reciprocating engines/integral compressors

- Emission unit ID: 001-03 thru 001-05
- Emission point ID: EN03 – EN05

Two (2) 6,060 hp Dresser Rand TCVD-12 natural gas-fired reciprocating engines/integral compressors

- Emission unit ID: 001-06 and 001-07
- Emission point ID: EN06 and EN07

One (1) 1,085 hp Caterpillar G3516 emergency auxiliary generator

- Emission unit ID: 002-02
- Emission point ID: AUX02

Two (2) 600 MMscf wet gas/day glycol dehydration systems

- Emission unit ID: 004-01 and 004-02
- Emission point ID: DEHY01 and DEHY02

One (1) 2.29 MMBtu/hr natural gas-fired dehydration unit reboiler

- Emission unit ID: 005-04
- Emission point ID: RBR01

One (1) 3.33 MMBtu/hr natural gas-fired dehydration unit reboiler

- Emission unit ID: 005-05
- Emission point ID: RBR02

Two (2) 539.5 scf/min Questor Q250 enclosed combustion devices

- Emission unit ID: 0003 and 0004
- Emission point ID: F1 and F2

One (1) 10.461 MMBtu/hr Cleaver Brooks CS-700C-250-15ST natural gas-fired boiler

- Emission unit ID: 005-01
- Emission point ID: BLR01

One (1) 5.5 MMBtu/hr Bryan HE-RV550-W-FDG natural gas-fired boiler

- Emission unit ID: 005-02
- Emission point ID: BLR02

One (1) 4.0 MMBtu/hr Natco DWG.A-14724 natural gas-fired heater

- Emission unit ID: 005-03
- Emission point ID: HTR01

One (1) 8,000 gallon vertical aboveground lube oil storage tank

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

One (1) 8,000 gallon horizontal aboveground ethylene glycol storage tank

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

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

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

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

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

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

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

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

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

One (1) 8,000 gallon horizontal aboveground ethylene glycol storage tank

- Emission unit ID: TK07
- Emission point ID: TK07

One (1) 8,000 gallon horizontal aboveground methanol storage tank

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

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

- Emission unit ID: TK09
- Emission point ID: TK09

One (1) 2,000 gallon horizontal aboveground triethylene glycol storage tank

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

One (1) 10,000 gallon horizontal aboveground produced fluids storage tank

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

One (1) 10,000 gallon horizontal aboveground produced fluids storage tank

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

One (1) 8,000 gallon horizontal aboveground crude oil storage tank

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

One (1) 8,000 gallon horizontal aboveground crude oil storage tank

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

One (1) 5,000 gallon vertical aboveground waste water storage tank

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

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

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

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

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

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

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

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

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

One (1) 8,000 gallon vertical aboveground triethylene glycol storage tank

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

One (1) 110 gallon vertical aboveground used oil storage tank

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

One (1) 110 gallon vertical aboveground used oil storage tank

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

One (1) 4,200 gallon horizontal aboveground waste water storage tank

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

One (1) 20,000 gallon horizontal aboveground produced fluids storage tank

- Emission unit ID: TK24
- Emission point ID: TK24

One (1) 20,000 gallon horizontal aboveground produced fluids storage tank

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

One (1) 5,000 gallon horizontal aboveground waste water storage tank

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

Listed below is a description of the equipment located at the Lightburn Extraction Plant:

Two (2) 3,550 hp Caterpillar 3612 natural gas-fired reciprocating engines/integral compressors

- Emission unit ID: 006-01 and 006-02
- Emission point ID: EN08 and EN09

Two (2) 216 hp John Deere JU6H-UF54 diesel fire pump engines

- Emission unit ID: 007-01 and 007-02
- Emission point ID: EN10 and EN11

One (1) 254 hp Generac QTI5069KNSY emergency auxiliary generator

- Emission unit ID: 012-01
- Emission point ID: AUX03

Two (2) 400 gpm natural gas liquid loading racks

- Emission unit ID: 009-01 and 009-02
- Emission point ID: FLARE3

One (1) 94,000 lb/hr emergency and maintenance flare

- Emission unit ID: 011-01
- Emission point ID: FLARE3

Four (4) 60,000 gallon natural gas liquid storage tanks

- Emission unit ID: 008-01 thru 008-04
- Emission point ID: FLARE3

Two (2) 290 gallon diesel fuel storage tanks

- Emission unit ID: 014-01 and 014-02
- Emission point ID: Vent

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

- Emission unit ID: TK07
- Emission point ID: TK07

One (1) 30,000 gallon horizontal aboveground drip/condensate storage tank

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

One (1) 150 gallon horizontal aboveground used oil storage tank

- Emission unit ID: TK09
- Emission point ID: TK09

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

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

One (1) 8,400 gallon vertical aboveground waste water storage tank

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

One (1) 174 gallon horizontal aboveground methanol storage tank

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

One (1) 85 gallon horizontal aboveground lube oil storage tank

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

One (1) 1,500 gallon horizontal aboveground ethylene glycol storage tank

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

One (1) 1,500 gallon horizontal aboveground ethylene glycol storage tank

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

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

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

One (1) 211,000 gallon vertical aboveground fire water storage tank

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

SECTION 2

Title V Operating Permit
Renewal Application –
General Forms

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

INITIAL/RENEWAL TITLE V PERMIT APPLICATION - GENERAL FORMS

Section 1: General Information

1. **Name of Applicant (As registered with the WV Secretary of State's Office):** Dominion Transmission, Inc.	**2. Facility Name or Location:** Lightburn Station/Lightburn Extraction Plant
3. DAQ Plant ID No.: 0 4 1 — 0 0 0 1 3	**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? 1964
☒ Permit Renewal — What is the expiration date of the existing permit? 7/24/2017
☐ 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:

27

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: 6486 Old Mill Road (Compressor Station) 6644 Old Mill Road (Extraction Plant)	**City:** Jane Lew	**County:** Lewis
UTM Easting: 547.4529 km	**UTM Northing:** 4,331.2792 km	**Zone:** ☒ 17 or ☐ 18
Directions: From Charleston, take I-79N to Jane Lew. Take Exit 105 (Jane Lew Exit) and make a left on County Road 7 (Berkin-Jane Lew Road). Stay on CR-7 until it intersects Route 19 (Main Avenue). Make a right on Route 19 and make the immediate left on Broad Run Road. Stay on Broad Run Road until it intersects County Road 1 (Old Mill Road/Fork River Road/Jackson Mill Road) and make a right. Stay on CR-1 for about 500 yards and Lightburn Station is on the right.		
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).** Maryland, Ohio, Pennsylvania
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).** Dolly Sods and Otter Creek Wilderness Area

[1] *Class I areas include Dolly Sods and Otter Creek Wilderness Areas in West Virginia, and Shenandoah National Park and James River Face Wilderness Area in Virginia.*

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

14. Facility Description

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

Process	Products	NAICS	SIC
Natural Gas Compressor Station	N/A	486120	4922
Natural Gas Extraction Plant	Natural Gasoline Liquids	211112	1321

Provide a general description of operations.

The Lightburn Compressor Station is a compressor facility that services a natural gas storage pool and pipeline system. The purpose of the facility is to alternately inject or withdraw the natural gas from the storage pool depending on demand. The reciprocating engines at the facility receive natural gas from a valve on a pipeline and compress it into the pool or withdraw and compress the gas to enable further transportation in the pipeline.

The Lightburn Extraction Plant is a natural gas liquids extraction facility. Propane and heavier components of natural gas are removed through a turbo-expander cryogenic process.

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

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

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

Section 2: Applicable Requirements

18. Applicable Requirements Summary	
Instructions: Mark all applicable requirements.	
☐ SIP	☐ FIP
☒ Minor source NSR (45CSR13)	☐ PSD (45CSR14)
☒ NESHAP (45CSR34)	☐ Nonattainment NSR (45CSR19)
☒ Section 111 NSPS	☒ Section 112(d) MACT standards
☐ Section 112(g) Case-by-case MACT	☒ 112(r) RMP
☐ Section 112(i) Early reduction of HAP	☐ Consumer/commercial prod. reqts., section 183(e)
☐ Section 129 Standards/Reqts.	☐ Stratospheric ozone (Title VI)
☐ Tank vessel reqt., section 183(f)	☐ Emissions cap 45CSR§30-2.6.1
☐ NAAQS, increments or visibility (temp. sources)	☐ 45CSR27 State enforceable only rule
☒ 45CSR4 State enforceable only rule	☐ Acid Rain (Title IV, 45CSR33)
☐ Emissions Trading and Banking (45CSR28)	☐ **C**ompliance **A**ssurance **M**onitoring (40CFR64)
☐ CAIR NO_x Annual Trading Program (45CSR39)	☐ CAIR NO_x Ozone Season Trading Program (45CSR40)
☐ CAIR SO_2 Trading Program (45CSR41)	
19. Non Applicability Determinations	

List all requirements which the source has determined not applicable and for which a permit shield is requested. The listing shall also include the rule citation and the reason why the shield applies.

45 CSR 10 – Compressor engines (EN01 – EN09) have been excluded from the applicability of SO_2 and H_2S limits. WVDAQ determined that 45 CSR 10 is not applicable to compressor engines.
40 CFR 60 Subpart Kb – The tanks (008-01 thru 008-04) are not subject to this subpart as they meet the applicability exemption criteria of 60.110b(d)(2). The diesel tanks (014-01 thru 014-03) are not subject to this subpart as the design capacity is below applicability criteria in 60.110b(a).
40 CFR 60 Subpart JJJJ – The compressor engines (EN01 – EN07) and auxiliary generator (AUX02) are not subject to this subpart since they were manufactured before the applicability date.
40 CFR 60 Subpart OOOO – This subpart does not apply to the facility since the facility does not have gas wells, centrifugal compressors, reciprocating compressors, and/or pneumatic controllers constructed, modified, or reconstructed after August 23, 2011. None of the newly installed tanks onsite meet the applicability requirements in 40 CFR 60.5365(e).

40 CFR 60 Subpart OOOOa – This subpart does not apply to the facility since the facility does not have gas wells, centrifugal compressors, reciprocating compressors, and/or pneumatic controllers constructed, modified, or reconstructed after September 18, 2015.

40 CFR 63 Subpart HH – The facility is not considered to be within the natural gas production source category since it does not meet the definition of "facility," (i.e. the facility is categorized as a natural gas transmission and storage facility). Therefore, the requirements of this subpart do not apply.

40 CFR 63 Subpart DDDDD – The reboilers (RBR01 and RBR02) are not subject to this subpart since they are exempt by §63.7491(h).
40 CFR 63 Subpart JJJJJJ – The facility is a major source of HAP; therefore, this subpart does not apply.
40 CFR 64 – CAM does not apply to the dehydration units (DEHY01 and DEHY02) as pre-control emissions are not above major source thresholds for VOC and HAPs (per §64.2(a)(3)). CAM does not apply to the compressor engines (EN08 and EN09) as (1) pre-control emissions are not above major source thresholds for VOC and CO (per §64.2(a)(3)) and (2) the engines are subject to NESHAP Subpart ZZZZ; therefore is exempt per 64.2(b)(1)(i). C AM does not apply to the auxiliary generator (AUX03) as pre-control emissions are not above major source thresholds for VOC, CO, and HAPs (per §64.2(a)(3)). CAM does not apply to the tanks (008-01 thru 008-04) and loading racks (009-01 and 009-02) as none of the PTEs of any pollutant emitted from the flare (FLARE3) exceed the major source threshold. Therefore, applicability criterion 64.2(a)(3) is not met.

☒ Permit Shield

20. Facility-Wide Applicable Requirements

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

45 CSR 6-3.1 – Open burning prohibited (TV 3.1.1)
45 CSR 6-3.2 – Open burning exemption (TV 3.1.2)
40 CFR Part 61 and 45 CSR 15 – Asbestos inspection and removal (TV 3.1.3)
45 CSR 4-3.1 – No objectionable odors (TV 3.1.4)
45 CSR 11-5.2 – Standby plans for emergency episodes (TV 3.1.5)
WV Code 22-5-4 (a) (14) – Annual emission inventory reporting (TV 3.1.6)
40 CFR Part 82 Subpart F – Ozone depleting substances (TV 3.1.7)
40 CFR Part 68 – Risk Management Plan (TV 3.1.8)
45 CSR 17-3.1 – Fugitive Particulate Matter (TV 3.1.14)

☐ Permit Shield

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

45 CSR 6-3.1 – The permittee shall prohibit open burning (TV 3.1.1)
45 CSR 6-3.2 – The permittee shall notify if open burning occurs (TV 3.1.2)
40 CFR Part 61 and 45 CSR 15 – Prior to demolition/construction buildings will be inspected for asbestos (TV 3.1.3)
45 CSR 11 – Upon request by the Secretary, the permittee shall prepare a standby plan (TV 3.1.5)
WV Code 22-5-4 (a) (14) – The permittee shall submit annual emission inventory reporting (TV 3.1.6)
40 CFR Part 82 Subpart F – The permittee will prohibit maintenance, service, or repair of appliances containing ozone depleting substances (TV 3.1.7)
40 CFR Part 68 – Should the permittee become subject to 40 CFR Part 68, a RMP shall be submitted (TV 3.1.8)
45 CSR 17 – The permittee will limit fugitive particulate matter emissions from the facility by burning only pipeline quality natural gas (TV 3.1.14)
45 CSR 13 and WV Code 22-5-4 (a) (14-15) – Testing Requirements (TV 3.3.1; R13-2823D 11.2.1 and 11.2.2)
45 CSR 30 – Recordkeeping Requirements (TV 3.4)
45 CSR 30-5.1.c.2.A and 13 – The permittee shall keep records of monitoring information (TV 3.4.1; R13-2823D 11.3.2)
45 CSR 4-3.1 – Permittee shall maintain records of all odor complaints received (TV 3.4.3)
45 CSR 30 – Reporting Requirements (TV 3.5)
45 CSR 30-8 – The permittee shall submit a certified emissions statement and pay fees on an annual basis (TV 3.5.4)
45 CSR 30-5.3.e – The permittee shall submit annual compliance certifications (TV 3.5.5)
45 CSR 30-5.1.c.3.A – The permittee shall submit semi-annual monitoring reports (TV 3.5.6)

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

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

21. Active Permits/Consent Orders		
Permit or Consent Order Number	Date of Issuance MM/DD/YYYY	List any Permit Determinations that Affect the Permit *(if any)*
R13-2823D	10/6/2014	N/A
R14-0009E	1/7/2009	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)	1,087.20
Nitrogen Oxides (NO_X)	2,497.97
Lead (Pb)	N/A
Particulate Matter ($PM_{2.5}$)[1]	35.57
Particulate Matter (PM_{10})[1]	35.57
Total Particulate Matter (TSP)	46.27
Sulfur Dioxide (SO_2)	0.73
Volatile Organic Compounds (VOC)	542.34
Hazardous Air Pollutants[2]	Potential Emissions
Acetaldehyde	8.21
Acrolein	7.43
Benzene	1.72
Ethylbenzene	0.25
Formaldehyde	51.06
Hexane	0.85
Toluene	0.98
Xylene	0.50
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:

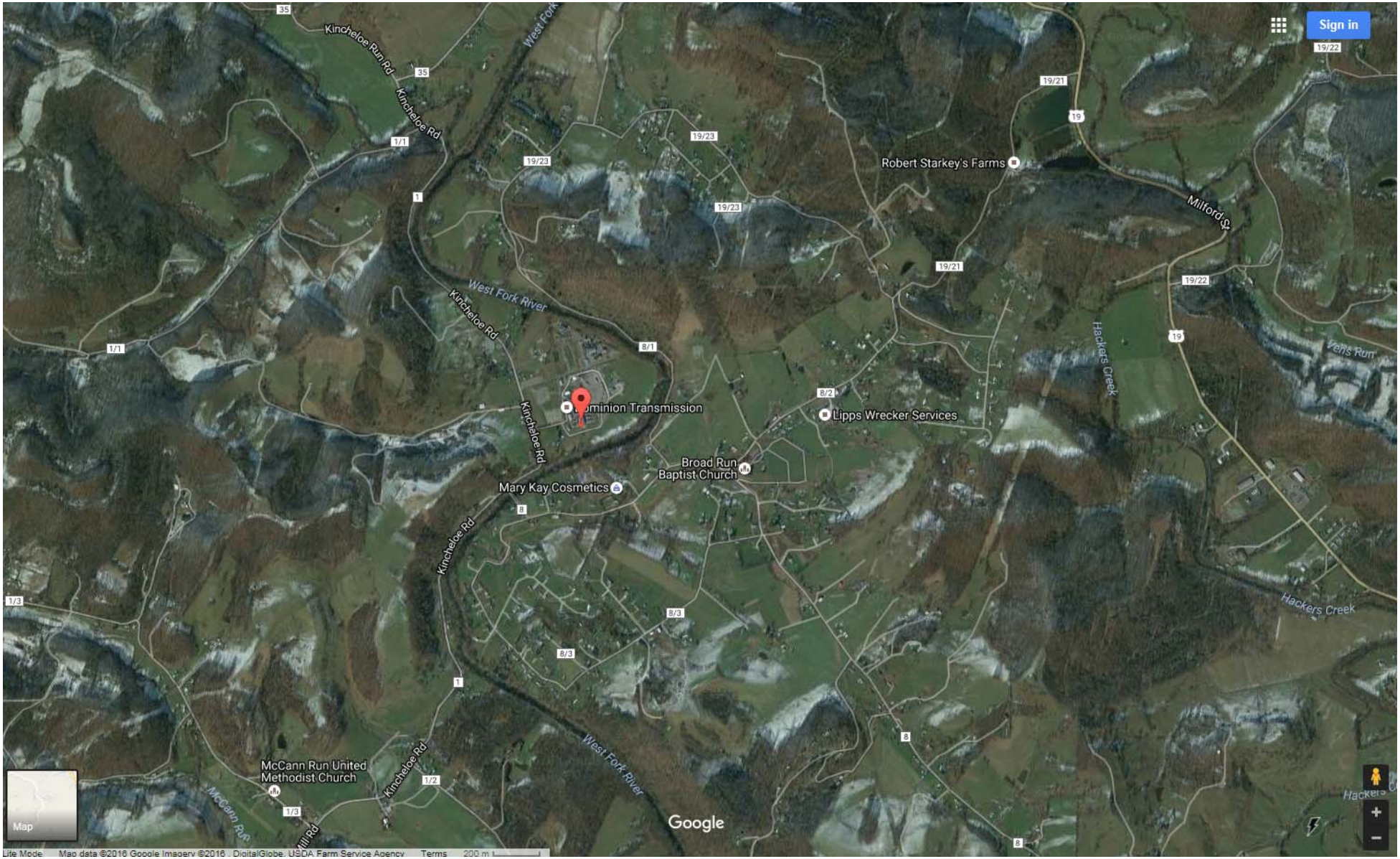
Signature: _____ Signature Date: 01/06/2017
(Must be signed and dated in blue ink)

Note: Please check all applicable attachments included with this permit application:	
☒	ATTACHMENT A: Area Map
☒	ATTACHMENT B: Plot Plan(s)
☒	ATTACHMENT C: Process Flow Diagram(s)
☒	ATTACHMENT D: Equipment Table
☒	ATTACHMENT E: Emission Unit Form(s)
☐	ATTACHMENT F: Schedule of Compliance Form(s)
☒	ATTACHMENT G: Air Pollution Control Device Form(s)
☐	ATTACHMENT H: Compliance Assurance Monitoring (CAM) Form(s)

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

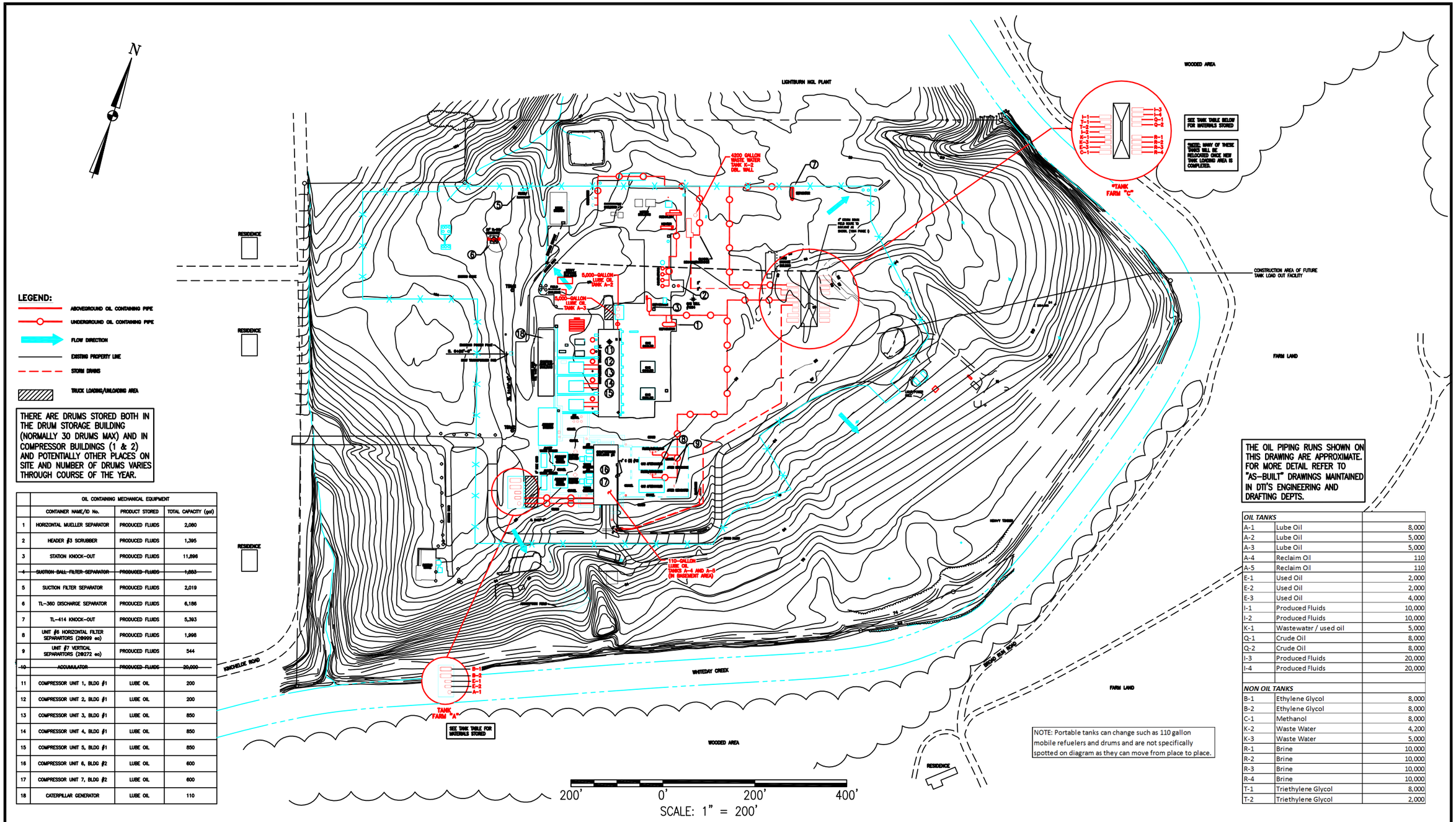
Attachment A

Area Map


Sign in
Kincheloe Run Rd
Kincheloe Rd
West Fork River
Robert Starkey's Farms
Milford St
Hackers Creek
Vens Run
Dominion Transmission
Lipps Wrecker Services
Broad Run
Baptist Church
Mary Kay Cosmetics
McCann Run United
Methodist Church
McCann Run
Google
Map
Terms
200 m

Attachment B

Plot Plan



	OIL CONTAINING MECHANICAL EQUIPMENT		
	CONTAINER NAME/ID No.	PRODUCT STORED	TOTAL CAPACITY (gal)
1	HORIZONTAL MUELLER SEPARATOR	PRODUCED FLUIDS	2,080
2	HEADER #3 SCRUBBER	PRODUCED FLUIDS	1,395
3	STATION KNOCK-OUT	PRODUCED FLUIDS	11,896
~~4~~	~~SUCTION BALL FILTER SEPARATOR~~	~~PRODUCED FLUIDS~~	~~1,883~~
5	SUCTION FILTER SEPARATOR	PRODUCED FLUIDS	2,019
6	TL-360 DISCHARGE SEPARATOR	PRODUCED FLUIDS	6,186
7	TL-414 KNOCK-OUT	PRODUCED FLUIDS	5,393
8	UNIT #6 HORIZONTAL FILTER SEPARARTORS (20999 ea)	PRODUCED FLUIDS	1,998
9	UNIT #7 VERTICAL SEPARARTORS (20272 ea)	PRODUCED FLUIDS	544
~~10~~	~~ACCUMULATOR~~	~~PRODUCED FLUIDS~~	~~20,000~~
11	COMPRESSOR UNIT 1, BLDG #1	LUBE OIL	200
12	COMPRESSOR UNIT 2, BLDG #1	LUBE OIL	200
13	COMPRESSOR UNIT 3, BLDG #1	LUBE OIL	850
14	COMPRESSOR UNIT 4, BLDG #1	LUBE OIL	850
15	COMPRESSOR UNIT 5, BLDG #1	LUBE OIL	850
16	COMPRESSOR UNIT 6, BLDG #2	LUBE OIL	600
17	COMPRESSOR UNIT 7, BLDG #2	LUBE OIL	600
18	CATERPILLAR GENERATOR	LUBE OIL	110

OIL TANKS		
A-1	Lube Oil	8,000
A-2	Lube Oil	5,000
A-3	Lube Oil	5,000
A-4	Reclaim Oil	110
A-5	Reclaim Oil	110
E-1	Used Oil	2,000
E-2	Used Oil	2,000
E-3	Used Oil	4,000
I-1	Produced Fluids	10,000
I-2	Produced Fluids	10,000
K-1	Wastewater / used oil	5,000
Q-1	Crude Oil	8,000
Q-2	Crude Oil	8,000
I-3	Produced Fluids	20,000
I-4	Produced Fluids	20,000
NON OIL TANKS		
B-1	Ethylene Glycol	8,000
B-2	Ethylene Glycol	8,000
C-1	Methanol	8,000
K-2	Waste Water	4,200
K-3	Waste Water	5,000
R-1	Brine	10,000
R-2	Brine	10,000
R-3	Brine	10,000
R-4	Brine	10,000
T-1	Triethylene Glycol	8,000
T-2	Triethylene Glycol	2,000

SYM.	DATE	BY	REVISION DESCRIPTION	PRJ/TSK	APP.
11	05/16/2016	JAR	ADDED NOTE AND REPLACED TWO SEPERATORS WITH HORIZONTAL MUELLER SEPERATOR		
10	09/22/15	TBB	REVISED TANK TABLE TO SHOW "I-3" & "I-4" UNDER "OIL TANKS"		
9	09/18/15	TBB	REVISED LOCATION OF TANKS IN TANK FARM "C" & ADDED TANKS "I-3" & "I-4"		
8	07/15/15	TBB	REVISED SIZE OF TANK T-1		
7	06/04/15	TBB	ADDED TANK TABLE AND OTHER NOTES PROVIDED BY TIM JACKSON		

SCALE	1" = 200'	DATE	
DRAWN			
CHECKED			
APP. FOR BID			
APP. FOR CONST.			
TOWN:	FREEMANS CREEK, WV	COUNTY:	LEWIS

Dominion Transmission, Inc.

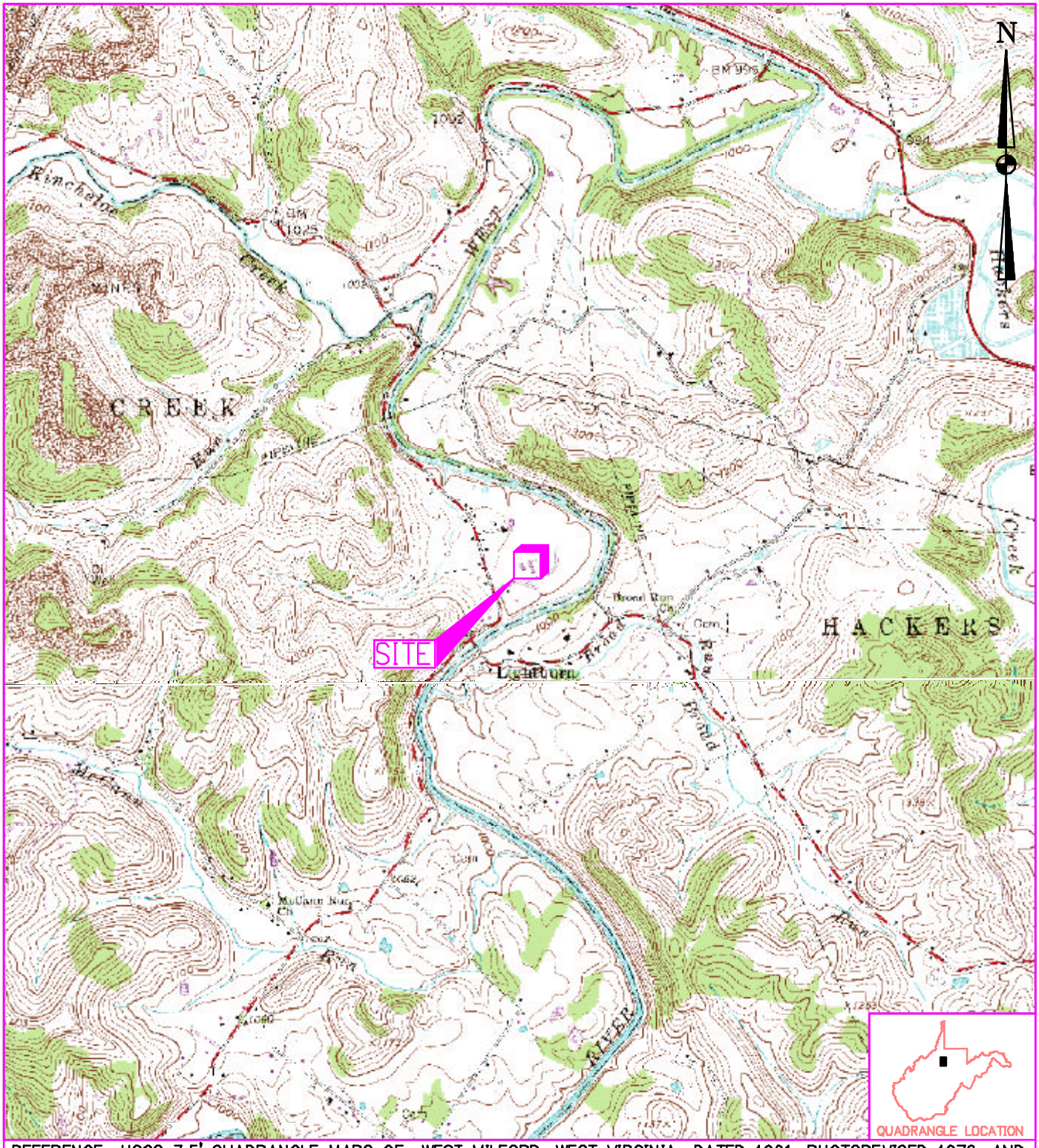
925 White Oaks Blvd. Bridgeport, West Virginia 26330 / Phone: (681) 842-3000

FOR: LIGHTBURN COMPRESSOR STATION

TITLE: ENVIRONMENTAL EMERGENCY SITE PLAN

DIR:	GROUP	DWG. NO.	REV.
DOCUMENTUM	PD	X8721EE	11
FILE: / PRJ/TSK:			

Printed: May 16, 2016 @10:05, By: jon0089, Filename: PDX8721EE.dwg



REFERENCE: USGS 7.5' QUADRANGLE MAPS OF: WEST MILFORD, WEST VIRGINIA; DATED 1961, PHOTOREVISED 1976, AND WESTON, WEST VIRGINIA; DATED 1961, PHOTOREVISED 1977.

DRAWN BY	DJF
DATE	
CHECKED BY	
SET JOB NO.	204046
SET DWG FILE	LIGHTBURNm01.dwg
DRAWING SCALE	1"=2000'

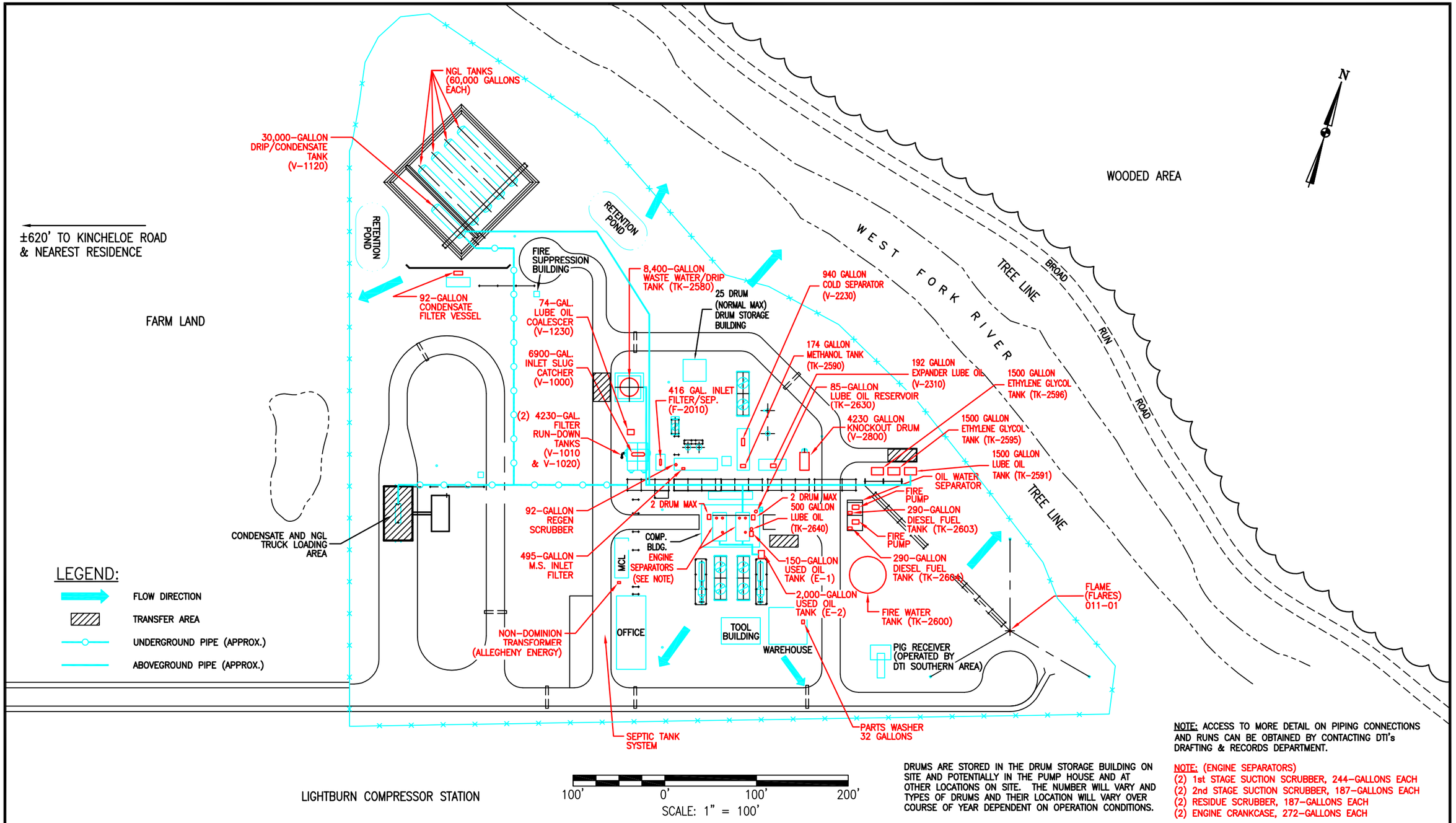
SE TECHNOLOGIES
98 Vanadium Road Bridgeville, PA 15017 (412) 221-1100

DOMINION TRANSMISSION

LIGHTBURN COMPRESSOR STATION
LEWIS COUNTY, WEST VIRGINIA
SITE LOCATION MAP

DRAWING NO.	REV.
FIGURE 1	0

Plot: env045 07/06/2004 12:03 G:\DOMINION\204046\LIGHTBURNm01.dwg



LIGHTBURN COMPRESSOR STATION

DRUMS ARE STORED IN THE DRUM STORAGE BUILDING ON SITE AND POTENTIALLY IN THE PUMP HOUSE AND AT OTHER LOCATIONS ON SITE. THE NUMBER WILL VARY AND TYPES OF DRUMS AND THEIR LOCATION WILL VARY OVER COURSE OF YEAR DEPENDENT ON OPERATION CONDITIONS.

NOTE: ACCESS TO MORE DETAIL ON PIPING CONNECTIONS AND RUNS CAN BE OBTAINED BY CONTACTING DTI's DRAFTING & RECORDS DEPARTMENT.

NOTE: (ENGINE SEPARATORS)
(2) 1st STAGE SUCTION SCRUBBER, 244-GALLONS EACH
(2) 2nd STAGE SUCTION SCRUBBER, 187-GALLONS EACH
(2) RESIDUE SCRUBBER, 187-GALLONS EACH
(2) ENGINE CRANKCASE, 272-GALLONS EACH

SYM.	DATE	BY	REVISION DESCRIPTION	PRJ/TSK	APP.
11	05/18/2016	JAR	CHANGED TEXT PERTAINING TO DRUMS AND ADDED DRUMS NEAR LUBE OIL TANK-2640		
10	02/29/16	TBB	REVISED PER TIM JACKSON MARK UPS		
9	09/02/15	TBB	ADDED LUBE OIL TANK (TK-2640) & ETHYLENE GLYCOL TANK (TK-2596) PER TIM JACKSON		
8	07/31/15	TBB	ADDED ABOVEGROUND AND UNDERGROUND OIL PIPING & TRANSFER AREAS		
7	05/28/15	TBB	REVISED PER TIM JACKSON MARK UPS		

SCALE	1" = 100'	DATE
DRAWN	DJF	01/03/13
CHECKED	MFP	
APP. FOR BID		
APP. FOR CONST.		
TOWN:	FREEMANS CREEK, WV	COUNTY: LEWIS

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

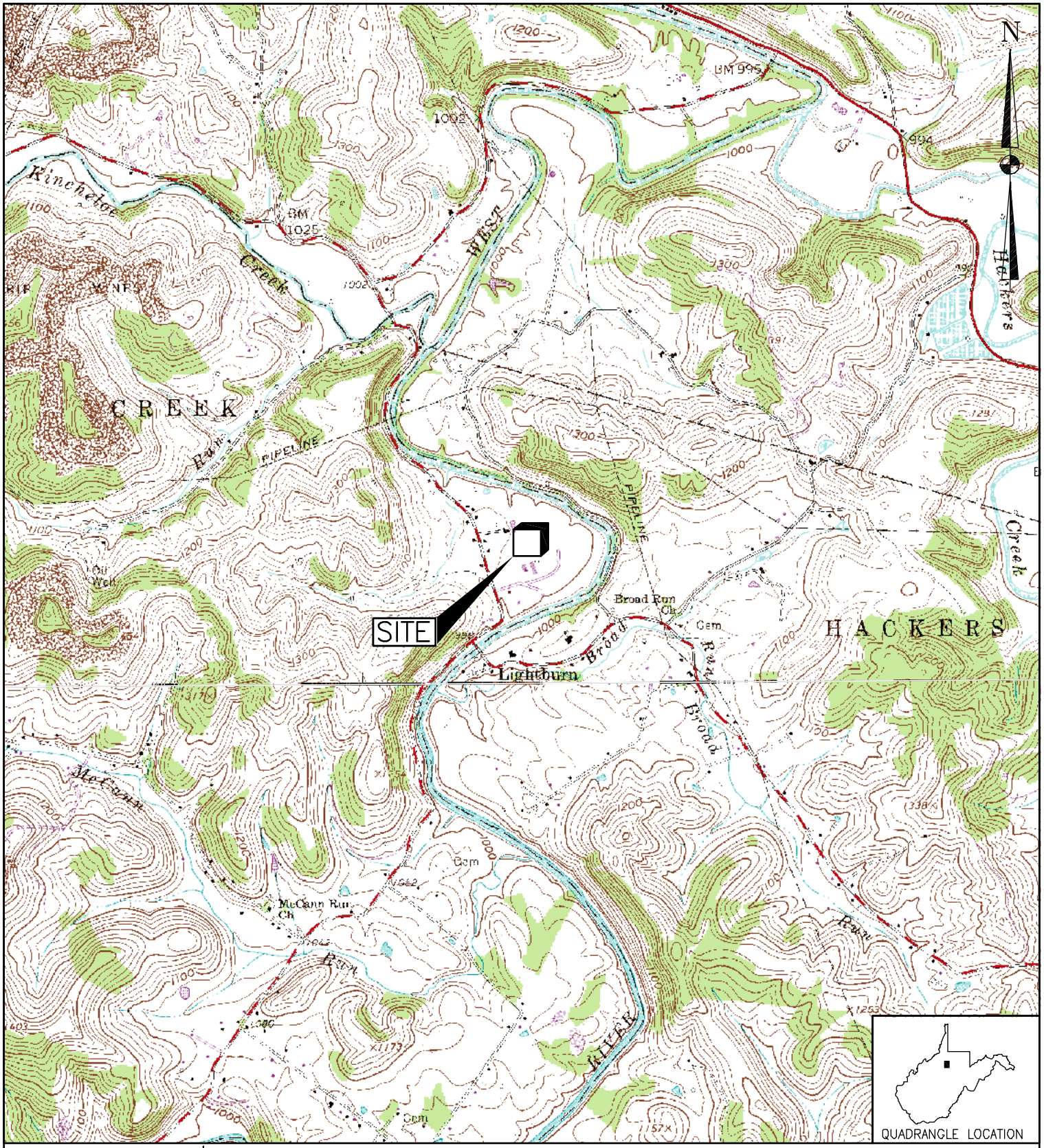
FOR: LIGHTBURN NGL PLANT

TITLE: ENVIRONMENTAL EMERGENCY SITE PLAN

DIR:	GROUP	DWG. NO.	REV.
DOCUMENTUM	PD	X7676	11

FILE: PRJ/TSK:

Printed: May 19, 2016 @12:39, By: jon0089, Filename: PDX7676.dwg



REFERENCE: USGS 7.5' QUADRANGLE MAPS OF: WEST MILFORD, WEST VIRGINIA; DATED 1961, PHOTOREVISED 1976, AND WESTON, WEST VIRGINIA; DATED 1961, PHOTOREVISED 1977.

DRAWN BY	DJF
DATE	3/10/11
CHECKED BY	RAD
SET JOB NO.	210164
SET DWG FILE	LIGHTBURN NGLm01.dwg
DRAWING SCALE	1"=2000'

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

DOMINION TRANSMISSION

LIGHTBURN NGL PLANT
LEWIS COUNTY, WEST VIRGINIA
SITE LOCATION MAP

DRAWING NO.	REV.
FIGURE 1	0

Plot: env045 03/15/2011 11:42 G:\DOMINION\210164\LIGHTBURN NGLm01.dwg

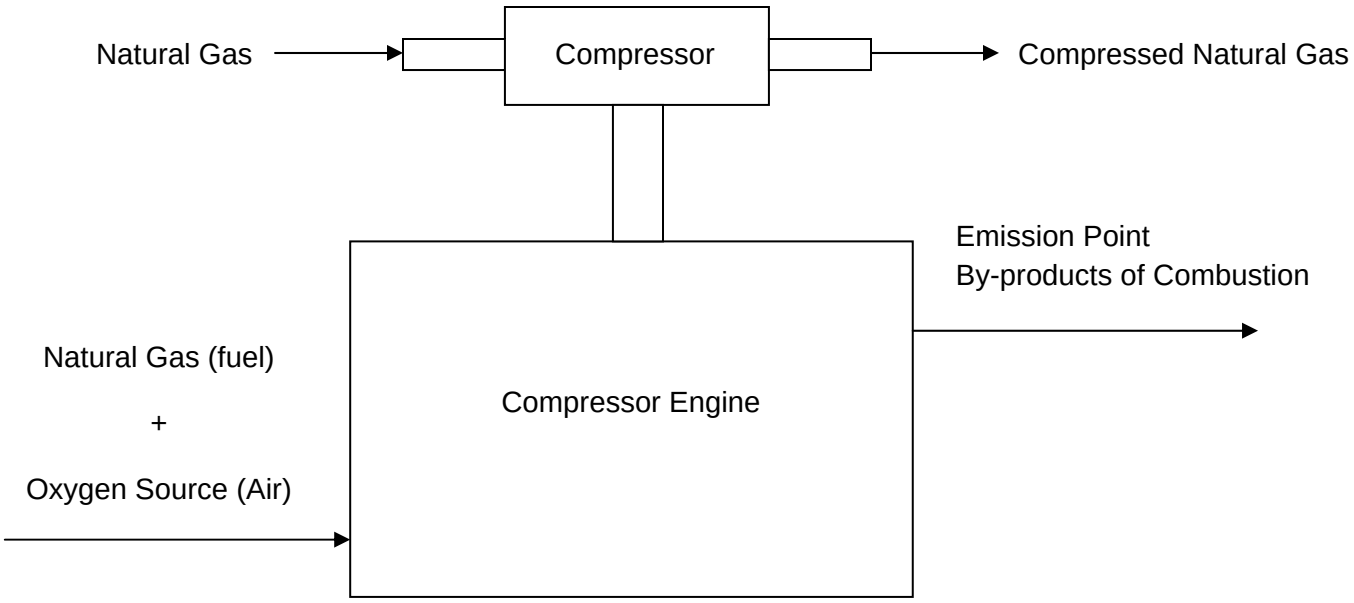
Attachment C

Process Flow Diagrams

Dominion Transmission, Inc.

Lightburn Compressor Station

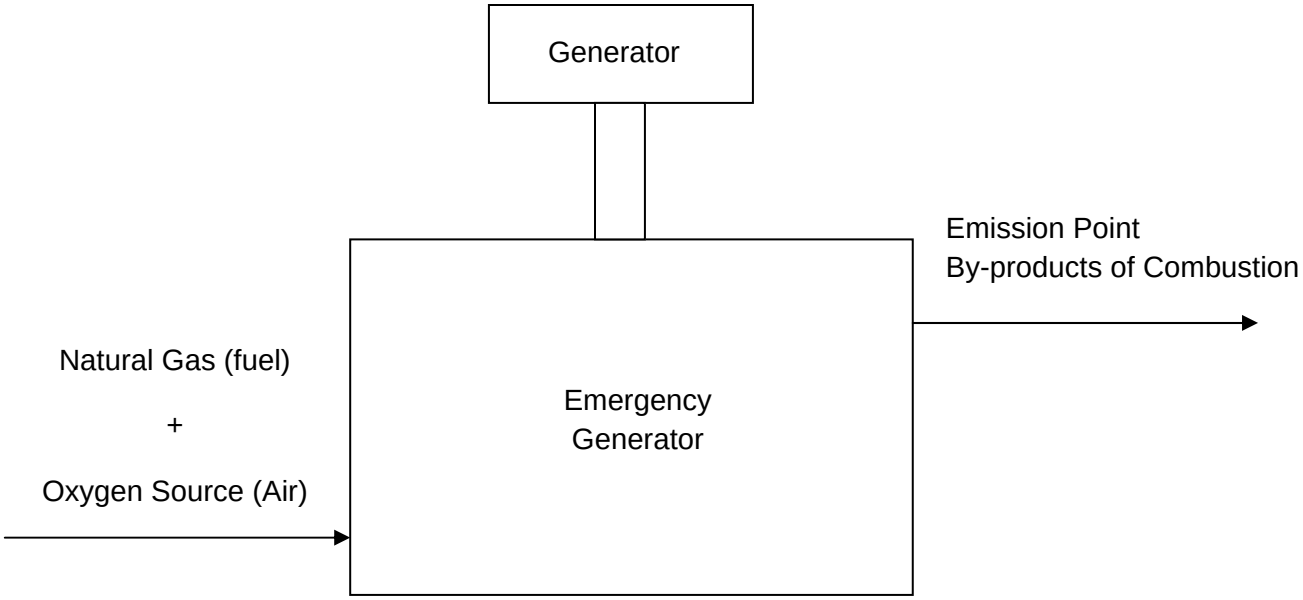
Compressor Engines (EN01 – EN07) Process Flow Diagram



Dominion Transmission, Inc.

Lightburn Compressor Station

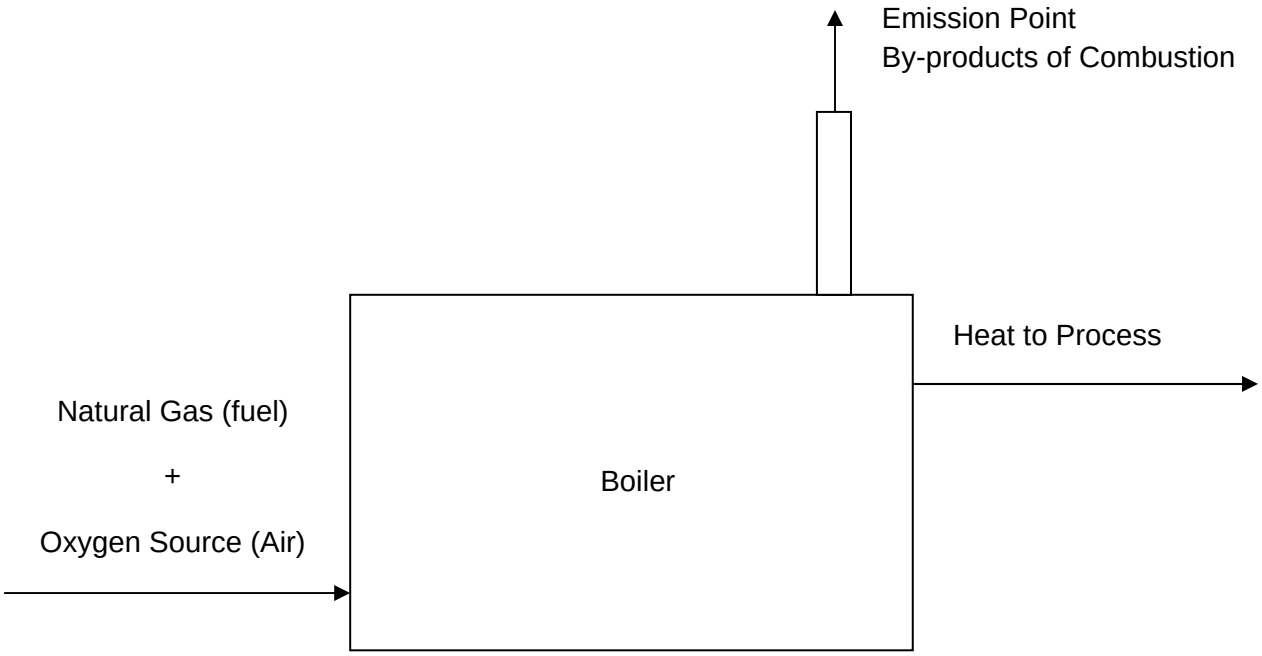
Emergency Auxiliary Generator (AUX02) Process Flow Diagram



Dominion Transmission, Inc.

Lightburn Compressor Station

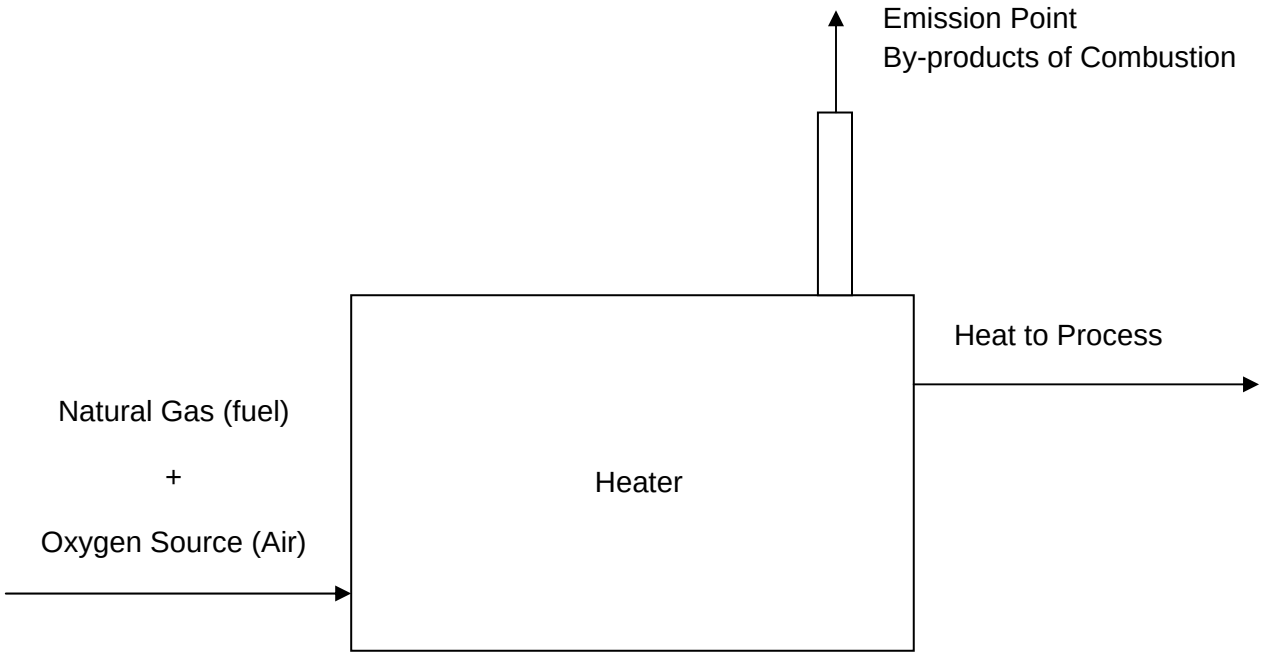
Boilers (BLR01 and BLR02) Process Flow Diagram



Dominion Transmission, Inc.

Lightburn Compressor Station

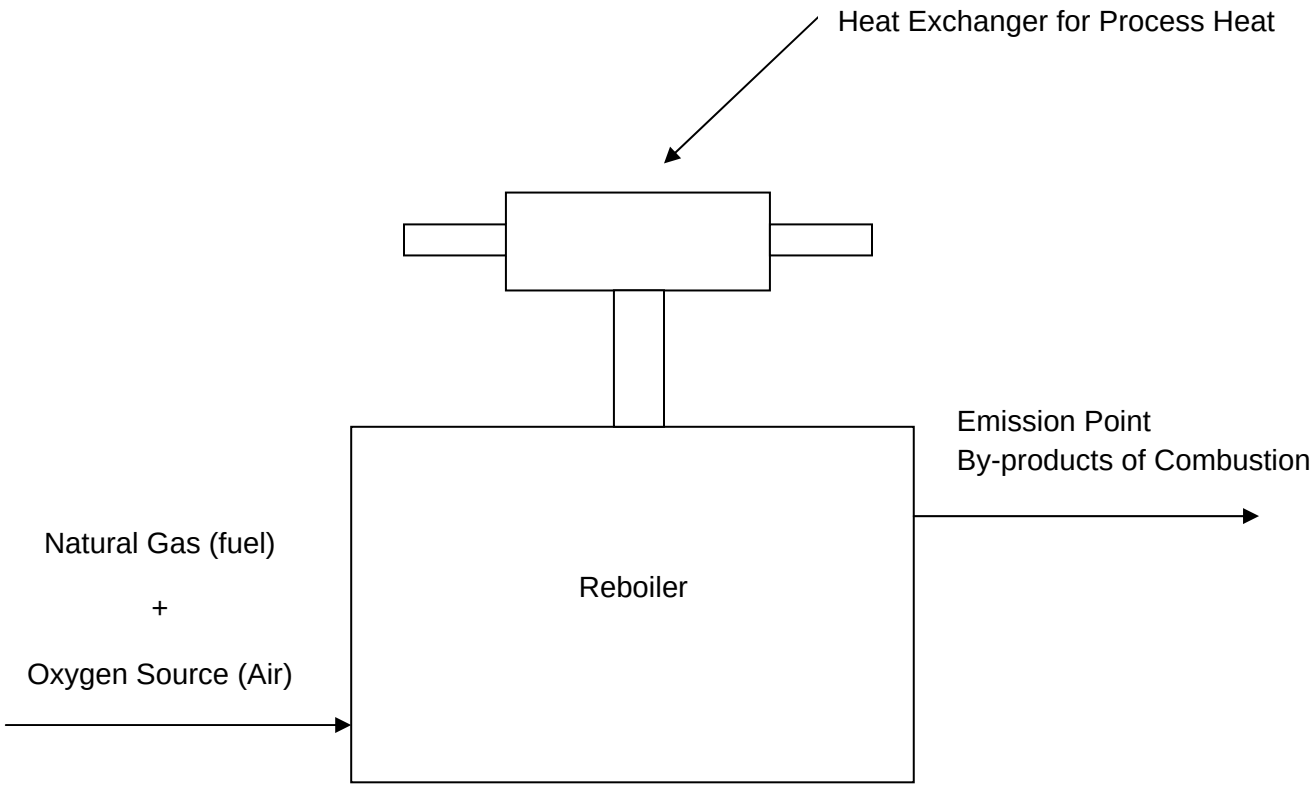
Heater (HTR01) Process Flow Diagram



Dominion Transmission, Inc.

Lightburn Compressor Station

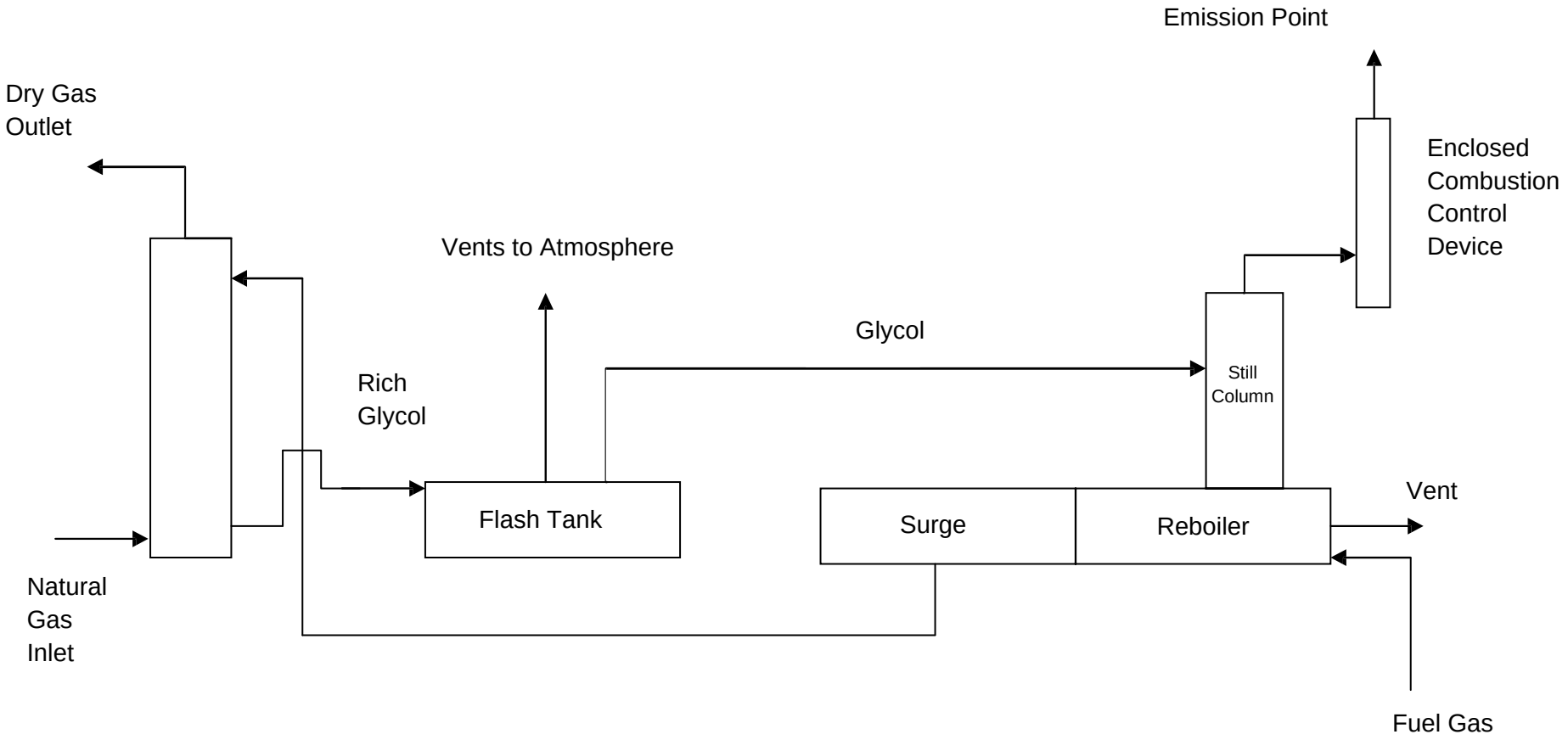
Reboilers (RBR01 and RBR02) Process Flow Diagram



Dominion Transmission, Inc.

Lightburn Compressor Station

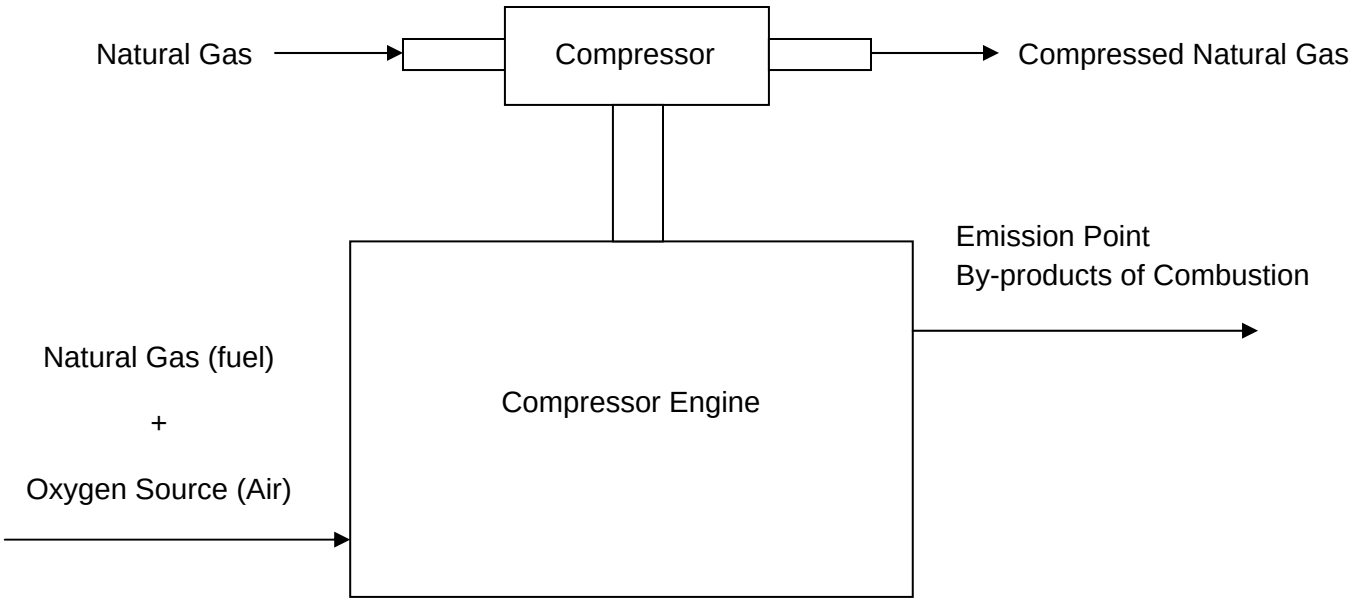
Each Dehydration Unit (F1, F2, DEHY01, DEHY02, RBR01, and RBR02) Process Flow Diagram



Dominion Transmission, Inc.

Lightburn Extraction Plant

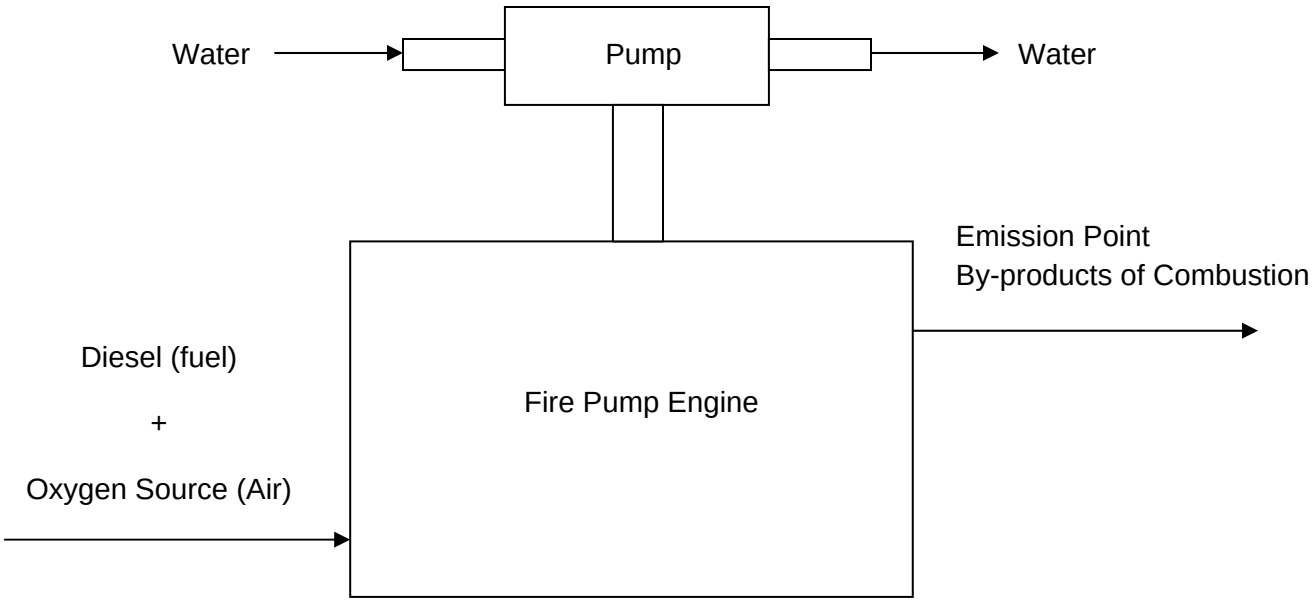
Compressor Engines (EN08 and EN09) Process Flow Diagram



Dominion Transmission, Inc.

Lightburn Extraction Plant

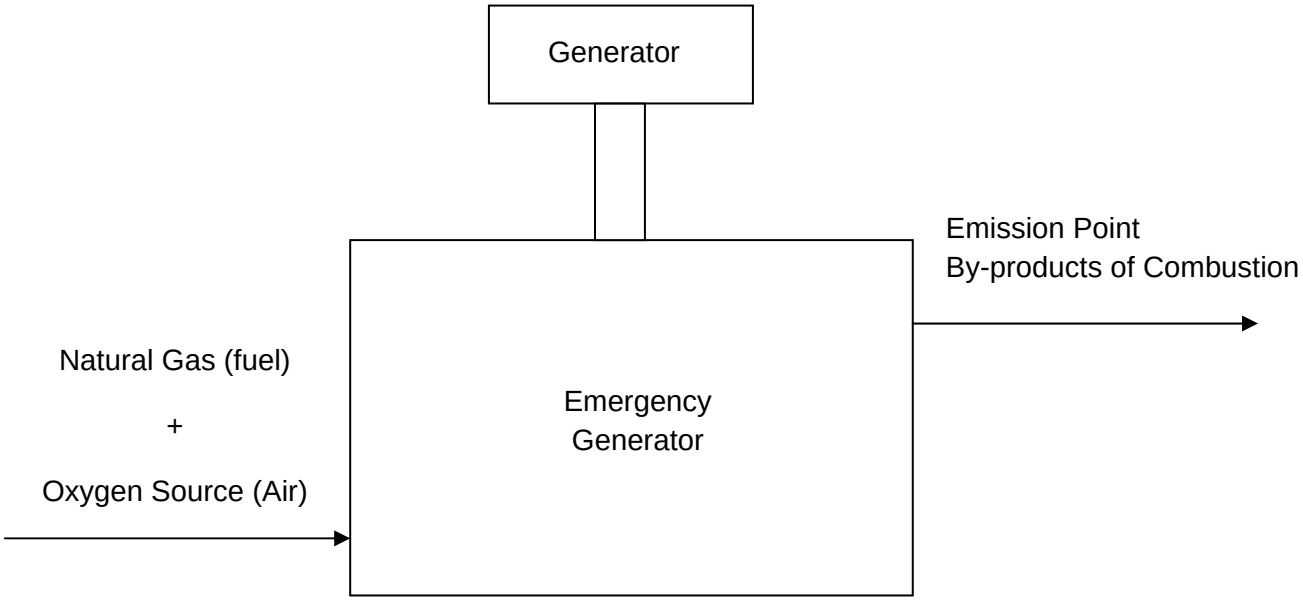
Fire Pump Engines (EN10 and EN11) Process Flow Diagram



Dominion Transmission, Inc.

Lightburn Extraction Plant

Emergency Auxiliary Generator (AUX03) 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
Lightburn Compressor Station					
EN01	N/A	001-01	Reciprocating Engine/Integral Compressor; Clark TLA-6	2,000 hp	1964
EN02	N/A	001-02	Reciprocating Engine/Integral Compressor; Clark TLA-6	2,000 hp	1964
EN03	CC01	001-03	Reciprocating Engine/Integral Compressor; Clark TCV-12	4,000 hp	1968
EN04	N/A	001-04	Reciprocating Engine/Integral Compressor; Clark TCV-12	4,000 hp	1970
EN05	N/A	001-05	Reciprocating Engine/Integral Compressor; Clark TCV-12	4,000 hp	1970
EN06	N/A	001-06	Reciprocating Engine/Integral Compressor; Dresser Rand TCVD-12	6,060 hp	1993
EN07	N/A	001-07	Reciprocating Engine/Integral Compressor; Dresser Rand TCVD-12	6,060 hp	1993
AUX02	N/A	002-02	Reciprocating Engine/Auxiliary Generator; Caterpillar	1,085 hp	2002
BLR02	N/A	005-02	Boiler; Bryan HE-RV550-W-FDG	5.5 MMBtu/hr	2009
DEHY01	F1	004-01	Dehydration Unit Still; Natco	600 MMcf/day	1967
DEHY02	F2	004-02	Dehydration Unit Still; Natco	600 MMcf/day	1994
RBR01	N/A	005-04	Dehydration Reboiler; Natco 5GR-2000	2.29 MMBtu/hr	1967
RBR02	N/A	005-05	Dehydration Reboiler; Natco 5B32/18-24	3.33 MMBtu/hr	1994
F1	N/A	0003	Questor Q250 Dehydration Unit #1 Flare (enclosed combustion device)	539.5 scf/min	2014
F2	N/A	0004	Questor Q250 Dehydration Unit #2 Flare (enclosed combustion device)	539.5 scf/min	2014
New units (and updates) to equipment list:					
HTR01	N/A	005-03	Heater; Natco DWG.A-14724	4.0 MMBtu/hr	1967
BLR01	N/A	005-01	Boiler; Cleaver Brooks CB-700X-250-15ST	10.461 MMBtu/hr	1969
TK01	N/A	TK01	Vertical Aboveground Lube Oil Tank	8,000 Gallons	1993
TK02	N/A	TK02	Horizontal Aboveground Ethylene Glycol Tank	8,000 Gallons	1994
TK03	N/A	TK03	Horizontal Aboveground Used Oil Tank	2,000 Gallons	1993

TK04	N/A	TK04	Horizontal Aboveground Used Oil Tank	2,000 Gallons	1993
TK05	N/A	TK05	Horizontal Aboveground Lube Oil Tank	5,000 Gallons	1964
TK06	N/A	TK06	Horizontal Aboveground Lube Oil Tank	5,000 Gallons	1964
TK07	N/A	TK07	Horizontal Aboveground Ethylene Glycol Tank	8,000 Gallons	1994
TK08	N/A	TK08	Horizontal Aboveground Methanol Tank	8,000 Gallons	1994
TK09	N/A	TK09	Horizontal Aboveground Used Oil Tank	4,000 Gallons	1994
TK10	N/A	TK10	Horizontal Aboveground Triethylene Glycol Tank	2,000 Gallons	1994
TK11	N/A	TK11	Horizontal Aboveground Produced Fluids Tank	10,000 Gallons	1994
TK12	N/A	TK12	Horizontal Aboveground Produced Fluids Tank	10,000 Gallons	1994
TK13	N/A	TK13	Horizontal Aboveground Crude Oil Tank	8,000 Gallons	1994
TK14	N/A	TK14	Horizontal Aboveground Crude Oil Tank	8,000 Gallons	1994
TK15	N/A	TK15	Horizontal Aboveground Waste Water Tank	5,000 Gallons	1994
TK16	N/A	TK16	Horizontal Aboveground Brine Tank	10,000 Gallons	1994
TK17	N/A	TK17	Horizontal Aboveground Brine Tank	10,000 Gallons	1994
TK18	N/A	TK18	Horizontal Aboveground Brine Tank	10,000 Gallons	1994
TK19	N/A	TK19	Horizontal Aboveground Brine Tank	10,000 Gallons	1994
TK20	N/A	TK20	Vertical Aboveground Triethylene Glycol Tank	8,000 Gallons	1994
TK21	N/A	TK21	Vertical Aboveground Used Oil Tank	110 Gallons	1993
TK22	N/A	TK22	Vertical Aboveground Used Oil Tank	110 Gallons	1993
TK23	N/A	TK23	Horizontal Aboveground Waste Water Tank	4,200 Gallons	2014
TK24	N/A	TK24	Horizontal Aboveground Produced Fluids Tank	20,000 Gallons	2015
TK25	N/A	TK25	Horizontal Aboveground Produced Fluids Tank	20,000 Gallons	2015
TK26	N/A	TK26	Horizontal Aboveground Waste Water Tank	5,000 Gallons	2015

[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
Lightburn Extraction Plant					
EN08	CC1	006-01	Caterpillar 3612 Compressor Engine	3,550 hp	2010
EN09	CC2	006-02	Caterpillar 3612 Compressor Engine	3,550 hp	2010
EN10	N/A	007-01	John Deere Co. JU6H-UF54 Diesel Fire Pump Engine	216 hp	2010
EN11	N/A	007-02	John Deere Co. JU6H-UF54 Diesel Fire Pump Engine	216 hp	2010
AUX03	Catalyst	012-01	Emergency Generator	254 hp (150 kW)	2011
FLARE3	Pressure Tank	008-01	Horizontal Natural Gas Liquid Storage Tank	60,000 Gallons	2010
FLARE3	Pressure Tank	008-02	Horizontal Natural Gas Liquid Storage Tank	60,000 Gallons	2010
FLARE3	Pressure Tank	008-03	Horizontal Natural Gas Liquid Storage Tank	60,000 Gallons	2010
FLARE3	Pressure Tank	008-04	Horizontal Natural Gas Liquid Storage Tank	60,000 Gallons	2010
FLARE3	Vapor Return to Tank	009-01	Natural Gas Liquid Loading Rack #1	400 gpm	2010
FLARE3	Vapor Return to Tank	009-02	Natural Gas Liquid Loading Rack #2	400 gpm	2010
FLARE3	FLARE3	011-01	Emergency and Maintenance Flare	94,000 lb/hr	2010
Vent	N/A	014-01	Diesel Fuel Storage Tank associated with Fire Pump 007-01	290 Gallons	2010
Vent	N/A	014-02	Diesel Fuel Storage Tank associated with Fire Pump 007-02	290 Gallons	2010
Units that have been removed:					
Vent	N/A	014-03	Methanol Storage Tank for De-icing	500 Gallons	2010
New units (updates) to equipment list:					
TK07	N/A	TK08	Horizontal Aboveground Lube Oil Tank	1,500 Gallons	2010
TK08	Pressure Tank	TK09	Horizontal Aboveground Drip/Condensate Tank	30,000 Gallons	2010
TK09	N/A	TK10	Horizontal Aboveground Used Oil Tank	150 Gallons	2010
TK10	N/A	TK11	Horizontal Aboveground Used Oil Tank	2,000 Gallons	2010
TK11	N/A	TK12	Vertical Aboveground Waste Water Tank	8,400 Gallons	2010
TK12	N/A	TK13	Horizontal Aboveground Methanol Tank	174 Gallons	2010
TK13	N/A	TK14	Horizontal Aboveground Lube Oil Tank	85 Gallons	2010
TK14	N/A	TK15	Horizontal Aboveground Ethylene Glycol Tank	1,500 Gallons	2015

TK15	N/A	TK16	Horizontal Aboveground Ethylene Glycol Tank	1,500 Gallons	2010
TK16	N/A	TK17	Horizontal Aboveground Lube Oil Tank	500 Gallons	2015
TK17	N/A	TK18	Vertical Aboveground Fire Water Tank	211,000 Gallons	2010

[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
(LIGHTBURN 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:**
Clark	TLA-6	73736
Construction date:	**Installation date:**	**Modification date(s):**
	1964	N/A

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
2,000 hp

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
0.014 MMscf/hr	122.64 MMscf/yr	8,760 hrs/yr

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

Does this emission unit combust fuel? _X_Yes ___ No	**If yes, is it?** ___ Indirect Fired _X_Direct Fired
Maximum design heat input and/or maximum horsepower rating: 2,000 hp	**Type and Btu/hr rating of burners:** 14.0 MMBtu/hr

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

Pipeline quality natural gas
- Maximum hourly fuel usage = 0.014 MMscf/hr
- Maximum annual fuel usage = 122.64MMscf/yr

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

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

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	19.80	86.72
Nitrogen Oxides (NO_X)	95.20	416.98
Lead (Pb)	N/A	N/A
Particulate Matter ($PM_{2.5}$)	0.54	2.35
Particulate Matter (PM_{10})	0.54	2.35
Total Particulate Matter (TSP)	0.68	2.96
Sulfur Dioxide (SO_2)	0.01	0.04
Volatile Organic Compounds (VOC)	13.20	57.82
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Acetaldehyde	0.11	0.48
Acrolein	0.11	0.48
Benzene	0.03	0.12
Ethylbenzene	< 0.01	0.01
Formaldehyde	0.77	3.38
Hexane	0.01	0.03
Toluene	0.01	0.06
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, 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.

No applicable requirements.

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

____ Permit Shield

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

No applicable requirements.

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

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

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

ATTACHMENT E - Emission Unit Form
(LIGHTBURN 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:**
Clark	TLA-6	73737
Construction date:	**Installation date:**	**Modification date(s):**
	1964	N/A

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
2,000 hp

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
0.014 MMscf/hr	122.64 MMscf/yr	8,760 hrs/yr

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

Does this emission unit combust fuel? _X_Yes ___ No	**If yes, is it?** ___ Indirect Fired _X_Direct Fired
Maximum design heat input and/or maximum horsepower rating: 2,000 hp	**Type and Btu/hr rating of burners:** 14.0 MMBtu/hr

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

Pipeline quality natural gas
- Maximum hourly fuel usage = 0.014 MMscf/hr
- Maximum annual fuel usage = 122.64MMscf/yr

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

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

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	19.80	86.72
Nitrogen Oxides (NO_X)	95.20	416.98
Lead (Pb)	N/A	N/A
Particulate Matter ($PM_{2.5}$)	0.54	2.35
Particulate Matter (PM_{10})	0.54	2.35
Total Particulate Matter (TSP)	0.68	2.96
Sulfur Dioxide (SO_2)	0.01	0.04
Volatile Organic Compounds (VOC)	13.20	57.82
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Acetaldehyde	0.11	0.48
Acrolein	0.11	0.48
Benzene	0.03	0.12
Ethylbenzene	< 0.01	0.01
Formaldehyde	0.77	3.38
Hexane	0.01	0.03
Toluene	0.01	0.06
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, 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.

No applicable requirements.

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

____ Permit Shield

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

No applicable requirements.

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

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

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

ATTACHMENT E - Emission Unit Form
(LIGHTBURN 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	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:**
Clark	TCV-12	107523
Construction date:	**Installation date:**	**Modification date(s):**
	1968	N/A

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
4,000 hp

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
0.0274 MMscf/hr	240.02 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: 4,000 hp	**Type and Btu/hr rating of burners:** 27.4 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 = 0.0274 MMscf/hr
- Maximum annual fuel usage = 240.02 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)	41.40	181.33
Nitrogen Oxides (NO_X)	104.80	459.02
Lead (Pb)	N/A	N/A
Particulate Matter ($PM_{2.5}$)	1.05	4.61
Particulate Matter (PM_{10})	1.05	4.61
Total Particulate Matter (TSP)	1.32	5.80
Sulfur Dioxide (SO_2)	0.02	0.07
Volatile Organic Compounds (VOC)	21.40	93.73
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Acetaldehyde	0.21	0.93
Acrolein	0.21	0.93
Benzene	0.05	0.23
Ethylbenzene	< 0.01	0.01
Formaldehyde	1.51	6.62
Hexane	0.01	0.05
Toluene	0.03	0.12
Xylene	0.01	0.03
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.

No applicable requirements.

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

____ Permit Shield

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

No applicable requirements.

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

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

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

ATTACHMENT E - Emission Unit Form
(LIGHTBURN COMPRESSOR STATION)

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
001-04	EN04 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:**
Clark	TCV-12	107527
Construction date:	**Installation date:**	**Modification date(s):**
	1970	N/A

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
4,000 hp

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
0.0274 MMscf/hr	240.02 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: 4,000 hp	**Type and Btu/hr rating of burners:** 27.4 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 = 0.0274 MMscf/hr
- Maximum annual fuel usage = 240.02 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)	41.40	181.33
Nitrogen Oxides (NO_X)	104.80	459.02
Lead (Pb)	N/A	N/A
Particulate Matter ($PM_{2.5}$)	1.05	4.61
Particulate Matter (PM_{10})	1.05	4.61
Total Particulate Matter (TSP)	1.32	5.80
Sulfur Dioxide (SO_2)	0.02	0.07
Volatile Organic Compounds (VOC)	21.40	93.73
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Acetaldehyde	0.21	0.93
Acrolein	0.21	0.93
Benzene	0.05	0.23
Ethylbenzene	< 0.01	0.01
Formaldehyde	1.51	6.62
Hexane	0.01	0.05
Toluene	0.03	0.12
Xylene	0.01	0.03
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.

No applicable requirements.

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

____ Permit Shield

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

No applicable requirements.

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

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

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

ATTACHMENT E - Emission Unit Form
(LIGHTBURN COMPRESSOR STATION)

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
001-05	EN05 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:**
Clark	TCV-12	107528
Construction date:	**Installation date:**	**Modification date(s):**
	1970	N/A

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
4,000 hp

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
0.0274 MMscf/hr	240.02 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: 4,000 hp	**Type and Btu/hr rating of burners:** 27.4 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 = 0.0274 MMscf/hr
- Maximum annual fuel usage = 240.02 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)	41.40	181.33
Nitrogen Oxides (NO_X)	104.80	459.02
Lead (Pb)	N/A	N/A
Particulate Matter ($PM_{2.5}$)	1.05	4.61
Particulate Matter (PM_{10})	1.05	4.61
Total Particulate Matter (TSP)	1.32	5.80
Sulfur Dioxide (SO_2)	0.02	0.07
Volatile Organic Compounds (VOC)	21.40	93.73
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Acetaldehyde	0.21	0.93
Acrolein	0.21	0.93
Benzene	0.05	0.23
Ethylbenzene	< 0.01	0.01
Formaldehyde	1.51	6.62
Hexane	0.01	0.05
Toluene	0.03	0.12
Xylene	0.01	0.03
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.

No applicable requirements.

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

____ Permit Shield

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

No applicable requirements.

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

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

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

ATTACHMENT E - Emission Unit Form
(LIGHTBURN COMPRESSOR STATION)

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
001-06	EN06 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:**
Dresser Rand	TCVD-12	12TCVD102AP
Construction date:	**Installation date:**	**Modification date(s):**
	1993	N/A

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
6,060 hp

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
0.0353 MMscf/hr	309.23 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: 6,060 hp	**Type and Btu/hr rating of burners:** 35.3 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 = 0.0353 MMscf/hr
- Maximum annual fuel usage = 309.23 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)	38.7	169.51
Nitrogen Oxides (NO_X)	26.7	116.95
Lead (Pb)	N/A	N/A
Particulate Matter ($PM_{2.5}$)	1.36	5.94
Particulate Matter (PM_{10})	1.36	5.94
Total Particulate Matter (TSP)	1.71	7.47
Sulfur Dioxide (SO_2)	0.02	0.09
Volatile Organic Compounds (VOC)	11.0	48.18
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Acetaldehyde	0.27	1.20
Acrolein	0.28	1.20
Benzene	0.07	0.30
Ethylbenzene	< 0.01	0.02
Formaldehyde	1.95	8.53
Hexane	0.02	0.07
Toluene	0.03	0.15
Xylene	0.01	0.04
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 SO2 emission rates based on manufacturer specs.
- PM10, PM2.5, 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.

45 CSR 14 – Emission limits (TV 3.1.10; R14-0009 A.1)

No applicable NESHAP Subpart ZZZZ requirements.

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

____ Permit Shield

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

45 CSR 14 – Calculate monthly emissions of SO2 by the 15th day of the subsequent month on a 12-month rolling total (TV 3.2.1; R14-0009 B.5)
45 CSR 14 – Annual portable testing (TV 3.3.2; R14-0009 B.4)

No applicable NESHAP Subpart ZZZZ requirements.

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

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

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

ATTACHMENT E - Emission Unit Form
(LIGHTBURN COMPRESSOR STATION)

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
001-07	EN07 Reciprocating Engine/Integral Compressor	N/A

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

Natural gas fired reciprocating engine/integral compressor

Manufacturer:	**Model number:**	**Serial number:**
Dresser Rand	TCVD-12	12TCVD103AP
Construction date:	**Installation date:**	**Modification date(s):**
	1993	N/A

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
6,060 hp

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
0.0353 MMscf/hr	309.23 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: 6,060 hp	**Type and Btu/hr rating of burners:** 35.3 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 = 0.0353 MMscf/hr
- Maximum annual fuel usage = 309.23 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)	38.7	169.51
Nitrogen Oxides (NO_X)	26.7	116.95
Lead (Pb)	N/A	N/A
Particulate Matter ($PM_{2.5}$)	1.36	5.94
Particulate Matter (PM_{10})	1.36	5.94
Total Particulate Matter (TSP)	1.71	7.47
Sulfur Dioxide (SO_2)	0.02	0.09
Volatile Organic Compounds (VOC)	11.0	48.18
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Acetaldehyde	0.27	1.20
Acrolein	0.28	1.20
Benzene	0.07	0.30
Ethylbenzene	< 0.01	0.02
Formaldehyde	1.95	8.53
Hexane	0.02	0.07
Toluene	0.03	0.15
Xylene	0.01	0.04
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 SO2 emission rates based on manufacturer specs.
- PM10, PM2.5, 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.

45 CSR 14 – Emission limits (TV 3.1.11; R14-0009 A.2)

No applicable NESHAP Subpart ZZZZ requirements.

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

____ Permit Shield

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

45 CSR 14 – Calculate monthly emissions of SO2 by the 15th day of the subsequent month on a 12-month rolling total (TV 3.2.1; R14-0009 B.5)
45 CSR 14 – Annual portable testing (TV 3.3.2; R14-0009 B.4)

No applicable NESHAP Subpart ZZZZ requirements.

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

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

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

ATTACHMENT E - Emission Unit Form
(LIGHTBURN COMPRESSOR STATION)

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
002-02	AUX02 Emergency Generator	NA

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

Natural gas-fired emergency auxiliary generator

Manufacturer:	**Model number:**	**Serial number:**
Caterpillar	G3516	CTL00388
Construction date:	**Installation date:**	**Modification date(s):**
2002	2002	N/A

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
1,085 hp

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
7,607 scf/hr	10.19 MMscf/yr	1,340 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: 1,085 hp	**Type and Btu/hr rating of burners:** 7.61 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 = 7,607 scf/hr
- Maximum annual fuel usage = 10.19 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)	3.59	2.40
Nitrogen Oxides (NO_X)	4.78	3.21
Lead (Pb)	N/A	N/A
Particulate Matter ($PM_{2.5}$)	0.07	0.05
Particulate Matter (PM_{10})	0.07	0.05
Total Particulate Matter (TSP)	0.07	0.05
Sulfur Dioxide (SO_2)	< 0.01	< 0.01
Volatile Organic Compounds (VOC)	1.44	0.96
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Acetaldehyde	0.06	0.04
Acrolein	0.04	0.03
Benzene	< 0.01	< 0.01
Ethylbenzene	< 0.01	< 0.01
Formaldehyde	0.46	0.31
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.
- HAP emission factors based on AP-42 Section 3.2, Table 3.2-2.
- Formaldehyde, methanol, acrolein, PM10, and SO2 emission factors based on R14-0009 permit limits and calculation equation in Title V permit.

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 14 – Hourly limit of 1,340 hours per year (TV 3.1.9; R14-0009 A.6)
45 CSR 14 – Emission limits (TV 3.1.12; R14-0009 A.3)

No applicable NESHAP Subpart ZZZZ requirements.

Existing emergency stationary RICE with a rating of > 500 HP located at a major source of HAP emissions do not have to meet the requirements of 40 CFR 63 Subpart ZZZZ, including initial notification (63.6590(b)(3)(iii))

____ Permit Shield

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

45 CSR 30-5.1.c – Calculate annual emission of NOx, CO, VOC, formaldehyde, methanol, acrolein, PM10, and SO2 by using the given emission calculation equations, based on a 12-month rolling total (TV 3.2.2)
45 CSR 14 – Maintain monthly records of the hours of operation (TV 3.4.4; R14-0009 B.4)

No applicable NESHAP Subpart ZZZZ requirements.

Existing emergency stationary RICE with a rating of > 500 HP located at a major source of HAP emissions do not have to meet the requirements of 40 CFR 63 Subpart ZZZZ, including initial notification (63.6590(b)(3)(iii))

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
(LIGHTBURN COMPRESSOR STATION)

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
005-01	BLR01 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	CB-700X-250-15ST	0L047769SC

Construction date:	**Installation date:**	**Modification date(s):**
	1969	N/A

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

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
0.0105 MMscf/hr	91.64 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: 10.461 MMBtu/hr	**Type and Btu/hr rating of burners:** 10.461 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 = 0.0105 MMscf/hr
- Maximum annual fuel usage = 91.64 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)	0.88	3.85
Nitrogen Oxides (NO_X)	1.05	4.58
Lead (Pb)	N/A	N/A
Particulate Matter ($PM_{2.5}$)	0.02	0.09
Particulate Matter (PM_{10})	0.02	0.09
Total Particulate Matter (TSP)	0.08	0.35
Sulfur Dioxide (SO_2)	0.01	0.03
Volatile Organic Compounds (VOC)	0.06	0.25
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% on a six minute block average (TV 4.1.1)
45 CSR 2-4.1.b – PM limit of 0.94 lb/hr (TV 4.1.2)
45 CSR 10-3.3.f – SO2 limit of 33.5 lb/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 13 – Compliance with TV 4.1.1 is demonstrated by a Method 9, if required.
45 CSR 2-8.3.c and 2A-7.1.a – Maintain records of the operating schedule and the quality and quantity of natural gas burned. Include the date and time of start-up and shutdown, and the quantity of fuel consumed on a monthly basis (TV 4.4.1)
40 CFR Part 63 NESHAP DDDDD – Operate and maintain the affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions (63.7500(a)(3))
40 CFR Part 63 NESHAP DDDDD – Conduct an annual tune-up. If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup. Inspections required as part of the tune-up may be delayed until the next scheduled shutdown if entry into a piece of process equipment or storage vessel is required to complete the inspection (63.7500(e) and 63.7540(a)(10))
40 CFR Part 63 NESHAP DDDDD – Submit the first Annual Compliance Status Report by 1/31/17. Report must cover the reporting period from January 1 to December 31 (63.7550(b)(1) - (3), (c)(1))
40 CFR Part 63 NESHAP DDDDD – Submit all subsequent Annual Notification of Compliance Status Reports (first report due 1/31/18). Report must cover the reporting period from January 1 to December 31 (63.7550(b)(1) - (3), (c)(1))
40 CFR Part 63 NESHAP DDDDD – Maintain records of (1) Initial Notification and supporting documentation (2) Notification of Compliance Status Report and supporting documentation (3) Compliance reports and supporting documentation (4) Records of the dates and results of each required boiler tune-up (5) Energy Assessment and supporting documentation (6) Records of the calendar date, time, occurrence and duration of each startup and shutdown (7) Records of the type(s) and amount(s) of fuels used during each startup and shutdown (63.7555)

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
(LIGHTBURN COMPRESSOR STATION)

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
005-02	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:**
Bryan Boilers	HE-RV550-W-FDG	97098
Construction date:	**Installation date:**	**Modification date(s):**
	2009	N/A

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

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
0.0055 MMscf/hr	48.18 MMscf/yr	8,760 hrs/yr

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

Does this emission unit combust fuel? _X__Yes ___ No	**If yes, is it?** ___ Indirect Fired _X__Direct Fired
Maximum design heat input and/or maximum horsepower rating: 5.5 MMBtu/hr	**Type and Btu/hr rating of burners:** 5.5 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 = 0.0055 MMscf/hr
- Maximum annual fuel usage = 48.18 MMscf/yr

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

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

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.46	2.02
Nitrogen Oxides (NO_X)	0.55	2.41
Lead (Pb)	N/A	N/A
Particulate Matter ($PM_{2.5}$)	0.03	0.14
Particulate Matter (PM_{10})	0.03	0.14
Total Particulate Matter (TSP)	0.04	0.18
Sulfur Dioxide (SO_2)	< 0.01	0.01
Volatile Organic Compounds (VOC)	0.03	0.13
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 2-3.1– Opacity limit of 10% on a six minute block average (TV 4.1.1)
45 CSR 14 – Emission limits (TV 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 – Compliance with TV 4.1.1 is demonstrated by a Method 9, if required.
40 CFR Part 63 NESHAP DDDDD – Operate and maintain the affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions (63.7500(a)(3))
40 CFR Part 63 NESHAP DDDDD – Conduct a tune-up every 2 years. If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup. Inspections required as part of the tune-up may be delayed until the next scheduled shutdown if entry into a piece of process equipment or storage vessel is required to complete the inspection (63.7500(e) and 63.7540(a)(10))
40 CFR Part 63 NESHAP DDDDD – Submit the first Biennial Compliance Status Report by 1/31/18. Report must cover the reporting period from January 1 to December 31 (63.7550(b)(1) - (3), (c)(1))
40 CFR Part 63 NESHAP DDDDD – Submit all subsequent Biennial Notification of Compliance Status Reports (first report due 1/31/20). Report must cover the reporting period from January 1 to December 31 (63.7550(b)(1) - (3), (c)(1))
40 CFR Part 63 NESHAP DDDDD – Maintain records of (1) Initial Notification and supporting documentation (2) Notification of Compliance Status Report and supporting documentation (3) Compliance reports and supporting documentation (4) Records of the dates and results of each required boiler tune-up (5) Energy Assessment and supporting documentation (6) Records of the calendar date, time, occurrence and duration of each startup and shutdown (7) Records of the type(s) and amount(s) of fuels used during each startup and shutdown (63.7555)

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
(LIGHTBURN COMPRESSOR STATION)

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
005-03	HTR01 Heater	N/A

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

Natural gas-fired fuel gas heater

Manufacturer:	**Model number:**	**Serial number:**
Natco	DWG.A-14724	IH-61350
Construction date:	**Installation date:**	**Modification date(s):**
	1967	N/A

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

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
0.0040 MMscf/hr	35.04 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: 4.0 MMBtu/hr	**Type and Btu/hr rating of burners:** 4.0 MMBtu/hr

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

Pipeline quality natural gas
- Maximum hourly fuel usage = 0.0040 MMscf/hr
- Maximum annual fuel usage = 35.04 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)	0.34	1.47
Nitrogen Oxides (NO_X)	0.40	1.75
Lead (Pb)	N/A	N/A
Particulate Matter ($PM_{2.5}$)	0.01	0.03
Particulate Matter (PM_{10})	0.01	0.03
Total Particulate Matter (TSP)	0.03	0.13
Sulfur Dioxide (SO_2)	< 0.01	0.01
Volatile Organic Compounds (VOC)	0.02	0.10
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Benzene	< 0.01	< 0.01
Formaldehyde	< 0.01	< 0.01
Hexane	0.01	0.03
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% on a six minute block average (TV 4.1.1)

____ Permit Shield

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

45 CSR 13 – Compliance with TV 4.1.1 is demonstrated by a Method 9, if required.
40 CFR Part 63 NESHAP DDDDD – Operate and maintain the affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions (63.7500(a)(3))
40 CFR Part 63 NESHAP DDDDD – Conduct a tune-up every 5 years. If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup. Inspections required as part of the tune-up may be delayed until the next scheduled shutdown if entry into a piece of process equipment or storage vessel is required to complete the inspection (63.7500(e) and 63.7540(a)(10))
40 CFR Part 63 NESHAP DDDDD – Submit the first 5 year Compliance Status Report by 1/31/21. Report must cover the reporting period from January 1 to December 31 (63.7550(b)(1) - (3), (c)(1))
40 CFR Part 63 NESHAP DDDDD – Submit all subsequent 5 year Notification of Compliance Status Reports (first report due 1/31/26). Report must cover the reporting period from January 1 to December 31 (63.7550(b)(1) - (3), (c)(1))
40 CFR Part 63 NESHAP DDDDD – Maintain records of (1) Initial Notification and supporting documentation (2) Notification of Compliance Status Report and supporting documentation (3) Compliance reports and supporting documentation (4) Records of the dates and results of each required boiler tune-up (5) Energy Assessment and supporting documentation (6) Records of the calendar date, time, occurrence and duration of each startup and shutdown (7) Records of the type(s) and amount(s) of fuels used during each startup and shutdown (63.7555)

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
(LIGHTBURN COMPRESSOR STATION)

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
004-01	DEHY01 Glycol Dehydration Unit	F1 Enclosed Combustion Device

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

Dehydration unit still column

Manufacturer:	**Model number:**	**Serial number:**
NATCO	SB40/24-24	

Construction date:	**Installation date:**	**Modification date(s):**
	1967	N/A

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

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
600 MMscf/day (daily)	219,000 MMscf/yr	8,760 hrs/yr

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

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

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

Natural gas
- Maximum daily wet gas throughput = 600 MMscf/day
- Maximum annual wet gas throughput = 219,000 MMscf/yr

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

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

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	N/A	N/A
Nitrogen Oxides (NO_X)	N/A	N/A
Lead (Pb)	N/A	N/A
Particulate Matter ($PM_{2.5}$)	N/A	N/A
Particulate Matter (PM_{10})	N/A	N/A
Total Particulate Matter (TSP)	N/A	N/A
Sulfur Dioxide (SO_2)	N/A	N/A
Volatile Organic Compounds (VOC)	0.27	1.17
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Benzene	0.01	0.04
Ethylbenzene	0.02	0.08
n-Hexane	< 0.01	0.01
Toluene	0.01	0.06
Xylenes	0.03	0.12
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

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

Applicable Requirements

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

45 CSR 34 – The facility is subject to NESHAP Subpart HHH (TV 5.1.8)

____ 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 HHH - Operate and maintain any affect source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices or minimizing emissions (63.1274(h))
40 CFR Part 63 Subpart HHH - Install and operate a monitoring instrument that directly measures natural gas flow rate to the glycol dehydration unit with an accuracy of +/- 2% or better. Calculate annual average daily natural gas throughput through the dehydration unit (63.1271, 63.1282(a)(1), and 63.1275(b)(1)(iii))
40 CFR Part 63 Subpart HHH - Determine actual average benzene or BTEX emissions using GRI-GLYCalc Version 3.0 or higher. Inputs to the model shall be representative of actual operating conditions of the glycol dehydration unit. Emissions shall be determined uncontrolled or with federally enforceable controls in place (63.1271 and 63.1282(a)(2)(i))
40 CFR Part 63 Subpart HHH – Malfunction reporting for the dehydration unit (63.1284(f), 63.1274(h), and 63.1285(b)(6))
40 CFR Part 63 Subpart HHH – Determine dehydration unit baseline operations that are representative of the unit as of August 23, 2011 and retain records. Parameter values to include (but not limited to) glycol circulation rate or glycol-HAP absorbency (63.1281(e), 63.1271, and 63.1284(b)(9))
40 CFR Part 63 Subpart HHH – Submit semi-annual reports (63.1285(b)(5) and 63.1285(b)(6))
40 CFR Part 63 Subpart HHH – Conduct an annual inspection to demonstrate that the closed-vent system operates with no detectable emissions (LDAR program). The procedure shall be conducted in accordance with Method 21, 40 CFR part 60, appendix A (63.1282(b) and 63.1283(c))

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

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

ATTACHMENT E - Emission Unit Form
(LIGHTBURN COMPRESSOR STATION)

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
004-02	DEHY02 Glycol Dehydration Unit	F2 Enclosed Combustion Device

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

Dehydration unit still column

Manufacturer:	**Model number:**	**Serial number:**
NATCO	SB32/18-24	

Construction date:	**Installation date:**	**Modification date(s):**
	1994	N/A

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

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
600 MMscf/day (daily)	219,000 MMscf/yr	8,760 hrs/yr

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

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

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

Natural gas
- Maximum daily wet gas throughput = 600 MMscf/day
- Maximum annual wet gas throughput = 219,000 MMscf/yr

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

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

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	N/A	N/A
Nitrogen Oxides (NO_X)	N/A	N/A
Lead (Pb)	N/A	N/A
Particulate Matter ($PM_{2.5}$)	N/A	N/A
Particulate Matter (PM_{10})	N/A	N/A
Total Particulate Matter (TSP)	N/A	N/A
Sulfur Dioxide (SO_2)	N/A	N/A
Volatile Organic Compounds (VOC)	0.28	1.22
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Benzene	0.01	0.04
Ethylbenzene	0.02	0.08
n-Hexane	< 0.01	0.01
Toluene	0.01	0.06
Xylenes	0.03	0.12
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

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

Applicable Requirements

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

45 CSR 34 – The facility is subject to NESHAP Subpart HHH (TV 5.1.8)

____ 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 HHH - Operate and maintain any affect source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices or minimizing emissions (63.1274(h))
40 CFR Part 63 Subpart HHH - Install and operate a monitoring instrument that directly measures natural gas flow rate to the glycol dehydration unit with an accuracy of +/- 2% or better. Calculate annual average daily natural gas throughput through the dehydration unit (63.1271, 63.1282(a)(1), and 63.1275(b)(1)(iii))
40 CFR Part 63 Subpart HHH - Determine actual average benzene or BTEX emissions using GRI-GLYCalc Version 3.0 or higher. Inputs to the model shall be representative of actual operating conditions of the glycol dehydration unit. Emissions shall be determined uncontrolled or with federally enforceable controls in place (63.1271 and 63.1282(a)(2)(i))
40 CFR Part 63 Subpart HHH – Malfunction reporting for the dehydration unit (63.1284(f), 63.1274(h), and 63.1285(b)(6))
40 CFR Part 63 Subpart HHH – Determine dehydration unit baseline operations that are representative of the unit as of August 23, 2011 and retain records. Parameter values to include (but not limited to) glycol circulation rate or glycol-HAP absorbency (63.1281(e), 63.1271, and 63.1284(b)(9))
40 CFR Part 63 Subpart HHH – Submit semi-annual reports (63.1285(b)(5) and 63.1285(b)(6))
40 CFR Part 63 Subpart HHH – Conduct an annual inspection to demonstrate that the closed-vent system operates with no detectable emissions (LDAR program). The procedure shall be conducted in accordance with Method 21, 40 CFR part 60, appendix A (63.1282(b) and 63.1283(c))

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

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

ATTACHMENT E - Emission Unit Form
(LIGHTBURN COMPRESSOR STATION)

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
005-04	RBR01 Reboiler	N/A

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

Natural gas-fired reboiler

Manufacturer:	**Model number:**	**Serial number:**
NATCO	5GR-2000	

Construction date:	**Installation date:**	**Modification date(s):**
	1967	N/A

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

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
2,290 cf/hr	20.06 MMscf/yr	8,760 hrs/yr

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

Does this emission unit combust fuel? _X_Yes ___ No	**If yes, is it?** ___ Indirect Fired _X_Direct Fired
Maximum design heat input and/or maximum horsepower rating: 2.29 MMBtu/hr	**Type and Btu/hr rating of burners:** 2.29 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 = 2,290 cf/hr
- Maximum annual fuel usage = 20.06 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)	0.19	0.84
Nitrogen Oxides (NO_X)	0.23	1.00
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)	0.02	0.08
Sulfur Dioxide (SO_2)	< 0.01	0.01
Volatile Organic Compounds (VOC)	0.01	0.06
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Benzene	< 0.01	< 0.01
Formaldehyde	< 0.01	< 0.01
n-Hexane	< 0.01	0.02
Naphthalene	< 0.01	< 0.01
Toluene	< 0.01	<0.01
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

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

Applicable Requirements

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

45 CSR 2-3.1– Opacity limit of 10% on a six minute block average (TV 4.1.1)

____ Permit Shield

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

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

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

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

ATTACHMENT E - Emission Unit Form
(LIGHTBURN COMPRESSOR STATION)

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
005-05	RBR02 Reboiler	N/A

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

Natural gas-fired reboiler

Manufacturer:	**Model number:**	**Serial number:**
NATCO	5B32/18-24	

Construction date:	**Installation date:**	**Modification date(s):**
	1994	N/A

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

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
3,330 cf/hr	29.17 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: 3.33 MMBtu/hr	**Type and Btu/hr rating of burners:** 3.33 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 = 3,330 cf/hr
- Maximum annual fuel usage = 29.17 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)	0.50	2.19
Nitrogen Oxides (NO_X)	0.27	1.17
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)	0.01	0.04
Sulfur Dioxide (SO_2)	< 0.01	0.01
Volatile Organic Compounds (VOC)	0.17	0.73
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Benzene	< 0.01	< 0.01
Formaldehyde	< 0.01	< 0.01
n-Hexane	0.01	0.03
Naphthalene	< 0.01	< 0.01
Toluene	< 0.01	<0.01
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

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

Applicable Requirements

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

45 CSR 2-3.1– Opacity limit of 10% on a six minute block average (TV 4.1.1)
45 CSR 14 – Emission limits (TV 4.1.4; R14-0009 A.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 TV 4.1.1 is demonstrated by a Method 9, if required.

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

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

ATTACHMENT E - Emission Unit Form
(LIGHTBURN COMPRESSOR STATION)

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
0003	F1 Enclosed Combustion Device	N/A

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

Dehydration Unit Control Device

Manufacturer:	**Model number:**	**Serial number:**
Questor (QTI)	Q250	
Construction date:	**Installation date:**	**Modification date(s):**
	2014	N/A

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
Combustor Rating: 539.5 scf/min
Pilot Burner: 0.50 MMBtu/hr

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Fuel to pilot flame: 50 scf/hr	Fuel to pilot flame: 0.438 MMscf/yr	8760 hrs/yr

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

Does this emission unit combust fuel? _X__Yes ___ No	**If yes, is it?** ___ Indirect Fired _X_Direct Fired
Maximum design heat input and/or maximum horsepower rating: Combustor Rating: 539.5 scf/min Pilot Burner: 0.50 MMBtu/hr	**Type and Btu/hr rating of burners:** Combustor Rating: 539.5 scf/min Pilot Burner: 0.50 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 to pilot throughput = 50 scf/hr
- Maximum annual fuel to pilot throughput = 0.438 MMscf/yr

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

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

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.56	2.44
Nitrogen Oxides (NO_X)	0.66	2.90
Lead (Pb)	N/A	N/A
Particulate Matter ($PM_{2.5}$)	0.87	3.83
Particulate Matter (PM_{10})	0.87	3.83
Total Particulate Matter (TSP)	0.87	3.83
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.).

Pilot:

- PM, SO2 and VOC emission factors based on AP-42, Section 1.4, Natural Gas Combustion, Table 1.4-2, 7/98.
- HAP emission factors based on AP-42, Section 1.4, Natural Gas Combustion, Table 1.4-3, 7/98.

Combustor:

- NOx and CO emission rates based on vendor specifications: maximum flowrate = 776.9 Mscf/day; waste to fuel gas ratio of 1:0.11.
- PM emission factor based on AP-42, Section 13.5, Industrial Flares, Table 13.5-1 for soot, assuming lightly smoking flare (40 ug/L). According to May 2011 Emission Estimation Protocol for Petroleum Regineries, approved by the US EPA on March 28, 2011, 40 ug/L is equivalent to 0.027 lb/MMBtu, assuming 3% O2 in exhaust gas stream.

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
(LIGHTBURN COMPRESSOR STATION)

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
0004	F2 Enclosed Combustion Device	N/A

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

Dehydration Unit Control Device

Manufacturer:	**Model number:**	**Serial number:**
Questor (QTI)	Q250	
Construction date:	**Installation date:**	**Modification date(s):**
	2014	N/A

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
Combustor Rating: 539.5 scf/min
Pilot Burner: 0.50 MMBtu/hr

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Fuel to pilot flame: 50 scf/hr	Fuel to pilot flame: 0.438 MMscf/yr	8760 hrs/yr

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

Does this emission unit combust fuel? _X__Yes ___ No	**If yes, is it?** ___ Indirect Fired _X_Direct Fired
Maximum design heat input and/or maximum horsepower rating: Combustor Rating: 539.5 scf/min Pilot Burner: 0.50 MMBtu/hr	**Type and Btu/hr rating of burners:** Combustor Rating: 539.5 scf/min Pilot Burner: 0.50 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 to pilot throughput = 50 scf/hr
- Maximum annual fuel to pilot throughput = 0.438 MMscf/yr

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

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

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.53	2.31
Nitrogen Oxides (NO_X)	0.63	2.76
Lead (Pb)	N/A	N/A
Particulate Matter ($PM_{2.5}$)	0.87	3.83
Particulate Matter (PM_{10})	0.87	3.83
Total Particulate Matter (TSP)	0.87	3.83
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.).

Pilot:

- PM, SO2 and VOC emission factors based on AP-42, Section 1.4, Natural Gas Combustion, Table 1.4-2, 7/98.
- HAP emission factors based on AP-42, Section 1.4, Natural Gas Combustion, Table 1.4-3, 7/98.

Combustor:

- NOx and CO emission rates based on vendor specifications: maximum flowrate = 776.9 Mscf/day; waste to fuel gas ratio of 1:0.11.
- PM emission factor based on AP-42, Section 13.5, Industrial Flares, Table 13.5-1 for soot, assuming lightly smoking flare (40 ug/L). According to May 2011 Emission Estimation Protocol for Petroleum Regineries, approved by the US EPA on March 28, 2011, 40 ug/L is equivalent to 0.027 lb/MMBtu, assuming 3% O2 in exhaust gas stream.

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
(LIGHTBURN EXTRACTION PLANT)

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
006-01	EN08 Reciprocating Engine/Integral Compressor	CC1

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	3612	BKE00552
Construction date:	**Installation date:**	**Modification date(s):**
	2010	N/A

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

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
27,512 cf/hr	241.01 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:** 27.51 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 = 27,512 cf/hr
- Maximum annual fuel usage = 241.01 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)	1.64	7.20
Nitrogen Oxides (NO_X)	3.91	17.14
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	1.20
Sulfur Dioxide (SO_2)	0.02	0.07
Volatile Organic Compounds (VOC)	2.35	10.28
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Acetaldehyde	0.23	1.01
Acrolein	0.14	0.62
Benzene	0.01	0.05
Ethylbenzene	< 0.01	0.01
Formaldehyde	0.80	3.51
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.
- PM, 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 7.1.1; R13-2823D 5.1.1)
45 CSR 13 – Emission limits (TV 7.1.2; R13-2823D 5.1.2)
45 CSR 13 and 16 and 40 CFR Part 60 Subpart JJJJ – NSPS Subpart JJJJ applicability (TV 7.1.22; R13-2823D 12.1.1) 45 CSR 13 and 16 and 40 CFR Part 60 Subpart JJJJ – NSPS Subpart JJJJ exemption for national security (TV 7.1.23; R13-2823D 12.1.3)
45 CSR 13 and 16 and 40 CFR Part 60 Subpart JJJJ – NSPS Subpart JJJJ emission limits (TV 7.1.24; R13-2823D 12.2.1)
45 CSR 13 and 16 and 40 CFR Part 60 Subpart JJJJ – When testing, meet the standards applicable to field testing (TV 7.1.25; R13-2823D 12.2.2)
45 CSR 13 and 16 and 40 CFR Part 60 Subpart JJJJ – Maintain the NSPS Subpart JJJJ standards over the entire life of the engine (TV 7.1.26; R13-2823D 12.2.3)
45 CSR 13 and 16 and 40 CFR Part 60 Subpart JJJJ – Meet applicable requirements in 60.433 (TV 7.1.27; R13-2823D 12.3.1)
45 CSR 13 and 16 and 40 CFR Part 60 Subpart JJJJ – Requirements of 60.4236 do not apply to owners/operators that have been modified or reconstructed, or removed from one existing location and reinstalled at a new location (TV 7.1.28; R13-2823D 12.3.2)
45 CSR 13 and 16 and 40 CFR Part 60 Subpart JJJJ – Purchase a non-certified engine (TV 7.1.29; R13-2823D 12.4.1)
45 CSR 13 and 16 and 40 CFR Part 60 Subpart JJJJ – Can use propane up to 100 hours per year (TV 7.1.30; R13-2823D 12.4.2)
45 CSR 13 and 16 and 40 CFR Part 60 Subpart JJJJ – The air-to-fuel ratio (AFR) controllers will be used with the operation of the 3-way catalyst/NSCR (TV 7.1.31; R13-2823D 12.4.3)
40 CFR Part 63 Subpart ZZZZ – Meeting NSPS Subpart JJJJ meets NESHAP Subpart ZZZZ requirements (TV 7.1.38)

____ 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 Subpart JJJJ –Demonstrate compliance by keeping a maintenance plan and records of conducted maintenance, and test the engine every 8,760 hours or 3 years, whichever comes first (TV 7.1.29 and 7.3.10; R13-2823D 12.4.1)
45 CSR 13 and 16 and 40 CFR Part 60 Subpart JJJJ – The AFR controller must be maintained and operated appropriately (TV 7.1.31; R13-2823D 12.4.3)
45 CSR 13 and 16 and 40 CFR Part 60 Subpart JJJJ – NSPS Subpart JJJJ testing procedures (TV 7.3.9; R13-2823D 12.5.1)
45 CSR 13 and 30.5.1.c – Maintain records of the amount of fuel consumed and hours of operation per calendar month on a rolling 12-month basis (TV 7.4.1; R13-2823D Section 5.2)
45 CSR 13 and 16 and 40 CFR Part 60 Subpart JJJJ – NSPS Subpart JJJJ recordkeeping and notification requirements (TV 7.4.8; R13-2823D 12.6.1)

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
(LIGHTBURN EXTRACTION PLANT)

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
006-02	EN09 Reciprocating Engine/Integral Compressor	CC2

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	3612	BKE00547
Construction date:	**Installation date:**	**Modification date(s):**
	2010	N/A

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

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
27,512 cf/hr	241.01 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:** 27.51 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 = 27,512 cf/hr
- Maximum annual fuel usage = 241.01 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)	1.64	7.20
Nitrogen Oxides (NO_X)	3.91	17.14
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	1.20
Sulfur Dioxide (SO_2)	0.02	0.07
Volatile Organic Compounds (VOC)	2.35	10.28
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Acetaldehyde	0.23	1.01
Acrolein	0.14	0.62
Benzene	0.01	0.05
Ethylbenzene	< 0.01	0.01
Formaldehyde	0.80	3.51
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.
- PM, 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 7.1.1; R13-2823D 5.1.1)
45 CSR 13 – Emission limits (TV 7.1.2; R13-2823D 5.1.2)
45 CSR 13 and 16 and 40 CFR Part 60 Subpart JJJJ – NSPS Subpart JJJJ applicability (TV 7.1.22; R13-2823D 12.1.1) 45 CSR 13 and 16 and 40 CFR Part 60 Subpart JJJJ – NSPS Subpart JJJJ exemption for national security (TV 7.1.23; R13-2823D 12.1.3)
45 CSR 13 and 16 and 40 CFR Part 60 Subpart JJJJ – NSPS Subpart JJJJ emission limits (TV 7.1.24; R13-2823D 12.2.1)
45 CSR 13 and 16 and 40 CFR Part 60 Subpart JJJJ – When testing, meet the standards applicable to field testing (TV 7.1.25; R13-2823D 12.2.2)
45 CSR 13 and 16 and 40 CFR Part 60 Subpart JJJJ – Maintain the NSPS Subpart JJJJ standards over the entire life of the engine (TV 7.1.26; R13-2823D 12.2.3)
45 CSR 13 and 16 and 40 CFR Part 60 Subpart JJJJ – Meet applicable requirements in 60.433 (TV 7.1.27; R13-2823D 12.3.1)
45 CSR 13 and 16 and 40 CFR Part 60 Subpart JJJJ – Requirements of 60.4236 do not apply to owners/operators that have been modified or reconstructed, or removed from one existing location and reinstalled at a new location (TV 7.1.28; R13-2823D 12.3.2)
45 CSR 13 and 16 and 40 CFR Part 60 Subpart JJJJ – Purchase a non-certified engine (TV 7.1.29; R13-2823D 12.4.1)
45 CSR 13 and 16 and 40 CFR Part 60 Subpart JJJJ – Can use propane up to 100 hours per year (TV 7.1.30; R13-2823D 12.4.2)
45 CSR 13 and 16 and 40 CFR Part 60 Subpart JJJJ – The air-to-fuel ratio (AFR) controllers will be used with the operation of the 3-way catalyst/NSCR (TV 7.1.31; R13-2823D 12.4.3)
40 CFR Part 63 Subpart ZZZZ – Meeting NSPS Subpart JJJJ meets NESHAP Subpart ZZZZ requirements (TV 7.1.38)

____ 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 Subpart JJJJ –Demonstrate compliance by keeping a maintenance plan and records of conducted maintenance, and test the engine every 8,760 hours or 3 years, whichever comes first (TV 7.1.29 and 7.3.10; R13-2823D 12.4.1)
45 CSR 13 and 16 and 40 CFR Part 60 Subpart JJJJ – The AFR controller must be maintained and operated appropriately (TV 7.1.31; R13-2823D 12.4.3)
45 CSR 13 and 16 and 40 CFR Part 60 Subpart JJJJ – NSPS Subpart JJJJ testing procedures (TV 7.3.9; R13-2823D 12.5.1)
45 CSR 13 and 30.5.1.c – Maintain records of the amount of fuel consumed and hours of operation per calendar month on a rolling 12-month basis (TV 7.4.1; R13-2823D Section 5.2)
45 CSR 13 and 16 and 40 CFR Part 60 Subpart JJJJ – NSPS Subpart JJJJ recordkeeping and notification requirements (TV 7.4.8; R13-2823D 12.6.1)

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
(LIGHTBURN EXTRACTION PLANT)

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
007-01	EN10 Emergency Fire Pump Engine	N/A

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

Diesel emergency fire pump engine

Manufacturer:	**Model number:**	**Serial number:**
John Deere	JU6H-UF54	
Construction date:	**Installation date:**	**Modification date(s):**
4/2010	2010	N/A

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

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
13.3 gal/hr	6,650 gal/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: 216 hp	**Type and Btu/hr rating of burners:** 1.82 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 = 13.3 gal/hr
- Maximum annual fuel usage = 6,650 gal/yr

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

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Diesel	15 ppm	N/A	137,030 Btu/gal

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.47	0.12
Nitrogen Oxides (NO_X)	2.07	0.52
Lead (Pb)	N/A	N/A
Particulate Matter ($PM_{2.5}$)	0.11	0.03
Particulate Matter (PM_{10})	0.11	0.03
Total Particulate Matter (TSP)	0.11	0.03
Sulfur Dioxide (SO_2)	< 0.01	< 0.01
Volatile Organic Compounds (VOC)	0.08	0.02
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Acetaldehyde	< 0.01	< 0.01
Acrolein	< 0.01	< 0.01
Benzene	< 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.).

- CO, NOx, VOC, and PM emission rates based on manufacturer specs.
- SO2 emission factor based on AP-42 Table 3.4-1 dated 10/96 (0.00809*sulfur content*hp rating)
- HAP emission factors based on AP-42 Tables 3.4-3,4 dated 10/96
- Assume PM = PM10 = PM 2.5

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 7.1.3; R13-2823D 5.1.3)
45 CSR 13 – Emission limits (TV 7.1.4; R13-2823D 5.1.4)
45 CSR 13 – Hourly limit of 500 hours per year based on a 12-month rolling total (TV 7.1.5; R13-2823D 11.1.1)
45 CSR 13 – Shall not receive, store, or burn of fire any recycled or used oil which is considered a hazardous waste or does not meet the used oil specifications (TV 7.1.6; R13-2823D 11.1.2)
45 CSR 13 and 16 and 40 CFR Part 60 Subpart IIII – NSPS Subpart IIII emission limits (TV 7.1.7; R13-2823 11.1.3)
45 CSR 13 and 16 and 40 CFR Part 60 Subpart IIII – Meet NSPS Subpart IIII emission standards according to the manufacturer's written instructions or procedures developed by the owner/operator that are approved by the engine manufacturer, over the entire life of the engine (TV 7.1.8; R13-2823 11.1.4)
45 CSR 13 and 16 and 40 CFR Part 60 Subpart IIII – Meet diesel fuel requirements of 15 ppm sulfur (TV 7.1.10; R13-2823 11.1.6)
45 CSR 13 and 16 and 40 CFR Part 60 Subpart IIII – NSPS Subpart IIII fuel requirements for non-compliant fuel (TV 7.1.11; R13-2823 11.1.7)
45 CSR 13 and 16 and 40 CFR Part 60 Subpart IIII – Definition of emergency operation. The unit can operate up to 100 hours per year for required maintenance and testing (TV 7.1.21; R13-2823 11.1.17)
40 CFR Part 63 Subpart ZZZZ – Meeting NSPS Subpart JJJJ meets NESHAP Subpart ZZZZ requirements (TV 7.1.38)
45 CSR 13 and 16 and 40 CFR Part 60 Subpart IIII – Exhaust emissions must not exceed the not-to-exceed (NTE) standards for the same model year and maximum engine power (TV 7.3.4 and 7.3.5; R13-2823 11.2.6 and 11.2.7)

____ 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 Subpart IIII – Install a non-resettable hour meter (TV 7.1.16; R13-2823 11.1.12)
45 CSR 13 and 16 and 40 CFR Part 60 Subpart IIII – Maintain the unit according to the manufacturer's written instructions or procedures developed by the owner/operator that are approved by the engine manufacturer (TV 7.1.18; R13-2823 11.1.14)
45 CSR 13 and 16 and 40 CFR Part 60 Subpart IIII – Purchase a certified engine (TV 7.1.19; R13-2823 11.1.15)
45 CSR 13 and 30.5.1.c – Maintain records of the amount of fuel consumed and hours of operation per calendar month on a rolling 12-month basis (TV 7.4.1; R13-2823D Section 5.2)
45 CSR 13 – Maintain maintenance records relating to failure and/or repair of fire pump (TV 7.4.3; R13-2823D 11.3.3)
45 CSR 13 and 16 and 40 CFR Part 60 Subpart IIII – Keep records of emergency vs. non-emergency hours of operation from the non-resettable hour meter. Record the time of operation and the reason the engine was in operation (TV 7.4.6; R13-2823 11.3.7)

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
(LIGHTBURN EXTRACTION PLANT)

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
007-02	EN11 Emergency Fire Pump Engine	N/A

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

Diesel emergency fire pump engine

Manufacturer:	**Model number:**	**Serial number:**
John Deere	JU6H-UF54	
Construction date:	**Installation date:**	**Modification date(s):**
4/2010	2010	N/A

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

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
13.3 gal/hr	6,650 gal/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: 216 hp	**Type and Btu/hr rating of burners:** 1.82 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 = 13.3 gal/hr
- Maximum annual fuel usage = 6,650 gal/yr

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

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Diesel	15 ppm	N/A	137,030 Btu/gal

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.47	0.12
Nitrogen Oxides (NO_X)	2.07	0.52
Lead (Pb)	N/A	N/A
Particulate Matter ($PM_{2.5}$)	0.11	0.03
Particulate Matter (PM_{10})	0.11	0.03
Total Particulate Matter (TSP)	0.11	0.03
Sulfur Dioxide (SO_2)	< 0.01	< 0.01
Volatile Organic Compounds (VOC)	0.08	0.02
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Acetaldehyde	< 0.01	< 0.01
Acrolein	< 0.01	< 0.01
Benzene	< 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.).

- CO, NOx, VOC, and PM emission rates based on manufacturer specs.
- SO2 emission factor based on AP-42 Table 3.4-1 dated 10/96 (0.00809*sulfur content*hp rating)
- HAP emission factors based on AP-42 Tables 3.4-3,4 dated 10/96
- Assume PM = PM10 = PM 2.5

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 7.1.3; R13-2823D 5.1.3)
45 CSR 13 – Emission limits (TV 7.1.4; R13-2823D 5.1.4)
45 CSR 13 – Hourly limit of 500 hours per year based on a 12-month rolling total (TV 7.1.5; R13-2823D 11.1.1)
45 CSR 13 – Shall not receive, store, or burn of fire any recycled or used oil which is considered a hazardous waste or does not meet the used oil specifications (TV 7.1.6; R13-2823D 11.1.2)
45 CSR 13 and 16 and 40 CFR Part 60 Subpart IIII – NSPS Subpart IIII emission limits (TV 7.1.7; R13-2823 11.1.3)
45 CSR 13 and 16 and 40 CFR Part 60 Subpart IIII – Meet NSPS Subpart IIII emission standards according to the manufacturer's written instructions or procedures developed by the owner/operator that are approved by the engine manufacturer, over the entire life of the engine (TV 7.1.8; R13-2823 11.1.4)
45 CSR 13 and 16 and 40 CFR Part 60 Subpart IIII – Meet diesel fuel requirements of 15 ppm sulfur (TV 7.1.10; R13-2823 11.1.6)
45 CSR 13 and 16 and 40 CFR Part 60 Subpart IIII – NSPS Subpart IIII fuel requirements for non-compliant fuel (TV 7.1.11; R13-2823 11.1.7)
45 CSR 13 and 16 and 40 CFR Part 60 Subpart IIII – Definition of emergency operation. The unit can operate up to 100 hours per year for required maintenance and testing (TV 7.1.21; R13-2823 11.1.17)
40 CFR Part 63 Subpart ZZZZ – Meeting NSPS Subpart JJJJ meets NESHAP Subpart ZZZZ requirements (TV 7.1.38)
45 CSR 13 and 16 and 40 CFR Part 60 Subpart IIII – Exhaust emissions must not exceed the not-to-exceed (NTE) standards for the same model year and maximum engine power (TV 7.3.4 and 7.3.5; R13-2823 11.2.6 and 11.2.7)

____ 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 Subpart IIII – Install a non-resettable hour meter (TV 7.1.16; R13-2823 11.1.12)
45 CSR 13 and 16 and 40 CFR Part 60 Subpart IIII – Maintain the unit according to the manufacturer's written instructions or procedures developed by the owner/operator that are approved by the engine manufacturer (TV 7.1.18; R13-2823 11.1.14)
45 CSR 13 and 16 and 40 CFR Part 60 Subpart IIII – Purchase a certified engine (TV 7.1.19; R13-2823 11.1.15)
45 CSR 13 and 30.5.1.c – Maintain records of the amount of fuel consumed and hours of operation per calendar month on a rolling 12-month basis (TV 7.4.1; R13-2823D Section 5.2)
45 CSR 13 – Maintain maintenance records relating to failure and/or repair of fire pump (TV 7.4.3; R13-2823D 11.3.3)
45 CSR 13 and 16 and 40 CFR Part 60 Subpart IIII – Keep records of emergency vs. non-emergency hours of operation from the non-resettable hour meter. Record the time of operation and the reason the engine was in operation (TV 7.4.6; R13-2823 11.3.7)

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
(LIGHTBURN EXTRACTION PLANT)

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
012-01	AUX03 Emergency Generator	Catalyst

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 / Ford	QT15068KNSY / G6.8L	6135974 / E172A2409102670245

Construction date:	**Installation date:**	**Modification date(s):**
10/2010	2011	N/A

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

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
2,061 scf/hr	1.03 MMscf/yr	500 hrs/yr

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

Does this emission unit combust fuel? _X__Yes ___ No	**If yes, is it?** ___ Indirect Fired _X__Direct Fired
Maximum design heat input and/or maximum horsepower rating: 254 hp	**Type and Btu/hr rating of burners:** 2.00 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 = 2,06 scf/hr
- Maximum annual fuel usage = 1.03 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)	0.85	0.21
Nitrogen Oxides (NO_X)	0.01	< 0.01
Lead (Pb)	N/A	N/A
Particulate Matter ($PM_{2.5}$)	0.02	0.01
Particulate Matter (PM_{10})	0.02	0.01
Total Particulate Matter (TSP)	0.04	0.01
Sulfur Dioxide (SO_2)	< 0.01	< 0.01
Volatile Organic Compounds (VOC)	0.07	0.02
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Acetaldehyde	0.01	< 0.01
Acrolein	0.01	< 0.01
Benzene	< 0.01	< 0.01
Ethylbenzene	< 0.01	< 0.01
Formaldehyde	0.04	0.01
Toluene	< 0.01	< 0.01
Xylene	< 0.01	< 0.01
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

- NOx, CO, and VOC data taken from engine manufacturer's technical data sheet
- PM, SO2, and HAP emissions calculated from AP-42, Section 3.2, Natural Gas-Fired Reciprocating Engines, Table 3.2-3, 7/00

Applicable Requirements

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

45 CSR 13 – Emission limits (TV 7.1.32; R13-2823D 13.1.1)
45 CSR 13 – Hourly limit of 500 hours per year based on a rolling 12 month basis (TV 7.1.33; R13-2823D 13.1.2)
45 CSR 13 and 16 and 40 CFR Part 60 Subpart JJJJ – Air-to-fuel ratio controllers must be maintained and operated to ensure proper operation and to minimize emissions (TV 7.1.34; R13-2823D 13.1.3)
45 CSR 16 and 40 CFR Part 60 Subpart JJJJ – NSPS Subpart JJJJ emission limits (TV 7.1.35; R13-2823D 13.1.3)
45 CSR 16 and 40 CFR Part 60 Subpart JJJJ – Purchase a certified engine (TV 7.1.36)
45 CSR 16 and 40 CFR Part 60 Subpart JJJJ – Definition of emergency operation. The unit can operate up to 100 hours per year for required maintenance and testing (TV 7.1.37)
40 CFR Part 63 Subpart ZZZZ – Meeting NSPS Subpart JJJJ meets NESHAP Subpart ZZZZ requirements (TV 7.1.38)

____ 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 Subpart JJJJ – Keep records of conducted maintenance (TV 7.1.36 and 7.4.10; R13-2823D 13.3.2)
45 CSR 13 – Monitor and record the number of hours the generator is operated each day (TV 7.4.9; R13-2823D 13.3.1)

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

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

ATTACHMENT E - Emission Unit Form
(LIGHTBURN EXTRATION PLANT)

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
008-01 thru 008-04	FLARE3 Storage tanks	Pressure tanks

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

Natural gas liquid storage tanks

Manufacturer:	**Model number:**	**Serial number:**

Construction date:	**Installation date:**	**Modification date(s):**
	2010	N/A

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
60,000 gal (each)

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
N/A	29,372,280 gal/yr combined	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: 400 gpm	**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.

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

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Benzene		
Formaldehyde		
n-Hexane		
Toluene		
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.).

Pressurized tanks = no emissions emitted

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 30-12.7 – Tank throughput limit of 34,399,200 gal/yr combined based on a 12-month rolling total (TV 8.1.1; R13-2823D 7.1.1)

____ Permit Shield

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

45 CSR 13 and 30-5.1.c – Maintain monthly records of the total aggregated throughput for the tanks (TV 8.4.1; R13-2823D 7.2.1)

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

(LIGHTBURN EXTRATION PLANT)

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
009-01, 009-02	FLARE3 Natural gas liquid loading racks (#1 and #2)	Vapor return to tank

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

Natural gas liquid loading racks (#1 and #2)

Manufacturer:	**Model number:**	**Serial number:**

Construction date:	**Installation date:**	**Modification date(s):**
	2010	N/A

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

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
N/A	34,399,200 gal/yr combined	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: 400 gpm	**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.

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

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)		
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Benzene		
Formaldehyde		
n-Hexane		
Toluene		
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.).

Vapor return to tank = no emissions

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 – Natural gas liquid throughput limit of 34,399,200 gal/yr combined based on a 12-month rolling total (TV 10.1.1; R13-2823D 9.1.1)
45 CSR 13 – Loading racks shall be operated in accordance with the plans and specifications filed in permit application R13-2823 (TV 10.1.2; R13-2823D 9.1.2)

____ Permit Shield

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

45 CSR 13 and 30-5.1.c – Maintain daily and monthly records of the total amount of natural gas liquids loaded by the loading racks (TV 10.4.1; R13-2823D 9.2.1)

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
(LIGHTBURN EXTRACTION PLANT)

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
011-01	FLARE3 Flare	N/A

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

Emergency and maintenance flare

Manufacturer:	**Model number:**	**Serial number:**
Zeeco	UFAA-16/30	

Construction date:	**Installation date:**	**Modification date(s):**
	2010	N/A

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
94,000 lb/hr

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Pilot: 65.0 scf/hr	Pilot: 0.569 MMscf/yr	8760 hrs/yr

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

Does this emission unit combust fuel? _X__Yes ___ No	**If yes, is it?** ___ Indirect Fired _X_Direct Fired
Maximum design heat input and/or maximum horsepower rating: 94,000 lb/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 to pilot throughput = 65.0 scf/hr
- Maximum annual fuel to pilot throughput = 0.569 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)	37.60	0.15
Nitrogen Oxides (NO_X)	8.25	0.08
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)	90.96	0.21
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Benzene	< 0.01	< 0.01
Formaldehyde	< 0.01	< 0.01
n-Hexane	0.34	< 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.).

Pilot:

- NOx, CO, PM, SO2, and VOC emission factors based on AP-42, Section 1.4, Natural Gas Combustion, Table 1.4-2, 7/98.
- HAP emission factors based on AP-42, Section 1.4, Natural Gas Combustion, Table 1.4-3, 7/98.

Combustor:

- NOx and CO emission factors based on AP-42, Section 13.5, Industrial Flares, Table 13.5-1 and 13.5-2, 12/16.
- PM emission factor is assumed to be 0 since it is a nonsmoking flare.
- VOC and HAP emission rate based on the volume of gas being sent to flare and their respective weight % in the gas.
- The controlled VOC and HAP emission rate based on the flare destruction efficiency of 98%.

Applicable Requirements

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

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

____ Permit Shield

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

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

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

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

ATTACHMENT E - Emission Unit Form
(LIGHTBURN EXTRACTION PLANT)

Emission Unit Description

Emission unit ID number:	**Emission unit name:** Non-Fractionating Process Plant	**List any control devices associated with this emission unit:**

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

Non-Fractionating Process Plant

Manufacturer:	**Model number:**	**Serial number:**
Construction date:	**Installation date:** 2010	**Modification date(s):** N/A

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

Maximum Hourly Throughput: 52 MMscf/day	**Maximum Annual Throughput:**	**Maximum Operating Schedule:** 8760 hrs/yr

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

Does this emission unit combust fuel? ___Yes ___ 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.

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

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

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)	N/A	N/A
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Benzene	N/A	N/A
Formaldehyde	N/A	N/A
n-Hexane	N/A	N/A
Toluene	N/A	N/A
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).		

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 – HAP emissions shall be less than 10 tons/yr of any single HAP or 25 tons/yr of any combination of HAP (TV 6.1.1; R13-2823D 4.1.2)
45 CSR 13 – Install, maintain, and operate all air pollution control equipment and associated monitoring equipment to minimize emissions (TV 6.1.2; R13-2823D 4.1.3)
45 CSR 13 – Maximum wet natural gas throughput limit of 52 MMscf/day (TV 9.1.1; R13-2823D 8.1.1)
45 CSR 13 – Comply with all applicable provisions of 40 CFR 60 Subpart KKK (TV 9.1.2; R13-2823D 8.1.2)
45 CSR 16 – May elect to comply with the requirements of 40 CFR 60.483-1 and 60.483-2 (TV 9.1.4)
45 CSR 16 – May apply to the Administer for permission to use an alternative means of emission limitation that achieves a reduction in emissions of VOC at least equivalent to that achieved by the controls required in Subpart KKK (TV 9.1.5)
45 CSR 16 – Comply with provisions 40 CFR 60.486 and 60.487 except as provided in 60.633, 60.635, and 60.636 of 40 CSR 60 Subpart KKK (TV 9.1.7)
45 CSR 16 - Each piece of equipment is presumed to be in VOC service or in wet gas service unless an owner or operator demonstrates that the piece of equipment is not in VOC service or in wet gas service (TV 9.1.8)
45 CSR 16 – Exceptions of 40 CFR Subpart KKK (TV 9.1.9)
45 CSR 16 – 40 CFR 60 Subpart KKK General Standards: (1) demonstrate compliance within 180 days of initial startup (2) compliance will be determined by review of records, reports, performance tests, and inspection (3) equipment that is in a vacuum service is excluded from the requirements of 60.482-2 to 60.482-10 if identified as required in 60.486(e)(5) (TV 9.1.10)
45 CSR 16 – 40 CFR 60 Subpart KKK standards for pumps in light liquid service (TV 9.1.11)
45 CSR 16 – 40 CFR 60 Subpart KKK standards for compressors (TV 9.1.12)
45 CSR 16 – 40 CFR 60 Subpart KKK standards for pressure relief devices in gas/vapor service (TV 9.1.13)
45 CSR 16 – 40 CFR 60 Subpart KKK standards for sampling connection systems (TV 9.1.14)
45 CSR 16 – 40 CFR 60 Subpart KKK standards for open-ended valves or lines (TV 9.1.15)
45 CSR 16 – 40 CFR 60 Subpart KKK standards for valves in gas/vapor service and in light liquid service (TV 9.1.16)
45 CSR 16 – 40 CFR 60 Subpart KKK standards for pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and connectors (TV 9.1.17)
45 CSR 16 – 40 CFR 60 Subpart KKK standards for delay or repair (TV 9.1.18)
45 CSR 16 – 40 CFR 60 Subpart KKK standards for closed vent systems and control devices (TV 9.1.19)

____ 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 – Records of malfunction of air pollution control equipment (TV 6.4.1; R13-2823D 4.1.4)
45 CSR 16 – 40 CFR 60 Subpart KKK test method procedures (TV 9.3.1)
45 CSR 13 and 30-5.1.c – Maintain monthly records of the amount of natural gas processed in the non-fractionating processing plant (TV 9.4.1; R13-2823D 8.2.1)
45 CSR 16 – 40 CFR 60 Subpart KKK recordkeeping requirements (TV 9.4.2)
45 CSR 16 – 40 CFR 60 Subpart VV recordkeeping requirements (TV 9.4.3)
45 CSR 30-5.1.c – Record the number of operating days for each calendar month (TV 9.4.4)
45 CSR 16 – 40 CFR 60 Subpart KKK reporting requirements (TV 9.5.1)
45 CSR 16 – 40 CFR 60 Subpart VV reporting requirements (TV 9.5.2)

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

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

Attachment G

Air Pollution Control Device Form

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: F1	**List all emission units associated with this control device.** DEHY01	
Manufacturer: Questor (QTI)	**Model number:** Q250	**Installation date:** 2014

Type of Air Pollution Control Device:

___ Baghouse/Fabric Filter
___ Carbon Bed Adsorber
___ Carbon Drum(s)
___ Catalytic Incinerator
___Thermal Incinerator
___ Wet Plate Electrostatic Precipitator
___ Venturi Scrubber
___ Packed Tower Scrubber
___ Other Wet Scrubber
___ Condenser
___ Flare
___ Multiclone
___ Single Cyclone
___ Cyclone Bank
___ Settling Chamber
_X__ Other (describe) _Enclosed Combustion Device
___ Dry Plate Electrostatic Precipitator

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

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

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).
QTI dehydration unit enclosed flare
539.5 scf/min combustor rating

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

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.** CAM does not apply to DEHY01 as pre-control emissions are not above major source thresholds for VOC and HAPs (per §64.2(a)(3)).

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

45 CSR 6-4.1 and 13– Particulate Matter emission limit (TV 5.1.1; R13-2823D 14.1.2)
45 CSR 6-4.3, 6-4.4, and 13 – Opacity limit of 20%, except smoke less than 40% opacity for a period(s) aggregating no more than 8 minutes per start-up (TV 5.1.2 and 5.1.3; R13-2823D 14.1.3 and 14.1.4)
45 CSR 6-4.5 – Incinerator particles in the open air requirements (TV 5.1.4)
45 CSR 6-4.6 – Incinerator odor prevention requirements (TV 5.1.5)
45 CSR 10-4.1 – Sulfur Dioxide emission limit (TV 5.1.6)
45 CSR 10-5.1 – Hydrogen Sulfide emission limit (TV 5.1.7)
45 CSR 34 and 40 CFR Part 63 NESHAP HHH – Subject to NESHAP Subpart HHH (TV 5.1.8)
45 CSR 13 – Meet a 95% control efficiency (TV 5.1.9; R13-2823D 14.1.1)
40 CFR Part 63 NESHAP HHH - Operate the flare in a manner consistent with safety and good air pollution control practices or minimizing emissions (63.1274(h))
40 CFR Part 63 NESHAP HHH - Operate with no visible emissions, except for periods not to exceed a total of 2 minutes during any hour (63.1282(h)(3))
40 CFR Part 63 NESHAP HHH - Install an enclosed combustion device (e.g., thermal vapor incinerator, catalytic vapor incinerator, boiler, or process heater) that is designed and operated to reduce the mass content of either TOC or total HAP in the gases vented to the device by 95.0% by weight or greater, as determined in accordance with the requirements of §63.1282(d) (63.1281(d)(1)(i)(A))
40 CFR Part 63 NESHAP HHH - Install a control device model that was tested by the device manufacturer that demonstrates the model achieves performance requirements (63.1282(g)). Must develop an inspection and maintenance plan (63.1283(b) and 63.1285(d)(1)(ii))

Monitoring
45 CSR 30-5.1.c – Annual inlet gas stream sampling for Sulfur Dioxide (TV 5.2.1)
45 CSR 30-5.1.c – Annual inlet gas stream sampling for Hydrogen Sulfide (TV 5.2.2)
45 CSR 30-5.1.c – Monthly visual emission checks (TV 5.2.3)
40 CFR Part 63 NESHAP HHH - Semi-annual inspections shall be conducted for the control device with maintenance and replacement of control device components made in accordance with the plan (63.1283(b) and 63.1285(d)(1)(ii))
40 CFR Part 63 NESHAP HHH - Install, calibrate, operate, and maintain a device equipped with a continuous recorder to measure the combustion temperature and pilot flame indicator for the control device (63.1282(e)(1), §63.1283(d)(3) and (5))
40 CFR Part 63 NESHAP HHH – Quarterly Method 22 with observation period of 1 hour (63.1282(h)(3))

Recordkeeping
45 CSR 30-5.1.c – Records of the monthly visual emission checks (TV 5.4.1)
40 CFR Part 63 NESHAP HHH – Recordkeeping requirements (63.1284)

Reporting
45 CSR 30-5.1.c – Reporting of Method 9 violations shall be reported within 10 calendar days of the occurrence (TV 5.5.1)
40 CFR Part 63 NESHAP HHH – Malfunction reporting (63.1284(f), 63.1274(h), and 63.1285(b)(6))

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: F2	**List all emission units associated with this control device.** DEHY02	
Manufacturer: Questor (QTI)	**Model number:** Q250	**Installation date:** 2014

Type of Air Pollution Control Device:

___ Baghouse/Fabric Filter
___ Carbon Bed Adsorber
___ Carbon Drum(s)
___ Catalytic Incinerator
___Thermal Incinerator
___ Wet Plate Electrostatic Precipitator
___ Venturi Scrubber
___ Packed Tower Scrubber
___ Other Wet Scrubber
___ Condenser
___ Flare
___ Multiclone
___ Single Cyclone
___ Cyclone Bank
___ Settling Chamber
_X__ Other (describe) _Enclosed Combustion Device
___ Dry Plate Electrostatic Precipitator

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

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

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).
QTI dehydration unit enclosed flare
539.5 scf/min combustor rating

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

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.** CAM does not apply to DEHY02 as pre-control emissions are not above major source thresholds for VOC and HAPs (per §64.2(a)(3)).

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

45 CSR 6-4.1 and 13– Particulate Matter emission limit (TV 5.1.1; R13-2823D 14.1.2)
45 CSR 6-4.3, 6-4.4, and 13 – Opacity limit of 20%, except smoke less than 40% opacity for a period(s) aggregating no more than 8 minutes per start-up (TV 5.1.2 and 5.1.3; R13-2823D 14.1.3 and 14.1.4)
45 CSR 6-4.5 – Incinerator particles in the open air requirements (TV 5.1.4)
45 CSR 6-4.6 – Incinerator odor prevention requirements (TV 5.1.5)
45 CSR 10-4.1 – Sulfur Dioxide emission limit (TV 5.1.6)
45 CSR 10-5.1 – Hydrogen Sulfide emission limit (TV 5.1.7)
45 CSR 34 and 40 CFR Part 63 NESHAP HHH – Subject to NESHAP Subpart HHH (TV 5.1.8)
45 CSR 13 – Meet a 95% control efficiency (TV 5.1.9; R13-2823D 14.1.1)
40 CFR Part 63 NESHAP HHH - Operate the flare in a manner consistent with safety and good air pollution control practices or minimizing emissions (63.1274(h))
40 CFR Part 63 NESHAP HHH - Operate with no visible emissions, except for periods not to exceed a total of 2 minutes during any hour (63.1282(h)(3))
40 CFR Part 63 NESHAP HHH - Install an enclosed combustion device (e.g., thermal vapor incinerator, catalytic vapor incinerator, boiler, or process heater) that is designed and operated to reduce the mass content of either TOC or total HAP in the gases vented to the device by 95.0% by weight or greater, as determined in accordance with the requirements of §63.1282(d) (63.1281(d)(1)(i)(A))
40 CFR Part 63 NESHAP HHH - Install a control device model that was tested by the device manufacturer that demonstrates the model achieves performance requirements (63.1282(g)). Must develop an inspection and maintenance plan (63.1283(b) and 63.1285(d)(1)(ii))

Monitoring
45 CSR 30-5.1.c – Annual inlet gas stream sampling for Sulfur Dioxide (TV 5.2.1)
45 CSR 30-5.1.c – Annual inlet gas stream sampling for Hydrogen Sulfide (TV 5.2.2)
45 CSR 30-5.1.c – Monthly visual emission checks (TV 5.2.3)
40 CFR Part 63 NESHAP HHH - Semi-annual inspections shall be conducted for the control device with maintenance and replacement of control device components made in accordance with the plan (63.1283(b) and 63.1285(d)(1)(ii))
40 CFR Part 63 NESHAP HHH - Install, calibrate, operate, and maintain a device equipped with a continuous recorder to measure the combustion temperature and pilot flame indicator for the control device (63.1282(e)(1), §63.1283(d)(3) and (5))
40 CFR Part 63 NESHAP HHH – Quarterly Method 22 with observation period of 1 hour (63.1282(h)(3))

Recordkeeping
45 CSR 30-5.1.c – Records of the monthly visual emission checks (TV 5.4.1)
40 CFR Part 63 NESHAP HHH – Recordkeeping requirements (63.1284)

Reporting
45 CSR 30-5.1.c – Reporting of Method 9 violations shall be reported within 10 calendar days of the occurrence (TV 5.5.1)
40 CFR Part 63 NESHAP HHH – Malfunction reporting (63.1284(f), 63.1274(h), and 63.1285(b)(6))

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: FLARE3	**List all emission units associated with this control device.** 008-01 thru 008-04; 009-01 and 009-02	
Manufacturer: Zeeco	**Model number:** UFAA-16/30	**Installation date:** 2010

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		98%
Benzene		98%
Ethylbenzene		98%
n-Hexane		98%
Toluene		98%
Xylene		98%

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).
94,000 lb/hr

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.** CAM does not apply as none of the PTEs of any pollutant emitted from the flare exceed the major source threshold. Therefore, applicability criterion 64.2(a)(3) is not met.

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

45 CSR 13 – Flare to control VOC emissions from emergency venting and during various non-routine maintenance activities of process equipment (TV 11.1.1; R13-2823D 10.1.1)
45 CSR 13 – Emission limits (TV 11.1.2; R13-2823D 10.1.2)
45 CSR 13 and 16 – Operation and design of the flare (TV 11.1.4, R13-2823D 10.1.4)
45 CSR 13 and 16 - Operate with no visible emissions, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours (TV 11.1.4; R13-2823D 10.1.4)
45 CSR 13 – Conduct a flare design evaluation (TV 11.1.5; R13-2823D 10.1.5)
45 CSR 6-4.1– Particulate Matter emission limit (TV 11.1.6)
45 CSR 6-4.3 and 6-4.4 – Opacity limit of 20%, except smoke less than 40% opacity for a period(s) aggregating no more than 8 minutes per start-up (TV 11.1.7 and 11.1.8)

Monitoring
45 CSR 30-5.1.c and 45 CSR 13 and 16 – Continuously monitor the presence or absence of the flare pilot flame using a thermocouple (TV 11.2.1; R13-2823D 10.2.1)
45 CSR 30-5.1.c and 45 CSR 13 – Monitor and record the throughput to the flare on a monthly basis. Include all sources venting to the flare and record the 12 month rolling total of VOC, NOX, and CO (TV 11.2.2; R13-2823D 10.2.2)

Testing
45 CSR 30-5.1.c and 13 and 16 – Monthly visual emission checks (TV 11.3.1; R13-2823D 10.3.1)

Recordkeeping
45 CSR 13 – Records of the times and duration of all periods which the pilot flame was absent (TV 11.4.1; R13-2823D 10.4.1)
45 CSR 13 – Records of the flare design evaluation (TV 11.4.2, R13-2823D 10.4.2)
45 CSR 13 – Records of the monthly visual emission checks (TV 11.4.5; R13-2823D 10.4.5)

Reporting
45 CSR 13 – Reporting of deviations of visible emissions requirements (TV 11.5.2, R13-2823D 10.5.2)
45 CSR 13 – Report deviation from flare design and operation criteria (TV 11.5.3, R13-2823D 10.5.3)