Cabot Oil & Gas Corporation

June 23, 2016

Mr. William F. Durham
Director
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street
Charleston, West Virginia 25304

Re: Danville Compressor Station Title V Renewal Application
Cranberry Pipeline Corporation
DAQ Plant ID No. 005-00020
Permit Number R30-00500020-2012
Boone County, West Virginia

Dear Mr. Durham:

Cranberry Pipeline Corporation (Cranberry) hereby submits this Title V Permit Renewal Application for the Danville Compressor Station located in Boone County, West Virginia. Cranberry has prepared the attached application in accordance WVDEP guidance and forms. The application is being submitted 6 months prior to the permit expiration date of January 10, 2017 in accordance 45 CSR §30-4.1.a.3. All previously approved modifications made during this Title V Permit term have been incorporated. This application is not requesting any additional modifications.

Cranberry appreciates your review and expedited issuance of the permit. Should you have any questions, please contact Mr. Brandon Bush, at 281-589-4809 or via email at brandon.bush@cabotog.com.

Regards,

Brody Webster

Safety and Environmental Manager

cc Mr. Phillip Hill, Cabot Oil & Gas – via email

Regional File

Corporate File

TITLE V AIR PERMIT RENEWAL APPLICATION

DANVILLE COMPRESSOR STATION

BOONE COUNTY, WEST VIRGINIA

DAQ PLANT ID NO. 005-00020

Prepared By:

CABOT OIL & GAS CORPORATION

Environmental, Health, and Safety

840 Gessner Road, Suite 1400

Houston, Texas 77024

281-589-4600

June 2016

Table of Contents

I. Introduction

Cranberry Pipeline Corporation (Cranberry) is submitting this application to renew the Title V Permit for the Danville Compressor Station (the Facility). The facility is a natural gas compressor station located in Boone County, WV that compresses natural gas from wells and/or upstream compressor stations and transmits it down the Cranberry pipeline, a Section 311 intrastate pipeline.

The facility is a Title V major source due to having the Potential to Emit greater than 100 T/yr NOx and is considered, is therefore subject to WVDEP Regulation 45 CSR Part 30 as well as the underlying State Operating Permit (Rule 13 Permit No. R13-2585D). The facility is an area source of hazardous air pollutants (HAPs) since the potential to emit is less than 10 T/yr of any individual HAPs and less than 25 T/yr of combined HAPs.

II. Process Description

As natural gas enters the facility it is compressed to a higher pressure by six (6) engines at the site that are fired by pipeline quality natural gas. Four of the engines are considered grandfathered sources and do not have any specific emissions requirements:

Emission Unit ID	Emission Unit Description	Design Capacity	Year Installed/Modified
#1	Cooper Reciprocating Engine, 2SLB	400 hp	1957
#2	Cooper Reciprocating Engine, 2SLB	400 hp	1957
#3	Cooper Reciprocating Engine, 2SLB	400 hp	1957
#4	Cooper Reciprocating Engine, 2SLB	800 hp	1980

The remaining two engines are considered non-remote Spark Ignited Reciprocating Internal Combustion (SI RICE) Units subject to the control requirements of 40 CFR Part 63 Subpart ZZZZ. These are both four stroke lean-burn engines controlled by oxidation catalyst. The catalyst was installed in 2013 in order to meet the compliance dates of Subpart ZZZZ.

Emission Unit ID	Emission Unit Description	Design Capacity	Year Installed/Modified	Control Device ID
CE-5	Caterpillar G3512 TALE 4SLB	810 hp	2004	C1
CE-6	Caterpillar G3512 TALE 4SLB	810 hp	2004	C2

Once the gas is compressed it is sent to the Triethylene Glycol (TEG) Dehydrator (Dehy) to remove moisture and impurities. The natural gas contacts the TEG in the dehydrator column. The TEG in

the column becomes "rich" with the moisture, impurities, and small amount of hydrocarbon that has been absorbed. The rich glycol is cycled through the reboiler (RB-1) where the moisture and hydrocarbon vapors are liberated from the glycol and the lean glycol is then recycled into the Dehy contactor. The vapors that are produced by reboiler then enter the Jatco BTEX condenser (1Cond) and are cooled and fall out as pipeline fluids. Any remaining vapors that exit the BTEX condenser are controlled by the flare (F1). Pipeline fluids are held in the Pipeline Fluids Tanks (TKO-1 and TKO-2) and are trucked off site through the Pipeline Fluids Truck Loading (TL-01) rack. The dry natural gas exits the dehy column and is sent down the pipeline.

The facility employs a 155 hp natural gas-fired SI RICE Generator Engine for backup power generation (EG-1). The engine is controlled by a three-way catalytic converter (EG-1C). The facility also contains tanks for the storage of lube oil, used oil, and TEG that are considered insignificant sources.

III. Project Description

The last renewal to the Danville Title V Air Permit was issued on January 10, 2012 effectively making this renewal application due by July 10, 2016. This renewal application will roll in the two modifications made to the site during the current permit term and authorized accordingly under 45SCR30 and 45SCR13. The two modifications are summarized below:

Minor Modification submitted April 4, 2012 and approved July 16, 2012 – MM01

This modification authorized the following:

- Updated the permit to reflect the most recent gas analysis
- Increased emissions from the flare (F1) based on the results of the gas analysis

The emissions increases are shown below.

Pollutant	Hourly Emissions (lb/hr)	Annual Emissions (tpy)
Hexane	+0.005	+0.02
Toluene	+0.002	+0.01
Xylene	+0.006	+0.03

Minor Modification submitted April 2, 2014 and approved November 24, 2014 – MM02

This modification authorized the following:

- Added oxidation catalyst to compressor engines CE-5 and CE-6
- Routed the condenser to the flare
- Installed 3-way catalytic converter to Emergency generator, EG-1
- Modified pipeline fluids truck loading TL-01

Below are the site-wide changes in potential to emit resulting from this permitting action:

Pollutant	Before Modification Annual Emissions (tpy)	After Modification Annual Emissions (tpy)	Net Emission Changes (tpy)
NOx	233.58	233.67	0.09
CO	50.18	32.37	-17.81
VOCs	16.14	16.65	0.51
SO2	0.08	0.23	0.15
Formaldehyde	6.25	6.32	0.07
Total HAPs	9.15	9.33	0.18

IV. Applicable Federal Rule Analysis

This section will summarize the requirements for applicable federal rules. A comprehensive list of requirements is provided in the general forms and Attachment E.

40 CFR 60, Subpart A

The facility is subject to various categorical source standards under the NSPS; therefore, is subject to the applicable requirements under 40 CFR 60, Subpart A.

NSPS 40 CFR 60, Subpart JJJJ

Subpart JJJJ applies to manufacturers, owners, and operators of stationary spark ignition internal combustion engines manufactured on or after June 12, 2006. The emergency generator, EG-1, is a stationary spark ignition internal combustion engine manufactured in 2010; therefore, this subpart is applicable to EG-1. The Facility will continue to comply with applicable regulatory requirements.

NSPS 40 CFR 60, Subpart OOOO

Subpart OOOO potentially applies to various equipment at oil and gas production, processing, and/or transmission facilities constructed, modified, or reconstructed after August 23, 2011. This proposed facility contains emission sources that have been modified after August 23, 2011 and operates equipment potentially subject to the applicable requirements under NSPS Subpart OOOO, in particular, the pipeline fluids tanks (TKO-1 and TKO-2).

As outlined in the regulation, storage tanks in the oil and natural gas production segment with emissions greater than six (6) tpy per tank are subject sources. The uncontrolled emissions from each storage vessel, TKO-1 and TKO-2 are less than six (6) tpy, therefore, these tanks are not subject.

40 CFR 61, Subpart A

The facility is not subject to any NESHAP requirements; therefore, 40 CFR 61, Subpart A will not apply.

40 CFR 63, Subpart A

The facility is subject to 40 CFR 63 Subpart ZZZZ; therefore, any applicable requirements of 40 CFR 63, Subpart A will apply.

40 CFR 63, Subpart HH

Subpart HH applies to major sources or area sources of HAPs from oil and natural gas production facilities. The Facility is an area source of HAPs and operates the TEG dehydration unit which is an affected source under subject to the requirements under 40 CFR 63 §63.760(b)(2). The facility has permit conditions listed in the Title V permit that require the TEG dehydration implement the standards of Subpart HH for TEG dehydration units located at an area source of HAP emissions The Facility will continue to comply with applicable regulatory requirements.

MACT 40 CFR 63, Subpart HHH

Subpart HHH applies to major sources of HAPs from natural gas transmission and storage facilities. The Facility is not considered a major source of HAPs; therefore, this subpart does not apply.

MACT 40 CFR 63, Subpart ZZZZ

Subpart ZZZZ applies to stationary reciprocating internal combustion engines ("RICE") located at major and area sources of HAP emissions. Engines #1, #2, #3, and #4 are grandfathered sources and are not subject to the requirements of this subpart. Engines CE-5 and CE-6 are 880 hp 4SLB that were constructed in 2014 and considered an existing stationary RICE located at an area source of HAP emissions. Therefore, CE-5 and CE-6 must comply with the requirements in Table 2d of the regulation and operating limitation is Table 2b. An oxidation catalyst was installed to reduce HAP emissions on each engine, CE-5 and CE-6 and a permit modification was submitted to reflect the modification at the site. The Facility will continue to comply with applicable regulatory requirements.

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):** Cranberry Pipeline Corporation	**2. Facility Name or Location:** Danville Compressor Station
3. DAQ Plant ID No.: 0 0 5 — 0 0 0 2 0	**4. Federal Employer ID No. (FEIN):** 0 4 2 9 8 9 9 3 4

5. **Permit Application Type:**

☐ Initial Permit — When did operations commence? 1957
☒ Permit Renewal — What is the expiration date of the existing permit? 01/10/2017
☐ 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:

26

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: 900 Lee Street East Suite 1500		
City: Charleston	**State:** WV	**Zip: 25301-**
Telephone Number: (304) 347-1600	**Fax Number:** (304) 347-1618	

12. Facility Location		
Street: 6804 Lick Creek Road	**City:** Danville	**County:** Boone
UTM Easting: 422.07 km	**UTM Northing:** 4,214.25 km	**Zone:** ☒ 17 or ☐ 18
Directions: From Route 19 take the second Danville/Madison exit. Go approximately 500 yards and turn onto Lick Creek Road. Go approximately 3.5 miles to the station located 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).** Kentucky Ohio Virginia
Is facility located within 100 km of a Class I Area[1]? ☐ Yes ☒ No **If no, do emissions impact a Class I Area[1]?** ☐ Yes ☒ No		**If yes, name the area(s).**

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

13. Contact Information		
Responsible Official: Brody Webster		**Title:** Safety and Environmental Manager
Street or P.O. Box: 900 Lee Street East, Suite 1500		
City: Charleston	**State:** WV	**Zip: 25301-**
Telephone Number: (304) 347-1642	**Fax Number:** (304) 347-1618	
E-mail address: brody.webster@cabotog.com		
Environmental Contact: Brody Webster		**Title:** Safety and Environmental Manager
Street or P.O. Box: 900 Lee Street East, Suite 1500		
City: Charleston	**State:** WV	**Zip: 25301-**
Telephone Number: (304) 347-1642	**Fax Number:** (304) 347-1618	
E-mail address: brody.webster@cabotog.com		
Application Preparer: Brandon Bush		**Title:** Sr Air Compliance Specialist
Company: Cabot Oil & Gas Corporation		
Street or P.O. Box: 840 Gessner Rd, Ste 1400		
City: Houston	**State:** TX	**Zip: 77024-**
Telephone Number: (281) 589-4809	**Fax Number:** (281) 589-4694	
E-mail address: Brandon.bush@cabotog.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 Processing	Crude Petroleum and Natural Gas	211111	1311

Provide a general description of operations.

Danville Compressor Station is a compressor facility that services a natural gas pipeline system. The purpose of the facility is to compress natural gas flowing through a pipeline. The reciprocating engines at the facility receive natural gas from a valve on a pipeline. The engines then compress the natural gas in order to further transport the natural gas through the pipeline system. Prior to exiting the facility through the pipeline, the compressed natural gas is processed by the dehydration unit that is controlled by a BTEX unit and condenser to remove moisture and impurities.

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

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

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

Section 2: Applicable Requirements

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

19. Non Applicability Determinations

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

40 CFR Part 63 Subpart HHH – This facility does not meet the definition of a post extraction facility.

40 CFR Subpart KKK – This facility is not involved in the extraction or fractionation of natural gas

40 CFR 60 Subpart LLL – This facility does not employ a sweetening or sulfur recovery unit.

40 CFR Subpart Dc – The reboiler at this facility is below 10 MMBTu/hr

40 CFR Subpart DDDDD – Reboiler PTE of HAPs is below 10 T/yr of individual HAPs or 25 T/yr of aggregate HAPs

40 CFR 60 Subpart GG – This facility does not operate turbines.

PSD (45SCR14) – This facility's potential emissions are below 250 T/yr

45SCR2 – Particulate matter from indirect fired heat exchangers.

PSD (45SCR19) – The facility is in Boone County which is an attainment area.

45SCR27 – The facility does not meet the definition of a chemical processing unit because the equipment does not produce or contact material containing more than 5% benzene by weight.

Section 111 NSPS – 40 CFR 60 Subpart Kb – The facility has no storage vessels greater the 75 cubic meters.

40 CFR 60 Subpart JJJJ – The compressor engines #1, #2, #3, and #4 are not subject to this subpart since they were manufactured prior to the applicability date.

40 CFR 64 – The dehy unit (Dehy) and compressor engines CE-5 and CE-6 are not applicable to CAM since the dehy is subject to NESHAP Subpart HH and the compressor engines are subject to MACT Subpart ZZZZ which have provisions for compliance monitoring established after 1990, (exemption per 64.2(b)(1)(i)).

40 CFR 60 Subpart OOOO – The newly installed tanks TKO-1 and TKO-2 do not meet the applicability requirements of 40 CFR 60.5365(e).

☒ Permit Shield

19. Non Applicability Determinations *(Continued)* - *Attach additional pages as necessary.*

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.

☐ 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 61.145(b) and 45 CSR 34 – Asbestos inspection and removal (TV 3.1.3)

45 CSR 4 – Odor (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 Emissions Inventory Reporting (TV 3.1.6)

40 CFR Subpart 82, Subpart F – Ozone depleting substances (TV 3.1.7)

40 CFR 68 – Risk Management Plan (TV 3.1.8)

State Only: 45 CSR 17-3.1 – Fugitive Particulate Matter (TV 3.1.9)

45 CSR 13, R132585, 4.1.1 – Operation and Maintenance of Air Pollution Control Equipment (TV 3.1.10)

WV 22-5-4(a)(14-15) and 45SCR13 – Testing Requirements (TV 3.3)

45 CSR 30 – Recordkeeping Requirements (TV 3.4)

45 CSR 30 – Reporting Requirements (TV 3.5)

45CSR 30 – Emergency Operating Scenario (TV3.8)

☐ 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 61.145(b) and 45 CSR 34 – Prior to demolition/construction buildings will be inspected for asbestos (TV 3.1.3)

45 CSR 4 – Permittee shall maintain records of all odor complaints received (TV 3.1.4)

45 CSR 11-5.2 – 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 Emissions Inventory reports (TV 3.1.6)

40 CFR Subpart 82, Subpart F – The permittee will prohibit maintenance, service, or repair of appliances containing ozone depleting substances (TV 3.1.7)

40 CFR 68 – Should the permittee become subject to 40 CFR Part 68, a RMP shall be submitted (TV 3.1.8)

State Only: 45 CSR 17-3.1 – The permittee will limit fugitive emissions from the facility by burning only pipeline quality natural gas (TV 3.1.9)

45 CSR 13, R13-2585, 4.1.1 – The permittee shall contruct and operate in accordance with R13-2585. The permittee shall, to the extent practicable, install, maintain, and operate the control devices in a manner consistent with safety and good air pollution control practices for minimizing emissions. (TV 3.1.10)

WV 22-5-4(a)(14-15) and 45SCR13 – Testing Requirements (TV 3.3.1)

45 CSR 30 – Recordkeeping Requirements (TV 3.4)

45 CSR 30 – Reporting Requirements (TV 3.5)

45CSR 30 – Emergency Operating Scenario (TV3.8)

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

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

20. Facility-Wide Applicable Requirements *(Continued)* - *Attach additional pages as necessary.*

List all facility-wide applicable requirements. For each applicable requirement, include the rule citation and/or permit with the condition number.

☐ 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.)

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)*
R30-00500020-2012	01/10 /2012	
R13-2585D	07/02/2014	
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22. Inactive Permits/Obsolete Permit Conditions		
Permit Number	Date of Issuance	Permit Condition Number
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Section 3: Facility-Wide Emissions

23. Facility-Wide Emissions Summary [Tons per Year]	
Criteria Pollutants	Potential Emissions
Carbon Monoxide (CO)	32.37
Nitrogen Oxides (NO_X)	233.67
Lead (Pb)	
Particulate Matter ($PM_{2.5}$)[1]	3.13
Particulate Matter (PM_{10})[1]	3.13
Total Particulate Matter (TSP)	3.13
Sulfur Dioxide (SO_2)	0.23
Volatile Organic Compounds (VOC)	16.65
Hazardous Air Pollutants[2]	Potential Emissions
Benzene	0.21
Ethylbenzene	0.05
Toluene	0.01
Xylene	0.09
Hexane	0.08
Regulated Pollutants other than Criteria and HAP	Potential Emissions
Formaldehyde	6.32
Total HAP	9.33

[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: Tank 001 - <0.01 lb/hr, 1.39 lb/yr Tank 002 - <0.01 lb/hr, 1.39 lb/yr Tank 003 - <0.01 lb/hr, 1.39 lb/yr Tank 004 - <0.01 lb/hr, 1.39 lb/yr Tank 005 - <0.01 lb.hr, 0.01 lb/yr Tank 006 - <0.01 lb.hr, 0.01 lb/yr _____ _____

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: Brody Webster	Title: Safety and Environmental Manager

Responsible official's signature:

Signature: _____ Signature Date: 6/23/2016

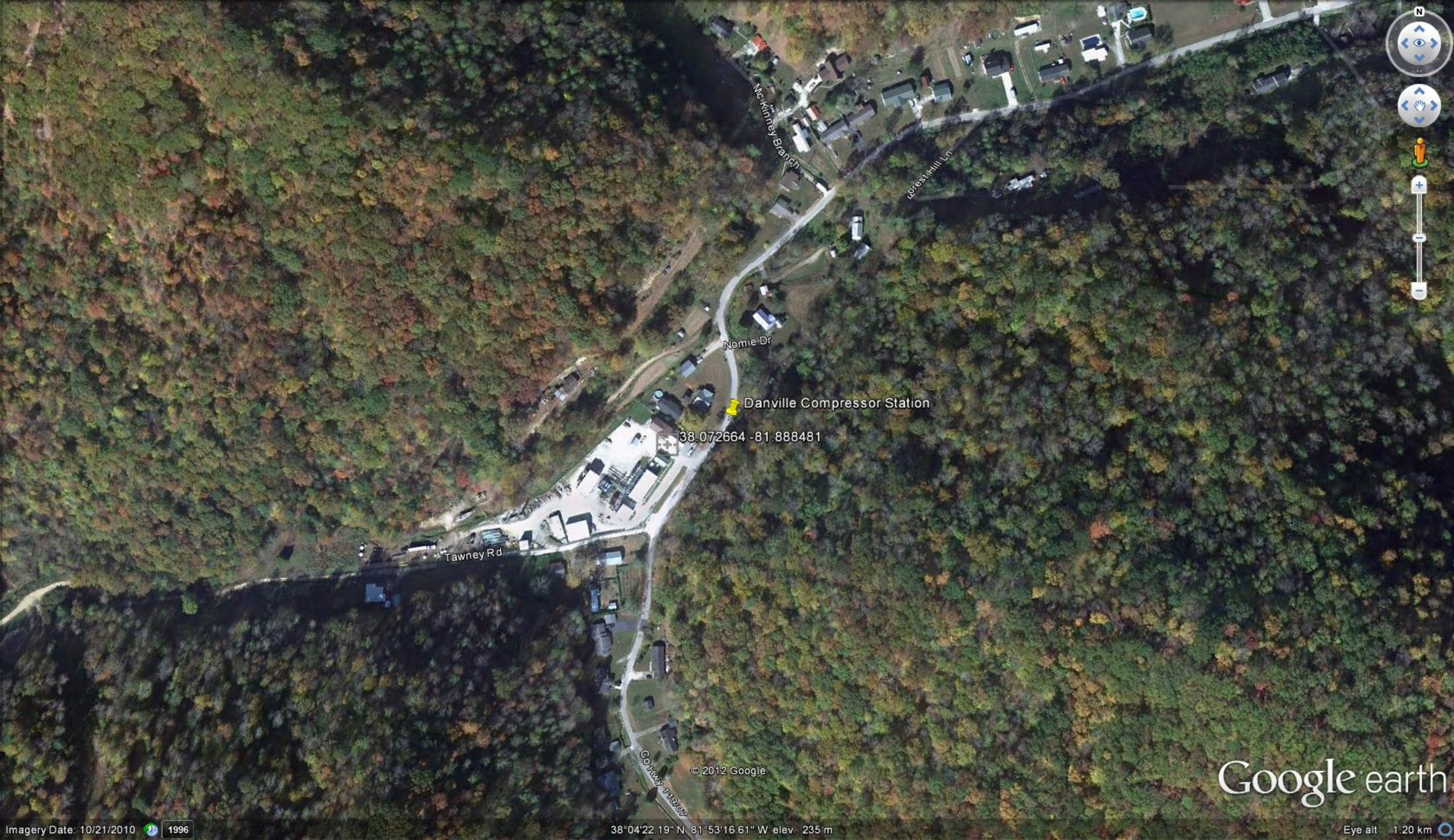
(Must be signed and dated in blue ink)

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

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

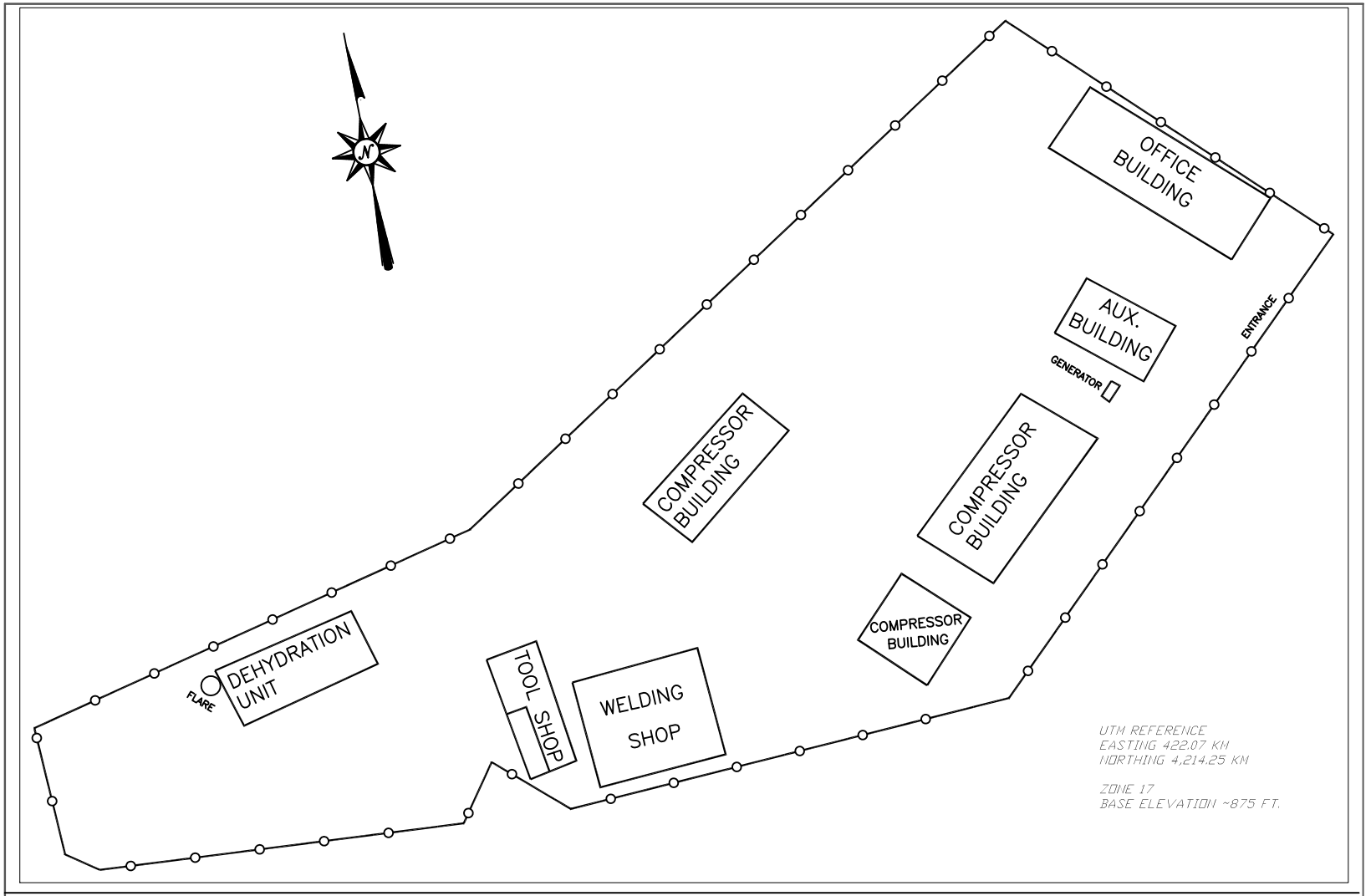
ATTACHMENT A

Area Map


McKinney Branch
Forest Hill Ln
Nomie Dr
Danville Compressor Station
38.072664 -81.888481
Tawney Rd
Co Hwy 1 (3/7)
© 2012 Google
Google earth
Imagery Date: 10/21/2010
1996
38°04'22.19" N 81°53'16.61" W elev 235 m
Eye alt 1.20 km

ATTACHMENT B

Plot Plan



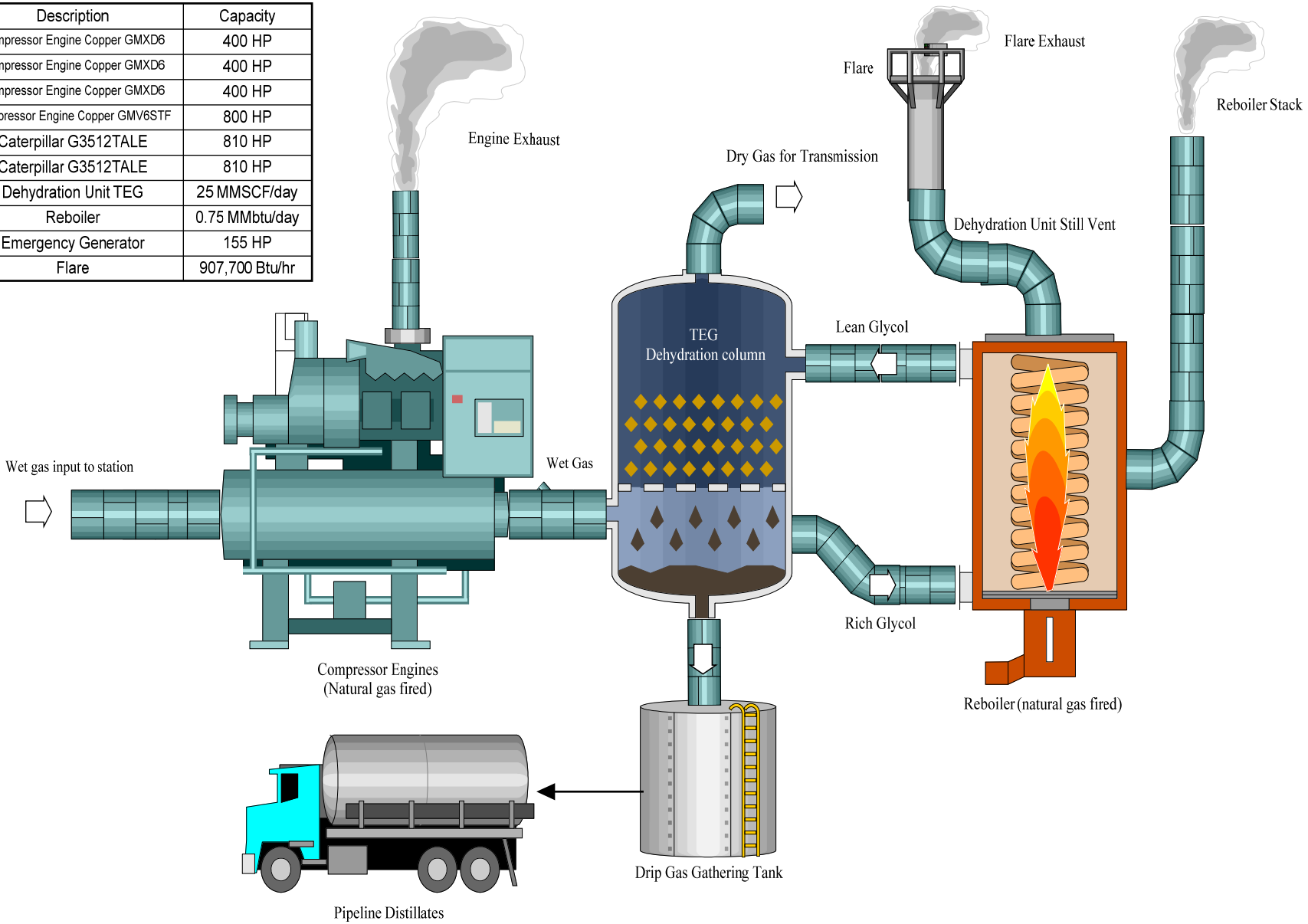
PLOT PLAN

CRANBERRY PIPELINE CORPORATION
DANVILLE COMPRESSOR STATION
DANVILLE, WEST VIRGINIA

ATTACHMENT C

Process Flow Diagram

Description	Capacity
Compressor Engine Copper GMXD6	400 HP
Compressor Engine Copper GMXD6	400 HP
Compressor Engine Copper GMXD6	400 HP
Compressor Engine Copper GMV6STF	800 HP
Caterpillar G3512TALE	810 HP
Caterpillar G3512TALE	810 HP
Dehydration Unit TEG	25 MMSCF/day
Reboiler	0.75 MMbtu/day
Emergency Generator	155 HP
Flare	907,700 Btu/hr



SLR	Danville Compressor Station Cranberry Pipeline Danville, WV
PROCESS FLOW DIAGRAM	Job No: 116.00400.00020

ATTACHMENT D

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
001-02	N/A	#1*	Cooper Reciprocating Engine, 2SLB	400 HP	1957
001-03	N/A	#2*	Cooper Reciprocating Engine, 2SLB	400 HP	1957
001-05	N/A	#3*	Cooper Reciprocating Engine, 2SLB	400 HP	1957
001-06	N/A	#4*	Cooper Reciprocating Engine, 2SLB	800 HP	1980
001-10	C1	CE-5*	Caterpillar G3512TALE lean burn four stroke Compressor Engine	810 HP	2004
001-10	N/A	C1	Oxidation Catalyst	N/A	2013
001-11	C2	CE-6*	Caterpillar G3512 TALE lean burn four stroke compressor engine	810 HP	2004
001-11	N/A	C2	Oxidation Catalyst	N/A	2013
001-09	F1 (Flare)	1Cond	Jatco BTEX Condenser	51.00 sq ft	2014
001-04	N/A	Reboiler* (RB-1)	Dehydrator Reboiler	0.75 MMBtu/hr	2004
001-09	Flare (F1), 1Cond	Dehy*	Triethylene Glycol Dehydrator	25 MMscf/day	2004
001-09	N/A	1C* (F1)	Model No. 630 Flare	907,700 Btu/hr	2004
TKO-1	N/A	TKO-1	Pipeline Fluids Tank	App. 4000 gallons	2014
TKO-2	N/A	TKO-2	Pipeline Fluids Tank	App. 4000 gallons	2014
EG-1E	EG-1C	EG-1*	Kohler 100REZG Generator with GM 8.1L Engine, 4SLB	155.2 hp	2010
EG-1E	N/A	EG-1C	Kohler Three-Way Catalytic Converter, 4SLB	N/A	2010
001-12	N/A	TL-01	Pipeline Fluids Truck Loading	70,533 gal/yr	2014

[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.

*This equipment burns pipeline quality natural gas

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
All Equipment listed below are Insignificant Emissions Sources from Section 4, Item 19					
001-12	N/A	Tank 001	Lube Oil Tank No. 1; Aboveground Tank	2,000 gal	1990
001-13	N/A	Tank 002	Lube Oil Tank No. 1; Aboveground Tank	2,000 gal	1990
001-14	N/A	Tank 003	Lube Oil Tank No. 1; Aboveground Tank	2,000 gal	1990
001-15	N/A	Tank 004	Used Oil Tank No. 1; Aboveground Tank	2,000 gal	2005
001-16	N/A	Tank 005	TEG Tank; Aboveground Tank	600 gal	2014
001-17	N/A	Tank 006	Antifreeze Tanks; Aboveground Tank	600 gal	2014

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

ATTACHMENT E

Emission Unit Forms

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
#1	Cooper Reciprocating Engine, 2SLB	N/A

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Compressor Engine; 2 Stroke Cycle; Lean Burn Engine (Grandfathered with no emission limits)

Manufacturer:	**Model number:**	**Serial number:**
Cooper	GMXD6	N/A
Construction date:	**Installation date:**	**Modification date(s):**
N/A	1957	N/A

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

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Grandfathered; No Limits	Grandfathered; No Limits	8,760 hours

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: 400 hp	**Type and Btu/hr rating of burners:** N/A

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.
This equipment combusts pipeline quality natural gas only; grandfathered with no emission limits

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	2,000 ppm	NA	1,000

Emissions Data			
Criteria Pollutants	Potential Emissions		
	PPH	TPY	
Carbon Monoxide (CO)	1.13	4.92	
Nitrogen Oxides (NO_X)	9.22	40.38	
Lead (Pb)	NA	NA	
Particulate Matter ($PM_{2.5}$)	-	-	
Particulate Matter (PM_{10})	0.15	0.62	
Total Particulate Matter (TSP)	0.15	0.62	
Sulfur Dioxide (SO_2)	0.01	0.01	
Volatile Organic Compounds (VOC)	0.35	1.53	
Hazardous Air Pollutants	Potential Emissions		
	PPH	TPY	
Benzene	0.01	0.03	
Formaldehyde	0.17	0.71	
Ethylbenzene	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.).

N/A

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 Emission Limits, Grandfathered

____ 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.)

NA

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

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

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
#2	Cooper Reciprocating Engine, 2SLB	N/A

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Compressor Engine; 2 Stroke Cycle; Lean Burn Engine (Grandfathered with no emission limits)

Manufacturer:	**Model number:**	**Serial number:**
Cooper	GMXD6	N/A
Construction date:	**Installation date:**	**Modification date(s):**
N/A	1957	N/A

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

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Grandfathered; No Limits	Grandfathered; No Limits	8,760 hours

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: 400 hp	**Type and Btu/hr rating of burners:** N/A

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.
This equipment combusts pipeline quality natural gas only; grandfathered with no emission limits

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	2,000 ppm	NA	1,000

Emissions Data			
Criteria Pollutants	Potential Emissions		
	PPH	TPY	
Carbon Monoxide (CO)	1.13	4.92	
Nitrogen Oxides (NO_X)	9.22	40.38	
Lead (Pb)	NA	NA	
Particulate Matter ($PM_{2.5}$)	-	-	
Particulate Matter (PM_{10})	0.15	0.62	
Total Particulate Matter (TSP)	0.15	0.62	
Sulfur Dioxide (SO_2)	0.01	0.01	
Volatile Organic Compounds (VOC)	0.35	1.53	
Hazardous Air Pollutants	Potential Emissions		
	PPH	TPY	
Benzene	0.01	0.03	
Formaldehyde	0.17	0.71	
Ethylbenzene	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.).

N/A

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 Emission Limits, Grandfathered

____ 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.)

NA

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

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

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
#3	Cooper Reciprocating Engine, 2SLB	N/A

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Compressor Engine; 2 Stroke Cycle; Lean Burn Engine (Grandfathered with no emission limits)

Manufacturer:	**Model number:**	**Serial number:**
Cooper	GMXD6	N/A
Construction date:	**Installation date:**	**Modification date(s):**
N/A	1957	N/A

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

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Grandfathered; No Limits	Grandfathered; No Limits	8,760 hours

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: 400 hp	**Type and Btu/hr rating of burners:** N/A

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.
This equipment combusts pipeline quality natural gas only; grandfathered with no emission limits

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	2,000 ppm	NA	1,000

Emissions Data			
Criteria Pollutants	Potential Emissions		
	PPH	TPY	
Carbon Monoxide (CO)	1.13	4.92	
Nitrogen Oxides (NO_X)	9.22	40.38	
Lead (Pb)	NA	NA	
Particulate Matter ($PM_{2.5}$)	-	-	
Particulate Matter (PM_{10})	0.15	0.62	
Total Particulate Matter (TSP)	0.15	0.62	
Sulfur Dioxide (SO_2)	0.01	0.01	
Volatile Organic Compounds (VOC)	0.35	1.53	
Hazardous Air Pollutants	Potential Emissions		
	PPH	TPY	
Benzene	0.01	0.03	
Formaldehyde	0.17	0.71	
Ethylbenzene	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.).

N/A

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 Emission Limits, Grandfathered

____ 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.)

NA

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

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

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
#4	Cooper Reciprocating Engine, 2SLB	N/A

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Natural Gas fired Compressor Engine
800 hp
Two Stroke Lean Burn

Manufacturer:	**Model number:**	**Serial number:**
Cooper	GMXD6-STX	N/A
Construction date:	**Installation date:**	**Modification date(s):**
NA	1980	N/A

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

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
NA	NA	8,760 hours

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: 800 hp	**Type and Btu/hr rating of burners:** NA

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

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	2,000 ppm	NA	1,000

Emissions Data			
Criteria Pollutants	Potential Emissions		
	PPH	TPY	
Carbon Monoxide (CO)	2.25	9.84	
Nitrogen Oxides (NO_X)	18.44	80.75	
Lead (Pb)	NA	NA	
Particulate Matter ($PM_{2.5}$)	-	-	
Particulate Matter (PM_{10})	0.28	1.24	
Total Particulate Matter (TSP)	0.28	1.24	
Sulfur Dioxide (SO_2)	0.01	0.02	
Volatile Organic Compounds (VOC)	0.70	3.06	
Hazardous Air Pollutants	Potential Emissions		
	PPH	TPY	
Benzene	0.01	0.05	
Formaldehyde	0.32	1.41	
Ethylbenzene	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.).
N/A

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.

NA

___ 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.)

NA

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

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

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
CE-5	Catterpillar G3512 TALE lean burn four stroke compressor engine	C1

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Natural Gas fired Compressor Engine
810 hp
Four Stroke Lean Burn

Manufacturer:	**Model number:**	**Serial number:**
Caterpillar	G3512TALE	N/A
Construction date:	**Installation date:**	**Modification date(s):**
2004	2004	N/A

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

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
6,883 scf/hr	51.53 MMscf/yr	8,760 hours

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

Does this emission unit combust fuel? __Yes _X__ No	**If yes, is it?** ___ Indirect Fired _X_Direct Fired
Maximum design heat input and/or maximum horsepower rating: 810 hp	**Type and Btu/hr rating of burners:** NA

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

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	2,000 gr/ 10^6 scf	NA	1,020

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.63	2.76
Nitrogen Oxides (NO_X)	3.57	15.63
Lead (Pb)	NA	NA
Particulate Matter ($PM_{2.5}$)	0.059	0.258
Particulate Matter (PM_{10})	0.059	0.258
Total Particulate Matter (TSP)	0.059	0.258
Sulfur Dioxide (SO_2)	0.003	0.015
Volatile Organic Compounds (VOC)	0.70	3.05
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Benzene	0.003	0.011
Ethylbenzene	0.001	0.001
Toluene	0.002	0.001
Xylene	0.001	0.005
n-Hexane	0.006	0.028
Formaldehyde	0.32	1.37
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.).

AP-42 Emission Factors – Section 1.4 (July 1998)
Manufacturer Supplied Emission Factors

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.

4.1.1. Maximum emissions from each of the Caterpillar G3512TALE 810 horsepower lean burn four stroke natural gas fired engines equipped with oxidation catalysts (Source IDs CE-5, CE-6), shall not exceed the following limits:

Pollutant		Maximum Emissions	
		Hourly (lb/hr)	Annual (ton/yr)
CO		0.63	2.76
NO_x		3.57	15.63
VOCs		0.70	3.05
HAPs	Formaldehyde	~~0.3~~ 0.32	1.37

[45CSR13, R13-2585, 5.1.2.]

4.1.2. Each Caterpillar G3512TALE 810 horsepower lean burn four stroke natural gas fired engine equipped with oxidation catalysts (Sources CE-5, CE-6) shall not exceed a consumption limit of 5,883 cubic feet of natural gas per hour and 51.53 x 10^6 cubic feet of natural gas per year. Compliance with the annual limit shall be determined using a rolling yearly total. A rolling yearly total shall mean the sum of natural gas consumed at any given time for the previous twelve (12) months.
[45CSR13, R13-2585, 5.1.1., 45CSR§30-5.1.c]

4.1.3. Requirements for Use of Catalytic Reduction Devices

a. Lean-burn natural gas compressor engines (CE-5, CE-6) equipped with oxidation catalyst air pollution control devices shall be fitted with a closed-loop automatic feedback controller to ensure emissions of regulated pollutants do not exceed the potential to emit for any engine/oxidation catalyst combination under varying load. The closed-loop automatic feedback controller shall provide proper and efficient operation of the engine;

b. The automatic air/fuel ratio controller or closed-loop automatic feedback controller shall provide a warning or indication to the operator and/or be interlocked with the engine ignition system to cease engine operation in case of a masking, poisoning or overrich air/fuel ratio situation which results in performance degradation or failure of the catalyst element; and

c. No person shall knowingly:
   1. Remove or render inoperative any air pollution or auxiliary air pollution control device installed subject to the requirements of this permit;
   2. Install any part or component when the principal effect of the part or component is to bypass, defeat or render inoperative any air pollution control device or auxiliary air pollution control device installed subject to the requirements of this permit; or
   3. Cause or allow engine exhaust gases to bypass any catalytic reduction device.

__X_ 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.)

4.2.1. Catalytic Oxidizer Control Devices (CE-5, CE-6) The permittee shall regularly inspect, properly maintain and/or replace catalytic reduction devices and auxiliary air pollution control devices to ensure functional and effective operation of the engine's physical and operational design. The permittee shall ensure proper operation, maintenance, and performance of catalytic reduction devices and auxiliary air pollution control devices by:

1. Maintaining proper operation of the automatic air/fuel ratio controller or automatic feedback controller
2. Following operating and maintenance recommendations of the catalyst element manufacturer.

[45CSR13, R13-2585, 5.2.1]

Please see Facility-wide testing requirements Section 3.3 and Testing Requirements of Section 11.1.

[45CSR13, R13-2585, 5.3.1]

4.4.1. demonstrate compliance with sections 4.1.1 and 4.1.2, the permittee shall maintain records of the amount and type of fuel consumed in each engine and the hours of operation of each engine. Said records shall be maintained on site or in a readily accessible off-site location maintained by the permittee for a period of five (5) years. Said records shall be made available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review. Any records submitted to the agency pursuant to a requirement of this permit or upon request by the Director shall be certified by a responsible official.

[45CSR13, R13-2585, 5.4.1]

4.4.2. To demonstrate compliance with section 4.1.3 the permittee shall maintain records of all catalytic reduction device maintenance. Said records shall be maintained on site or in a readily accessible off-site location maintained by the permittee for a period of five (5) years. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review. Any records submitted to the agency pursuant to a requirement of this permit or upon request by the Director shall be certified by a responsible official.

[45CSR13, R13-2585, 5.4.2.]

Please see Facility-wide reporting requirements Section 3.5 and Reporting Requirements of Section 11.1.

[45CSR13, R13-2585, 5.5.1.]

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

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
CE-6	Catterpillar G3512 TALE lean burn four stroke compressor engine	C2

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Natural Gas fired Compressor Engine
810 hp
Four Stroke Lean Burn

Manufacturer:	**Model number:**	**Serial number:**
Caterpillar	G3512TALE	N/A
Construction date:	**Installation date:**	**Modification date(s):**
2004	2004	N/A

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

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
6,883 scf/hr	51.53 MMscf/yr	8,760 hours

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

Does this emission unit combust fuel? __Yes _X__ No	**If yes, is it?** ___ Indirect Fired _X_Direct Fired
Maximum design heat input and/or maximum horsepower rating: 810 hp	**Type and Btu/hr rating of burners:** NA

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

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	2,000 gr/ 10^6 scf	NA	1,020

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.63	2.76
Nitrogen Oxides (NO_X)	3.57	15.63
Lead (Pb)	NA	NA
Particulate Matter ($PM_{2.5}$)	0.059	0.258
Particulate Matter (PM_{10})	0.059	0.258
Total Particulate Matter (TSP)	0.059	0.258
Sulfur Dioxide (SO_2)	0.003	0.015
Volatile Organic Compounds (VOC)	0.70	3.05
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Benzene	0.003	0.011
Ethylbenzene	0.001	0.001
Toluene	0.002	0.001
Xylene	0.001	0.005
n-Hexane	0.006	0.028
Formaldehyde	0.32	1.37
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.).

AP-42 Emission Factors – Section 1.4 (July 1998)
Manufacturer Supplied Emission Factors

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.

4.1.1. Maximum emissions from each of the Caterpillar G3512TALE 810 horsepower lean burn four stroke natural gas fired engines equipped with oxidation catalysts (Source IDs CE-5, CE-6), shall not exceed the following limits:

Pollutant		Maximum Emissions	
		Hourly (lb/hr)	Annual (ton/yr)
CO		0.63	2.76
NO_x		3.57	15.63
VOCs		0.70	3.05
HAPs	Formaldehyde	~~0.3~~ 0.32	1.37

[45CSR13, R13-2585, 5.1.2.]

4.1.2. Each Caterpillar G3512TALE 810 horsepower lean burn four stroke natural gas fired engine equipped with oxidation catalysts (Sources CE-5, CE-6) shall not exceed a consumption limit of 5,883 cubic feet of natural gas per hour and 51.53 x 10^6 cubic feet of natural gas per year. Compliance with the annual limit shall be determined using a rolling yearly total. A rolling yearly total shall mean the sum of natural gas consumed at any given time for the previous twelve (12) months.
[45CSR13, R13-2585, 5.1.1., 45CSR§30-5.1.c]

4.1.3. Requirements for Use of Catalytic Reduction Devices

a. Lean-burn natural gas compressor engines (CE-5, CE-6) equipped with oxidation catalyst air pollution control devices shall be fitted with a closed-loop automatic feedback controller to ensure emissions of regulated pollutants do not exceed the potential to emit for any engine/oxidation catalyst combination under varying load. The closed-loop automatic feedback controller shall provide proper and efficient operation of the engine;

b. The automatic air/fuel ratio controller or closed-loop automatic feedback controller shall provide a warning or indication to the operator and/or be interlocked with the engine ignition system to cease engine operation in case of a masking, poisoning or overrich air/fuel ratio situation which results in performance degradation or failure of the catalyst element; and

c. No person shall knowingly:
   1. Remove or render inoperative any air pollution or auxiliary air pollution control device installed subject to the requirements of this permit;
   2. Install any part or component when the principal effect of the part or component is to bypass, defeat or render inoperative any air pollution control device or auxiliary air pollution control device installed subject to the requirements of this permit; or
   3. Cause or allow engine exhaust gases to bypass any catalytic reduction device.

__X_ 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.)

4.2.1. Catalytic Oxidizer Control Devices (CE-5, CE-6) The permittee shall regularly inspect, properly maintain and/or replace catalytic reduction devices and auxiliary air pollution control devices to ensure functional and effective operation of the engine's physical and operational design. The permittee shall ensure proper operation, maintenance, and performance of catalytic reduction devices and auxiliary air pollution control devices by:

1. Maintaining proper operation of the automatic air/fuel ratio controller or automatic feedback controller
2. Following operating and maintenance recommendations of the catalyst element manufacturer.

[45CSR13, R13-2585, 5.2.1]

Please see Facility-wide testing requirements Section 3.3 and Testing Requirements of Section 11.1.

[45CSR13, R13-2585, 5.3.1]

4.4.1. demonstrate compliance with sections 4.1.1 and 4.1.2, the permittee shall maintain records of the amount and type of fuel consumed in each engine and the hours of operation of each engine. Said records shall be maintained on site or in a readily accessible off-site location maintained by the permittee for a period of five (5) years. Said records shall be made available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review. Any records submitted to the agency pursuant to a requirement of this permit or upon request by the Director shall be certified by a responsible official.

[45CSR13, R13-2585, 5.4.1]

4.4.2. To demonstrate compliance with section 4.1.3 the permittee shall maintain records of all catalytic reduction device maintenance. Said records shall be maintained on site or in a readily accessible off-site location maintained by the permittee for a period of five (5) years. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review. Any records submitted to the agency pursuant to a requirement of this permit or upon request by the Director shall be certified by a responsible official.

[45CSR13, R13-2585, 5.4.2.]

Please see Facility-wide reporting requirements Section 3.5 and Reporting Requirements of Section 11.1.

[45CSR13, R13-2585, 5.5.1.]

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

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
DEHY	Dehydrator Reboiler	Flare (F1), 1Cond

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
25 MMscf/day Dehydration Unit

Manufacturer:	**Model number:**	**Serial number:**
Natco/Kinwind	TEG Dehydration Unit	N/A

Construction date:	**Installation date:**	**Modification date(s):**
N/A	2004	2012

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

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
1.04 MMscf/hr	9,125 MMscf/yr	8,760 hours

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: NA	**Type and Btu/hr rating of burners:** NA

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

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

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

Emissions Data

Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.336	1.47
Nitrogen Oxides (NO_X)	0.062	0.27
Lead (Pb)	-	-
Particulate Matter ($PM_{2.5}$)	-	-
Particulate Matter (PM_{10})	-	-
Total Particulate Matter (TSP)	-	-
Sulfur Dioxide (SO_2)	0.037	0.164
Volatile Organic Compounds (VOC)	0.299	1.311
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Benzene	0.008	0.036
Ethylbenzene	0.014	0.059
Toluene	0.007	0.032
Xylene	0.019	0.081
n-Hexane	0.005	0.022
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.).

GRI-GLYCalc 4.0
AP-42

Applicable Requirements

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

6.1.13 Maximum Throughput Limitation. The maximum dry natural gas throughput to the TEG dehydration unit/still column (DEHY) shall not exceed 25 million standard cubic feet per day (mmscfd). Compliance with the Maximum Throughput Limitation shall be determined using a twelve month rolling total. A twelve month rolling total shall mean the sum of the monthly throughput at any given time during the previous twelve consecutive calendar months. [45CSR13, R13-2585,6.1.1]

6.1.16. *40 C.F.R. §63.764 General standards.* (Note: The following section numbers match those of 40 C.F.R. §63.764)

(a) Table 2 of the Part 63 Subpart HH specifies the provisions of subpart A (General Provisions) of Part 63 that apply and those that do not apply to owners and operators of affected sources subject to this subpart.

(b) All reports required under this subpart shall be sent to the Administrator at the appropriate address listed in 40 C.F.R. §63.13. Reports may be submitted on electronic media.

(d) Except as specified in paragraph (e)(1) of this requirement, the owner or operator of an affected source located at an existing or new area source of HAP emissions shall comply with the applicable standards specified in paragraph (d) of this section.

(2) Each owner or operator of an area source not located in a UA plus offset and UC boundary (as defined in 40 C.F.R. §63.761) shall comply with paragraphs (d)(2)(i) through (iii) of this requirement.

(i) Determine the optimum glycol circulation rate using the following equation:

$$L_{OPT} = 1.15 * 3.0 \frac{\text{gal TEG}}{\text{lb } H_2O} * \left(\frac{F * (I - O)}{24 \text{ hr/day}} \right)$$

Where:
L_{OPT}= Optimal circulation rate, gal/hr.
F = Gas flowrate (MMSCF/D).
I = Inlet water content (lb/MMSCF).
O = Outlet water content (lb/MMSCF).
3.0 = The industry accepted rule of thumb for a TEG-to water ratio (gal TEG/lb H_2O).
1.15 = Adjustment factor included for a margin of safety.

(ii) Operate the TEG dehydration unit such that the actual glycol circulation rate does not exceed the optimum glycol circulation rate determined in accordance with paragraph (d)(2)(i) of this section. If the TEG dehydration unit is unable to meet the sales gas specification for moisture content using the glycol circulation rate determined in accordance with paragraph (d)(2)(i), the owner or operator must calculate an alternate circulation rate using GRI–GLYCalc^{TM} , Version 3.0 or higher. The owner or operator must document why the TEG dehydration unit must be operated using the alternate circulation rate and submit this documentation with the initial notification in accordance with 40 C.F.R. §63.775(c)(7).

(iii) Maintain a record of the determination specified in paragraph (d)(2)(ii) in accordance

with the requirements in 40 C.F.R. §63.774(f) and submit the Initial Notification in accordance with the requirements in 40 C.F.R. §63.775(c)(7). If operating conditions change and a modification to the optimum glycol circulation rate is required, the owner or operator shall prepare a new determination in accordance with paragraph (d)(2)(i) or (ii) of this section and submit the information specified under 40 C.F.R. §63.775(c)(7)(ii) through (v).

(e) *Exemptions.* (1) The owner or operator of an area source is exempt from the requirements of paragraph (d) of this section if the criteria listed in paragraph (e)(1)(ii) of this section are met, except that the records of the determination of these criteria must be maintained as required in 40 C.F.R. §63.774(d)(1).

(ii) The actual average emissions of benzene from the glycol dehydration unit process vent to the atmosphere are less than 0.90 megagram per year (1 ton/yr), as determined by the procedures specified in 40 C.F.R. §63.772(b)(2).

[40 C.F.R. §63.764(a), (b), (d), (e), 45CSR34] [F1, DEHY]

6.1.17. If the annual emissions of benzene from the dehydration unit ever equals or exceeds 0.90 megagram per year (1 tpy) as calculated per 40 C.F.R. §63.772(b)(2) (requirement 6.3.2), the permittee shall comply with section d(2)(i) through (iii) of 40 C.F.R. §63.764 **(**requirement 6.1.16). **[45CSR§30-5.1.c] [F1, DEHY]**

6.1.19. The glycol dehydration unit/still column (DEHY) shall be equipped with a fully functional JATCO BTEX Elimination System at all times. The JATCO BTEX Elimination System shall be operated according to manufacturer's specifications.
[45CSR13, R13-2585, 6.1.5.]

__X_ 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.)

6.2. The permittee shall monitor the throughput of dry natural gas fed to the dehydration system on a monthly basis for each glycol dehydration unit. Compliance with the annual total shall be based on a 12-month rolling total.
[45CSR13, R13-2585, 6.2.2~~3~~, 45CSR§30-5.1.c]

6.2.3. In order to demonstrate compliance with the area source status, as well as the 1 ton per year benzene exemption provided under 6.1. 16(e)(1)(ii) using GRI-GLYCalc V3 or higher, the dehydration system must be accurately defined by monitoring and recording actual operating parameters associated with the dehydration system. These parameters shall be measured at least once quarterly, with the exception of natural gas flowrate, annual daily average, natural gas flowrate maximum design capacity, and wet gas composition, in order to define annual average values or, if monitoring is not practical, some parameters may be assigned default values as listed below.

The WV Division of Air Quality requires the following actual operating parameters be measured

or assumed to equal the default values listed below in order to satisfy this monitoring requirement when using the Gas Analysis and Process Data, GLYCalc emission modeling method:

- Natural Gas Flowrate:
  - operating hours per quarter,
  - quarterly throughput (MMscf/quarter)
  - annual daily average (MMscf/day), and
  - maximum design capacity (MMscf/day)
- Absorber temperature and pressure
- Lean glycol circulation rate
- Glycol pump type and maximum design capacity (gpm)
- Flash tank temperature and pressure, if applicable
- Stripping Gas flow rate, if applicable
- Wet gas composition (upstream of the absorber – dehydration column) Sampled in accordance with GPA method 2166 and analyzed consistent with GPA extended method 2286 as well as the procedures presented in the GRI-GLYCalc Technical Reference User Manual and Handbook V4.
- Wet gas water content (lbs H_2O/MMscf)
- Dry gas water content (lbs H_2O/MMscf) at a point directly after exiting the dehydration column and before any additional separation points

The following operating parameter**(s)** may be assigned default values when using GRI-GLYCalc:

- Dry Gas water content at a point directly after exiting the dehydration column and before any additional separation points or assume pipeline quality at 7 lb H_2O / MMscf.
- Lean glycol water content if not directly measured may use the default value of 1.5 % water as established by GRI.
- Lean glycol circulation rate may be estimated using the recirculation ratio of 3 gal TEG / lb H_2O removed.
- Wet gas water content can be assumed to be saturated.

Note: If you are measuring and using actual wet or dry gas water content, then you should also measure the glycol recirculation rate rather than using the default TEG recirculation ratio.

[45CSR§30-5.1.c, 45CSR13, R13-2585, 6.2.3, 40 CFR §63.772(b)(2)(i), 45CSR34][F1, DEHY]

6.3.1. The permittee shall determine the composition of the wet natural gas by sampling in accordance with GPA Method 2166 and analyzing according to extended GPA Method 2286 analysis as specified in the GRI-GLYCalc V4 Technical Reference User Manual and Handbook. As specified in the handbook, the permittee shall sample the wet gas stream at a location prior to the glycol dehydration contactor column, but after any type of separation device, in accordance with GPA method 2166. The permittee may utilize other equivalent methods provided they are approved in advance by DAQ as part of a testing protocol. If alternative methods are proposed, a test protocol shall be submitted for approval no later than 60 days before the scheduled test date. The initial compliance test must be conducted within 180 days of permit issuance or within 180 days of startup of the glycol dehydration unit, whichever is later.

Note: The DAQ defines a representative wet gas sample to be one that is characteristic of the average gas composition dehydrated throughout a calendar year. If an isolated sample is not indicative of the annual average composition, the permittee may opt to produce a weighted average based on throughput between multiple sampling events, which can be used to define a more representative average annual gas composition profile.

[45CSR §13-5.11, 45CSR13, R13-2585, 6.3.4.]

6.3.2. The following testing and compliance provisions of 40 C.F.R. Part 63 Subpart HH *National Emission Standards for Hazardous Air Pollutants From Oil and Natural Gas Production Facilities* are applicable to the facility:

40 C.F.R. *§ 63.772 Test methods, compliance procedures, and compliance demonstrations* (Note: The following section numbers match those of 40 C.F.R. §63.772)

(b) Determination of glycol dehydration unit flowrate, benzene emissions, or BTEX emissions. The procedures of this paragraph shall be used by an owner or operator to determine glycol dehydration unit natural gas flowrate, ~~or~~ benzene emissions, or BTEX emissions to meet the criteria for an exemption from control requirements under 40 C.F.R. §63.764(e)(1) (requirement 6.1.16).

(2) The determination of actual average benzene or BTEX emissions from a glycol dehydration unit shall be made using the procedures of paragraph (b)(2)(i) of this requirement. Emissions shall be determined either uncontrolled, or with federally enforceable controls in place.

(i) The owner or operator shall determine actual average benzene or BTEX emissions using the model GRI-GLYCalc™ , Version 3.0 or higher, and the procedures presented in the associated GRI-GLYCalc™ Technical Reference Manual. Inputs to the model shall be representative of actual operating conditions of the glycol dehydration unit and may be determined using the procedures documented in Gas Research Institute (GRI) report entitled "Atmospheric Rich/Lean Method for Determining Glycol Dehydrator Emissions " (GRI-95/0368.1).

Compliance with this monitoring and testing requirement shall be streamlined by demonstrating compliance with the monitoring specified within 6.2.3~~5~~ and the testing provision of 6.3.1.

[40 C.F.R. §63.772 (b)(2)(i), 45CSR34, 45CSR §13-5.11, 45CSR13, R13-2585, 6.3.5.] [DEHY, F1]

6.3.3. In order to demonstrate compliance with 3.1.11, upon request of the Director, the permittee shall demonstrate compliance with the HAP emissions thresholds using GLYCalc Version 3.0 or higher. The permittee shall sample in accordance with GPA Method 2166 and analyze the samples utilizing the extended GPA Method 2286 as specified in the GRI-GLYCalc V4 Technical Reference User Manual and Handbook.
[45CSR13, R13-2585, 6.3.3.]

6.4.1. The permittee shall maintain a record of the dry natural gas throughput through the dehydration system to demonstrate compliance with section 6.1.13~~19~~ of this permit.
[45CSR13, R13-2585, 6.4.7.]

6.4.6. For the purpose of documenting compliance with the emission limitations, HAP major source thresholds, as well as the benzene exemption, the permittee shall maintain records of all monitoring data, wet gas sampling, and annual GRI-GLYCalc™ emission estimates. Said records shall be maintained for a period of five (5) years on site or in a readily accessible off-site location maintained by the permittee. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review. Any records submitted to the agency pursuant to a requirement of this permit or upon request by the Director shall be certified by a responsible official.
[45CSR 13, R13-2585, 6.4.9.] [DEHY, F1]

6.4.7. An owner or operator of a glycol dehydration unit that meets the exemption criteria in 40 C.F.R. §63.764(e)(1)(ii) (Section 6.1.19 of this permit) shall maintain records the actual average benzene emissions (in terms of benzene emissions per year) as determined in accordance with 40 C.F.R. §63.772(b)(2) (Section 6.3.2 of this permit)
[40 C.F.R. §63.774(d)(1)(ii) and 45CSR34] [DEHY, F1]

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

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
EG-1	Emergency Generator	EG-1C

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Lean Burn, 4 Stroke, Kohler 100REZG Generator with GM 8.1L Engine

Manufacturer:	**Model number:**	**Serial number:**
Kohler	100REZG	N/A

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

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
155.2 hp/115.7kW

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
1,137 scf/hr	0.57 MMscf/yr	<500 hr/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: 155.2 hp/1,800 rpm	**Type and Btu/hr rating of burners:** 7,470 Btu/hp-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

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	2000 gr/10^6 scf	NA	1,000

Emissions Data

Criteria Pollutants	Potential Emissions	
	PPH	TPY

Carbon Monoxide (CO)	0.06	0.02
Nitrogen Oxides (NO_X)	0.04	0.01
Lead (Pb)	-	-
Particulate Matter ($PM_{2.5}$)	-	-
Particulate Matter (PM_{10})	0.01	0.003
Total Particulate Matter (TSP)	0.01	0.003
Sulfur Dioxide (SO_2)	<0.001	<0.001
Volatile Organic Compounds (VOC)	0.13	0.03
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
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.).

Manufacturer Supplied Emission Factors

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.

8.1.1. **Maximum Yearly Operation Limitation**. The maximum yearly hours of operation for the 155.2 hp Kohler 100REZG emergency generator (EG-1) shall not exceed 500 hours per year. Compliance with the maximum yearly operation limitation shall be determined using a twelve month rolling total. A twelve month rolling total shall mean the sum of the hours of operation at any given time during the previous twelve consecutive calendar months.

8.1.2. Requirements for Use of Catalytic Reduction Devices (EG-1)

a. Rich-burn natural gas compressor engine (EG-1) equipped with three-way catalytic reduction air pollution control device shall be fitted with a closed-loop, automatic air/fuel ratio controller to ensure emissions of regulated pollutants do not exceed the potential to emit for any engine/NSCR combination under varying load. The closed-loop, automatic air/fuel ratio controller shall control a fuel metering valve to deliver additional fuel when required to ensure a fuel-rich mixture and a resultant exhaust oxygen content of less than or equal to 0.5%. The automatic air/fuel ratio controller shall also incorporate dual-point exhaust gas temperature and oxygen sensors which provide temperature and exhaust oxygen content differential feedback. Such controls shall ensure proper and efficient operation of the engine and air pollution control device;

b. The automatic air/fuel ratio controller or closed-loop automatic feedback controller shall provide a warning or indication to the operator and/or be interlocked with the engine ignition system to cease engine operation in case of a masking, poisoning or over rich air/fuel ratio situation which results in performance degradation or failure of the catalyst element; and

c. No person shall knowingly:

1. Remove or render inoperative any air pollution or auxiliary air pollution control device installed subject to the requirements of this permit;
2. Install any part or component when the principal effect of the part or component is to bypass, defeat or render inoperative any air pollution control device or auxiliary air pollution control device installed subject to the requirements of this permit; or
3. Cause or allow engine exhaust gases to bypass any catalytic reduction device.

8.1.3. The emergency generator (EG-1) is subject to the requirements of 40 C.F.R. 63, Subpart ZZZZ. EG-1 is a new stationary RICE located at an area source and shall meet the requirements of 40 C.F.R. 63, Subpart ZZZZ by meeting the requirements of 40 C.F.R. 60, Subpart JJJJ for spark ignition engines. See Section 9.0.
[40 C.F.R. §63.6590(c)]

__X_ 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.)

8.2.1. Catalytic Oxidizer Control Devices (EG-1) The permittee shall regularly inspect, properly maintain and/or replace catalytic reduction devices and auxiliary air pollution control devices to ensure functional and effective operation of the engine's physical and operational design. The permittee shall ensure proper operation, maintenance, and performance of catalytic reduction devices and auxiliary air pollution control devices by:

1. Maintaining proper operation of the automatic air/fuel ratio controller or automatic feedback controller
2. Following operating and maintenance recommendations of the catalyst element manufacturer.

. **[45CSR13, R13-2585, 5.2.1]**

8.4.1. To demonstrate compliance with section 8.1.1 the applicant shall maintain records of the amount and type of fuel consumed in the microturbine generator and the hours of operation of the microturbine generator. These records shall be maintained on-site or in a readily accessible off-site location maintained by the permittee for a period of five (5) years. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review. Any records submitted to the agency pursuant to a requirement of this permit or upon request by the Director shall be certified by a responsible official.
[45CSR13, R13-2585, 5.4.1.]

8.4.2. To demonstrate compliance with section 8.1.2, the permittee shall maintain records of all catalytic reduction device maintenance. Said records shall be maintained on site or in a readily accessible off-site location maintained by the permittee for a period of five (5) years. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review. Any records submitted to the agency pursuant to a requirement of this permit or upon request by the Director shall be certified by a responsible official.
[45CSR13, R13-2585, 5.4.2.]

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 E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
1C (F1)	Model No. 630 Flare	NA

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Ground Flare
850 scf/min capacity
51,000 scf/hr
907,000 Btu/hr

Manufacturer:	**Model number:**	**Serial number:**
Flare Industries	630	N/A

Construction date:	**Installation date:**	**Modification date(s):**
NA	July 2005	N/A

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
2850 Scf/min; 907,700 Btu/hr

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
51,000 scf/hr	446,760,000 scf/yr	8,760 hours

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: NA	**Type and Btu/hr rating of burners:** 907,700 Btu/hr

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

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/Waste Gas	2,000 ppm	NA	907,700 Btu/hr

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.08	0.33
Nitrogen Oxides (NO_X)	0.03	0.13
Lead (Pb)	-	-
Particulate Matter ($PM_{2.5}$)	-	-
Particulate Matter (PM_{10})	-	-
Total Particulate Matter (TSP)	-	-
Sulfur Dioxide (SO_2)	-	-
Volatile Organic Compounds (VOC)	0.14	0.59
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Benzene	0.01	0.04
Ethylbenzene	0.01	0.01
Formaldehyde	0.01	0.01
Xylene	0.016	0.04
n-Hexane	0.005	0.02
Toluene	0.002	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.).

GRI-GLYCalc 4.0
AP-42

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.

6.1.1. Flares shall be designed for and operated with no visible emissions as determined by the methods specified in 40 C.F.R. §60.18(f), except for periods not to exceed a total of 5 minutes during any 2 consecutive hours. This streamlined limit of no visible emissions will ensure compliance with 45CSR§6-4.3. During the exception period when visible emissions are allowed, the visible emissions shall not exceed 20% opacity except for periods of start-up as outlined in 45CSR§6-4.4. (i.e., less than forty (40%) percent opacity, for a period or periods aggregating no more than eight (8) minutes per start-up).
[40 C.F.R. §60.18(c)(1), 45CSR§6-4.3 and 45CSR§16-4.1.] [45CSR13, R13-2585, 6.1.~~1~~ 3.b.]

6.1.2. Flares shall be operated with a flame present at all times, as determined by the methods specified in 40 C.F.R. §60.18(f).
[40 C.F.R. §60.18(c)(2) and 45CSR§16-4.1.] [45CSR13, R13-2585, 6.1. 3.c]

6.1.3. Flares shall be used only with the net heating value of the gas being combusted being 11.2 MJ/scm (300 Btu/scf) or greater if the flare is steam-assisted or air-assisted; or with the net heating value of the gas being combusted being 7.45 MJ/scm (200 Btu/scf) or greater if the flare is nonassisted. The net heating value of the gas being combusted shall be determined by the methods specified in paragraph (f)(3) of this section.
[40 C.F.R. §60.18(c)(3)(ii) and 45CSR§16-4.1.] [45CSR13, R13-2585, 6.1. 3.d]

6.1. Nonassisted flares shall be designed for and operated with an exit velocity, as determined by the methods specified in paragraph (f)(4) of this section, less than 18.3 m/sec (60 ft/sec), except as provided in paragraphs (c)(4) (ii) and (iii) listed below.
[40 C.F.R. 60.18(c)(4)(i) and 45CSR§16.4.1] [45CSR13, R13-2585, 6.1.~~7~~3.e]

(ii) Nonassisted flares designed for and operated with an exit velocity, as determined by the methods specified in paragraph (f)(4) of this section, equal to or greater than 18.3 m/sec (60 ft/sec) but less than 122 m/sec (400 ft/sec) are allowed if the net heating value of the gas being combusted is greater than 37.3 MJ/scm (1,000 Btu/scf).
[40 C.F.R. 60.18(c)(4)(ii) and 45CSR§16-4.1.] [45CSR13, R13-2585, 6.1.~~7~~ 3.f]

(iii) Nonassisted flares designed for and operated with an exit velocity, as determined by the methods specified in paragraph (f)(4) of this section, less than the velocity, V_{max}, as determined by the method specified in paragraph (f)(5) of this section, and less than 122 m/sec (400 ft/sec) are allowed.
[40 C.F.R. 60.18(c)(4)(iii) and 45CSR§16-4.1.] [45CSR13, R13-2585, 6.1.~~7~~ 3.g]

6.1.5. Flares used to comply with this section shall be nonassisted.
[40 C.F.R. §60.18(c)(6) and 45CSR§16-4.1.] [45CSR13, R13-2585, 6.1.~~8~~ 3.a.]

6.1.6. Owners or operators of flares used to comply with the provisions of this subpart shall monitor these control devices to ensure that they are operated and maintained in conformance with their designs.
[40 C.F.R. §60.18(d) and 45CSR§16-4.1.]

6.1.7. Flares used to comply with provisions of this subpart shall be operated at all times when emissions may be vented to them.
[40 C.F.R. §60.18(e) and 45CSR§16-4.1.]

6.1.8. Method 22 of appendix A to this part shall be used to determine the compliance of flares with the visible emission provisions of this subpart. The observation period is 2 hours and shall be used

according to Method 22.
[40 C.F.R. §60.18(f)(1) and 45CSR§16-4.1.]

6.1.9. The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame.
[40 C.F.R. §60.18(f)(2) and 45CSR§16-4.1.]

6.1.10. No person shall cause, suffer, allow or permit particulate matter to be discharged from any incinerator into the open air in excess of the quantity determined by use of the following formula:

Emissions (lb/hr) = F x Incinerator Capacity (tons/hr)
Where, the factor, F, is as indicated in Table I below:
Table I: Factor, F, for Determining Maximum Allowable Particulate Emissions
Incinerator Capacity: Factor F
A. Less than 15,000 lbs/hr 5.43
B. 15,000 lbs/hr or greater 2.72

Calculation for PM Emissions:

$$(5.43) \times (52.4 \frac{lb}{hr}) \times (\frac{ton}{2000 lb}) = 0.142 \frac{lb}{hr}$$

[45CSR§6-4.1]

6.1.11. No person shall cause, suffer, allow or permit the emission of particles of unburned or partially burned refuse or ash from any incinerator which are large enough to be individually distinguished in the open air.
[45CSR§6-4.5]

6.1.12. Incinerators, including all associated equipment and grounds, shall be designed, operated and maintained so as to prevent the emission of objectionable odors.
[45CSR§6-4.6]

6.1.14. Maximum emissions from the Flare, F1, shall not exceed the following limits:

Emissions Point ID No.	Pollutant	Maximum Emissions	
		Hourly (lb/hr)	Annual (tpy)
F1	NO_x	0.06	0.27
	CO	0.34	1.47
	VOC	0.30	1.32

[45CSR13, R13-2585, 6.1.2~~1~~]

6.1.15. The owner or operator of an affected area source that is not located in an Urban-1 county, as defined in 40 C.F.R. §63.761, the construction or reconstruction of which commences before July 8, 2005, shall achieve compliance with the provisions of this subpart no later than the dates specified in paragraph (ii) of this section, except as provided for in 40 C.F.R. §63.6(i).
(ii) If the affected area source is not located within any UA plus offset and UC boundary, as defined in §63.761, the compliance date is January 5, 2009. **[40 C.F.R. §63.760(f)(5), 45CSR34] [F1, DEHY]**

6.1.18. The permittee is not required to conduct a flare compliance assessment for concentration of sample (i.e. Method 18) and tip velocity (i.e. Method 2) until such time as the Director requests a flare compliance assessment to be conducted in accordance with section 6.3.4, but the permittee is required to conduct a flare design evaluation in accordance with section 6.4.3. Alternatively, the permittee may elect to demonstrate compliance with the flare design criteria requirements of sections 6.1.1 through 6.1.5 by complying with the compliance assessment testing requirements of section 6.3.4.
[45CSR13, R13-2585, 6.1.4.]

__X_ 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.)

6.2.1. In order to demonstrate compliance with the requirements of 6.1.2, the permittee shall monitor the presence or absence of a flare pilot flame using a thermocouple or any other equivalent device, except during SSM events.
[45CSR13, R13-2585, 6.2.1]

6.3.3. In order to demonstrate compliance with the flare opacity requirements of 6.1.1, the permittee shall conduct a Method 22 opacity test for at least two hours. This test shall demonstrate no visible emissions are observed for more than a total of 5 minutes during any 2 consecutive hour period using 40CFR60 Appendix A Method 22. The permittee shall conduct this test within one (1) year of permit issuance or initial startup whichever is later. The visible emission checks shall determine the presence or absence of visible emissions. At a minimum, the observer must be trained and knowledgeable regarding the effects of background contrast, ambient lighting, observer position relative to lighting, wind, and the presence of uncombined water (condensing water vapor) on the visibility of emissions. This training may be obtained from written materials found in the References 1 and 2 from 40 CFR part 60, appendix A, Method 22 or from the lecture portion of 40 CFR part 60, appendix A, Method 9 certification course.
[45CSR13, R13-2585, 6.3.1.]

6.3.4. The Director may require the permittee to conduct a flare compliance assessment to demonstrate compliance with sections 6.1.1 through 6.1.5. This compliance assessment testing shall be conducted in accordance with Test Method 18 for organics and Test Method 2, 2A, 2C, or 2D in appendix A to 40 CFR part 60, as appropriate, or other equivalent testing approved in writing by the Director. Also, Test Method 18 may require the permittee to conduct Test Method 4 in conjunction with Test Method 18.
[45CSR13, R13-2585, 6.3.2.]

6.4.2. For the purpose of demonstrating compliance with the limit set forth in section 6.1.2and 6.2.1., the permittee shall maintain records of the times and duration of all periods which the pilot flame was absent.
[45CSR13, R13-2585, 6.4. 1.]

6.4.3. For the purpose of demonstrating compliance with the limit set forth in 6.1.18 and 6.3.4., the permittee shall maintain a record of the flare design evaluation. The flare design evaluation shall include net heat value calculations, exit (tip) velocity calculations, and all supporting concentration calculation and other related information requested by the Director. **[45CSR13, R13-2585, 6.4. 2.]**

6.4.4. For the purpose of demonstrating compliance with the limit set forth in 6.1.1, the permittee shall maintain records of visible emission opacity tests conducted per Section 6.3.3.
[45CSR13, R13-2585, 6.4.5.]

6.4.5. For the purpose of demonstrating compliance with the ~~limits~~ requirements set forth in 6.1.1 through 6.1.5, the permittee shall maintain records of testing conducted in accordance with 6.3.5 **[45CSR13, R13-2585, 6.4.3.]**

6.4.8. The permittee shall document and maintain the corresponding records specified by the on-going monitoring requirements of 6.2 and testing requirements of 6.3 **[45CSR13, R13-2585, 6.4.4.]**

6.4.9. All records required under Section 6.4 shall be maintained on site or in a readily accessible off-site location maintained by the permittee for a period of five (5) years. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review. Any records submitted to the agency pursuant to a requirement of this permit or upon request by the Director shall be certified by a responsible official. **[45CSR13, R13-2585, 6.4.8.]**

6.5.1. If permittee is required by the Director to demonstrate compliance with section 6.3.5, then the permittee shall submit a testing protocol at least thirty (30) days prior to testing and shall submit a notification of the testing date at least fifteen (15) days prior to testing. The permittee shall submit the testing results within sixty (60) days of testing and provide all supporting calculations and testing data. **[45CSR13, R13-2585, 6.5.1.]**

6.5.2. Any deviation(s) from the allowable visible emission requirement for any emission source discovered during observations using 40CFR Part 60, Appendix A, Method 9 or 22 shall be reported in writing to the Director of the Division of Air Quality as soon as practicable, but in any case within ten (10) calendar days of the occurrence and shall include at least the following information: the results of the visible determination of opacity of emissions, the cause or suspected cause of the violation(s), and any corrective measures taken or planned. **[45CSR13, R13-2585, 6.5.2.]**

6.5.3. Any deviation(s) from the flare design and operation criteria in Section 6.1.1 through 6.1.5 shall be reported in writing to the Director of the Division of Air Quality as soon as practicable, but in any case within ten (10) calendar days of discovery of such deviation. **[45CSR13, R13-2585, 6.5.3.]**

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

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

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
(RB1) Reboiler	Reboiler	N/A

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Reboiler
0.75 MMBtu/hr Heat Input

Manufacturer:	**Model number:**	**Serial number:**
Natco/Kinwind	N/A	N/A
Construction date:	**Installation date:**	**Modification date(s):**
N/A	2004	05/01/2014

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
0.75 MMBtu/hr Heat Input
1,072 scf/hr fuel consumption

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
NA	NA	8,760 hours

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

Does this emission unit combust fuel? _X_Yes ___ No	**If yes, is it?** ___ Indirect Fired _X_Direct Fired
Maximum design heat input and/or maximum horsepower rating: 0.75 MMBtu/hr	**Type and Btu/hr rating of burners:** 0.75 MMBtu/hr

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

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	2,000 gr/10^6 scf	NA	1,000

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	0.07	0.28
Nitrogen Oxides (NO_X)	0.08	0.33
Lead (Pb)	-	-
Particulate Matter ($PM_{2.5}$)	-	-
Particulate Matter (PM_{10})	0.01	0.03
Total Particulate Matter (TSP)	0.01	0.03
Sulfur Dioxide (SO_2)	0.01	0.01
Volatile Organic Compounds (VOC)	0.01	0.02
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Benzene	0.01	0.01
Formaldehyde	0.01	0.01
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.).

HAP-CALC 3.01

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.

5.1.1. No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any fuel burning unit which is greater than ten (10) percent opacity based on a six minute block average.
[45CSR§2-3.1] [45CSR13, R13-2585, 7.1.2]

5.1.2. Maximum Design Heat Input. The maximum design heat input for the Glycol Dehydration Unit Reboiler (RB-1) shall not exceed 0.75 MMBtu/hr.

__X_ 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.)

5.3.1. Compliance with the visible emission requirements of 45CSR§2-3.1 (Section 5.1.1. of this permit) shall be determined in accordance with 40 C.F.R. Part 60, Appendix A, Method 9 or by using measurements from continuous opacity monitoring systems approved by the Director. The Director may require the installation, calibration, maintenance and operation of continuous opacity monitoring systems and may establish policies for the evaluation of continuous opacity monitoring results and the determination of compliance with the visible emission requirements of 45CSR§2-3.1 (Section 5.1.1 of this permit). Continuous opacity monitors shall not be required on fuel burning units which employ wet scrubbing systems for emission control.
[45CSR§2-3.2] [45CSR13, R13-2585, 7.3.]

5.4.1. The permittee shall maintain records of all monitoring data required by Section 5.2.1 documenting the date and time of each visible emission check, the emission point or equipment/source identification number, the name or means of identification of the observer, the results of the check(s), whether the visible emissions are normal for the process, and, if applicable, all corrective measures taken or planned. The permittee shall also record the general weather conditions (i.e. sunny, approximately 80°F, 6 - 10 mph NE wind) during the visual emission check(s). Should a visible emission observation be required to be performed per the requirements specified in Method 9, the data records of each observation shall be maintained per the requirements of Method 9
[45CSR13, R13-2585, 7.4.1]

5.5.1. Any deviation(s) from the allowable visible emission requirement for any emission source discovered during observations using 40 CFR Part 60, Appendix A, Method 9 or 22 shall be reported in writing to the Director of the Division of Air Quality as soon as practicable, but in any case within (10) calendar days of the occurrence and shall include at least the following

	information: the results of the visible determination of opacity of emissions, the cause or suspected cause of the violations(s), and any corrective measures taken or planned **[45CSR13, R13-2585, 7.5.1]**

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
TKO-1	100 bbl Pipeline Fluids Tank	N/A

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

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

Construction date:	**Installation date:**	**Modification date(s):**
2014	2014	

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

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
4.027 gal/hr	35,277 gal/yr	8,760 hours

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: N/A	**Type and Btu/hr rating of burners:** NA

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.
NA

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)	-	-
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)		0.467
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
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.).

Tanks 4.0.9d
E&P Tanks

Applicable Requirements

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

7.1.1. The facility shall install a carbon filter on the two (2) 100 bbl pipeline fluids storage tanks (TKO-1 and TKO-2).
[45CSR13, R13-2585, 8.1.1]

7.1.2. The maximum quantity of pipeline fluids that shall be stored in the two (2) 100 bbl storage tanks (TKO-1 and TKO-2) shall not exceed 70,533 gallons per year. Compliance with this limit shall be demonstrated using a twelve month rolling total. A twelve month rolling total shall mean the sum of the monthly throughput at any given time during the previous twelve consecutive calendar months.
[45CSR13, R13-2585, 8.1.2.]

7.1.4. The two (2) 100 bbl pipeline fluids storage tanks (TKO-1 and TKO-2) shall be operated in accordance with the plans and specifications filed in Permit Application R13-2585D, including the parameters utilized in the GOR calculations.
[45CSR13, R13-2585, 8.1.4.]

__X_ 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.)

7.2.1. The permitee shall monitor the throughput to the two (2) 100 bbl pipeline fluids storage tanks (TKO-1 and TKO-2) on a monthly basis.
[45CSR13, R13-2585, 8.2.1]

7.4.1. The permittee shall maintain accurate records of the dates the carbon filters were replaced.
[45CSR13, R13-2585, 8.3.2.][TK-01, TK-02]

7.4.2. To demonstrate compliance with sections 7.1.2 and 7.1.3, the permittee shall maintain a record of the aggregate throughput for the storage tanks and material loaded on a monthly and rolling twelve month total.
[45CSR13, R13-2585, 8.3.4.]

7.4.3. *Record of Malfunctions.* The permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the storage tanks during which excess emissions occur. For each such case, the following information shall be recorded:

a. The equipment involved.

b. Steps taken to minimize emissions during the event.

c. The duration of the event.

d. The estimated increase in emissions during the event.

For each such case associated with an equipment malfunction, the additional information shall also be recorded:

e. The cause of the malfunction.

f. Steps taken to correct the malfunction.

g. Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.

[45CSR13, R13-2585, 8.3.3]

7.4.4. All records required under Section 7.4 shall be maintained on site or in a readily accessible off-site location maintained by the permittee for a period of five (5) years. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review. Any records submitted to the agency pursuant to a requirement of this permit or upon request by the Director shall be certified by a responsible official.
[45CSR13, R13-2585, 8.3.1]

7.5.1. Upon request by the Director, the permittee shall report deviations within a requested time frame of any occurrences when the control device was operated outside of the parameters defined in the monitoring plan.
[45CSR13, R13-2585, 8.4.1]

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

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

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
TKO-2	100 bbl Pipeline Fluids Tank	N/A

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

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

Construction date:	**Installation date:**	**Modification date(s):**
2014	2014	

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

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
4.027 gal/hr	35,277 gal/yr	8,760 hours

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: N/A	**Type and Btu/hr rating of burners:** NA

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.
NA

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)	-	-
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)		0.467
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
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.).

Tanks 4.0.9d
E&P Tanks

Applicable Requirements

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

7.1.1. The facility shall install a carbon filter on the two (2) 100 bbl pipeline fluids storage tanks (TKO-1 and TKO-2).
[45CSR13, R13-2585, 8.1.1]

7.1.2. The maximum quantity of pipeline fluids that shall be stored in the two (2) 100 bbl storage tanks (TKO-1 and TKO-2) shall not exceed 70,533 gallons per year. Compliance with this limit shall be demonstrated using a twelve month rolling total. A twelve month rolling total shall mean the sum of the monthly throughput at any given time during the previous twelve consecutive calendar months.
[45CSR13, R13-2585, 8.1.2.]

7.1.4. The two (2) 100 bbl pipeline fluids storage tanks (TKO-1 and TKO-2) shall be operated in accordance with the plans and specifications filed in Permit Application R13-2585D, including the parameters utilized in the GOR calculations.
[45CSR13, R13-2585, 8.1.4.]

__X_ 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.)

7.2.1. The permitee shall monitor the throughput to the two (2) 100 bbl pipeline fluids storage tanks (TKO-1 and TKO-2) on a monthly basis.
[45CSR13, R13-2585, 8.2.1]

7.4.1. The permittee shall maintain accurate records of the dates the carbon filters were replaced.
[45CSR13, R13-2585, 8.3.2.][TK-01, TK-02]

7.4.2. To demonstrate compliance with sections 7.1.2 and 7.1.3, the permittee shall maintain a record of the aggregate throughput for the storage tanks and material loaded on a monthly and rolling twelve month total.
[45CSR13, R13-2585, 8.3.4.]

7.4.3. *Record of Malfunctions.* The permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the storage tanks during which excess emissions occur. For each such case, the following information shall be recorded:

a. The equipment involved.

b. Steps taken to minimize emissions during the event.

c. The duration of the event.

d. The estimated increase in emissions during the event.

For each such case associated with an equipment malfunction, the additional information shall also be recorded:

e. The cause of the malfunction.

f. Steps taken to correct the malfunction.

g. Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.

[45CSR13, R13-2585, 8.3.3]

7.4.4. All records required under Section 7.4 shall be maintained on site or in a readily accessible off-site location maintained by the permittee for a period of five (5) years. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review. Any records submitted to the agency pursuant to a requirement of this permit or upon request by the Director shall be certified by a responsible official.
[45CSR13, R13-2585, 8.3.1]

7.5.1. Upon request by the Director, the permittee shall report deviations within a requested time frame of any occurrences when the control device was operated outside of the parameters defined in the monitoring plan.
[45CSR13, R13-2585, 8.4.1]

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

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

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
TL-01	Pipeline Fluids Truck Loading	N/A

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

Manufacturer:	**Model number:**	**Serial number:**
NA	NA	NA
Construction date:	**Installation date:**	**Modification date(s):**
2004	2004	NA200

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
70,533gal/yr

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
200 gal/hr	70,533 gal/yr	8,760 hours

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: N/A	**Type and Btu/hr rating of burners:** NA

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.
NA

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)	-	-
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)	0.479	0.087
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
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.).

AP-42 Emission Factors

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.

7.1.3 – The maximum quantity of pipeline fluids that shall be loaded in the Truck Loading (TL-01) area shall not exceed 70,533 gallons per year. Compliance with this limit shall be demonstrated using a twelve month rolling total. A twelve month rolling total shall mean the sum of the monthly throughput at any given time during the previous twelve consecutive calendar months. – 45SCR13, R13-2585, 8.1.3

__X_ 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.)

7.1.3 – The maximum quantity of pipeline fluids that shall be loaded in the Truck Loading (TL-01) area shall not exceed 70,533 gallons per year. Compliance with this limit shall be demonstrated using a twelve month rolling total. A twelve month rolling total shall mean the sum of the monthly throughput at any given time during the previous twelve consecutive calendar months. – 45SCR13, R13-2585, 8.1.3. The permittee will maintain records of the aggregate thgouhput loaded on a monthly and twelve month rolling basis.

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 Forms

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: C1	**List all emission units associated with this control device.** CE-5	
Manufacturer: Environmental Air Solutions, LLC	**Model number:**	**Installation date:** 10/19/2013

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 ___ Flare _X_ Other (describe) _Oxidation Catalyst

___ 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
CO	100%	93%

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

The control device, C1, provides carbon monoxide reduction for the four stroke lean-burn engine, CE-5. The catalyst is situated in the exhaust piping of the engine and contains precious metals that oxidize carbon monoxide in the post combustion gas. The manufacturer guarantees a 93% reduction in post catalyst carbon monoxice emissions. The oxidation catalyst is designed to treat 4,159 cf/min of post combustion gas.

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.**

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

The catalyst is maintained and performance tests are performed in accordance with 40 CFR 63 Subpart ZZZZ.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: C2	**List all emission units associated with this control device.** CE-6	
Manufacturer: Environmental Air Solutions, LLC	**Model number:**	**Installation date:** 10/19/2013

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 ___ Flare _X_ Other (describe) _Oxidation Catalyst

___ 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
CO	100%	93%

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

The control device, C2, provides carbon monoxide reduction for the four stroke lean-burn engine, CE-6. The catalyst is situated in the exhaust piping of the engine and contains precious metals that oxidize carbon monoxide in the post combustion gas. The manufacturer guarantees a 93% reduction in post catalyst carbon monoxice emissions. The oxidation catalyst is designed to treat 4,159 cf/min of post combustion gas.

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.**

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

The catalyst is maintained and performance tests are performed in accordance with 40 CFR 63 Subpart ZZZZ.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: F1	**List all emission units associated with this control device.** Dehy, 1COND	
Manufacturer: Flare Industries	**Model number:** 630	**Installation date:** July 20015

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, methane, ethane	100%	98%

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

The control device, Flare F1, is a ground flare that controls emissions from the glycol dehydration unit and the condenser. Emissions from the dehydrator still vent go to the condenser to knockout any liquids and any remaining gases are combusted in the flare.

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

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.**

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

Pilot light continuously monitored
Method 22 Visual Emissions checks

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: EG-1C	**List all emission units associated with this control device.** EG-1	
Manufacturer: Kohler	**Model number:** Not Specified	**Installation date:** 2010

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) -- Three Way Catalytic Converter
___ 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
NOx	100%	>98%
CO	100%	>98%
VOC	100%	>98%

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

Design inlet volume: 220 SCFM
CATALYST MATERIALS ARE RHODIUM & PALLADIUM IN CERAMIC HONEYCOMB DESIGN.

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.**

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

No parameters outlined in R13-2585B or R30-00500020-2007.

However, the unit is inspected and maintained regularly to ensure functional and effective operation of the engine's physical and operational design. The automatic air/fuel ratio controller or automatic feedback controller is maintained properly, and the operating and maintenance recommendations of the catalyst element manufacturer are properly followed.

ATTACHMENT H

CAM Plan

ATTACHMENT H - Compliance Assurance Monitoring (CAM) Plan Form

For definitions and information about the CAM rule, please refer to 40 CFR Part 64. Additional information (including guidance documents) may also be found at http://www.epa.gov/ttn/emc/cam.html

CAM APPLICABILITY DETERMINATION

1) Does the facility have a PSEU (Pollutant-Specific Emissions Unit considered separately with respect to **EACH** regulated air pollutant) that is subject to CAM (40 CFR Part 64), which must be addressed in this CAM plan submittal? To determine applicability, a PSEU must meet **all** of the following criteria (*If No, then the remainder of this form need not be completed*): ☐ YES ☒ NO

a. The PSEU is located at a major source that is required to obtain a Title V permit;

b. The PSEU is subject to an emission limitation or standard for the applicable regulated air pollutant that is NOT exempt;

LIST OF EXEMPT EMISSION LIMITATIONS OR STANDARDS:

- NSPS (40 CFR Part 60) or NESHAP (40 CFR Parts 61 and 63) proposed after 11/15/1990.
- Stratospheric Ozone Protection Requirements.
- Acid Rain Program Requirements.
- Emission Limitations or Standards for which a WVDEP Division of Air Quality Title V permit specifies a continuous compliance determination method, as defined in 40 CFR §64.1.
- An emission cap that meets the requirements specified in 40 CFR §70.4(b)(12).

c. The PSEU uses an add-on control device (as defined in 40 CFR §64.1) to achieve compliance with an emission limitation or standard;

d. The PSEU has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than the Title V Major Source Threshold Levels; AND

e. The PSEU is NOT an exempt backup utility power emissions unit that is municipally-owned.

BASIS OF CAM SUBMITTAL

2) Mark the appropriate box below as to why this CAM plan is being submitted as part of an application for a Title V permit:

☐ RENEWAL APPLICATION. **ALL** PSEUs for which a CAM plan has NOT yet been approved need to be addressed in this CAM plan submittal.

☐ INITIAL APPLICATION (submitted after 4/20/98). **ONLY** large PSEUs (i. e., PSEUs with potential post-control device emissions of an applicable regulated air pollutant that are equal to or greater than Major Source Threshold Levels) need to be addressed in this CAM plan submittal.

☐ SIGNIFICANT MODIFICATION TO LARGE PSEUs. **ONLY** large PSEUs being modified after 4/20/98 need to be addressed in this cam plan submittal. For large PSEUs with an approved CAM plan, Only address the appropriate monitoring requirements affected by the significant modification.

3) [a] BACKGROUND DATA AND INFORMATION					
Complete the following table for **all** PSEUs that need to be addressed in this CAM plan submittal. This section is to be used to provide background data and information for each PSEU In order to supplement the submittal requirements specified in 40 CFR §64.4. If additional space is needed, attach and label accordingly.					
PSEU DESIGNATION	DESCRIPTION	POLLUTANT	CONTROL DEVICE	[b] EMISSION LIMITATION or STANDARD	[c] MONITORING REQUIREMENT
EXAMPLE Boiler No. 1	Wood-Fired Boiler	PM	Multiclone	45CSR§2-4.1.c.; 9.0 lb/hr	Monitor pressure drop across multiclone: Weekly inspection of multiclone

[a] If a control device is common to more than one PSEU, one monitoring plan may be submitted for the control device with the affected PSEUs identified and any conditions that must be maintained or monitored in accordance with 40 CFR §64.3(a). If a single PSEU is controlled by more than one control device similar in design and operation, one monitoring plan for the applicable control devices may be submitted with the applicable control devices identified and any conditions that must be maintained or monitored in accordance with 40 CFR §64.3(a).

[b] Indicate the emission limitation or standard for any applicable requirement that constitutes an emission limitation, emission standard, or standard of performance (as defined in 40 CFR §64.1).

[c] Indicate the monitoring requirements for the PSEU that are required by an applicable regulation or permit condition.

CAM MONITORING APPROACH CRITERIA			
Complete this section for **EACH** PSEU that needs to be addressed in this CAM plan submittal. This section may be copied as needed for each PSEU. This section is to be used to provide monitoring data and information for EACH indicator selected for EACH PSEU in order to meet the monitoring design criteria specified in 40 CFR §64.3 and §64.4. if more than two indicators are being selected for a PSEU or if additional space is needed, attach and label accordingly with the appropriate PSEU designation, pollutant, and indicator numbers.			
4a) PSEU Designation:	**4b) Pollutant:**	**4c) [a] Indicator No. 1:**	**4d) [a] Indicator No. 2:**
5a) GENERAL CRITERIA Describe the MONITORING APPROACH used to measure the indicators:			
[b] Establish the appropriate INDICATOR RANGE or the procedures for establishing the indicator range which provides a reasonable assurance of compliance:			
5b) PERFORMANCE CRITERIA Provide the SPECIFICATIONS FOR OBTAINING REPRESENTATIVE DATA, such as detector location, installation specifications, and minimum acceptable accuracy:			
[c] For new or modified monitoring equipment, provide VERIFICATION PROCEDURES, including manufacturer's recommendations, TO CONFIRM THE OPERATIONAL STATUS of the monitoring:			
Provide QUALITY ASSURANCE AND QUALITY CONTROL (QA/QC) PRACTICES that are adequate to ensure the continuing validity of the data, (i.e., daily calibrations, visual inspections, routine maintenance, RATA, etc.):			
[d] Provide the MONITORING FREQUENCY:			
Provide the DATA COLLECTION PROCEDURES that will be used:			
Provide the DATA AVERAGING PERIOD for the purpose of determining whether an excursion or exceedance has occurred:			

[a] Describe all indicators to be monitored which satisfies 40 CFR §64.3(a). Indicators of emission control performance for the control device and associated capture system may include measured or predicted emissions (including visible emissions or opacity), process and control device operating parameters that affect control device (and capture system) efficiency or emission rates, or recorded findings of inspection and maintenance activities.

[b] Indicator Ranges may be based on a single maximum or minimum value or at multiple levels that are relevant to distinctly different operating conditions, expressed as a function of process variables, expressed as maintaining the applicable indicator in a particular operational status or designated condition, or established as interdependent between more than one indicator. For CEMS, COMS, or PEMS, include the most recent certification test for the monitor.

[c] The verification for operational status should include procedures for installation, calibration, and operation of the monitoring equipment, conducted in accordance with the manufacturer's recommendations, necessary to confirm the monitoring equipment is operational prior to the commencement of the required monitoring.

[d] Emission units with post-control PTE ≥ 100 percent of the amount classifying the source as a major source (i.e., Large PSEU) must collect four or more values per hour to be averaged. A reduced data collection frequency may be approved in limited circumstances. Other emission units must collect data at least once per 24 hour period.

RATIONALE AND JUSTIFICATION

Complete this section for **EACH** PSEU that needs to be addressed in this CAM plan submittal. This section may be copied as needed for each PSEU. This section is to be used to provide rationale and justification for the selection of EACH indicator and monitoring approach and EACH indicator range in order to meet the submittal requirements specified in 40 CFR §64.4.

6a) PSEU Designation:	6b) Regulated Air Pollutant:

7) **INDICATORS AND THE MONITORING APPROACH**: Provide the rationale and justification for the selection of the indicators and the monitoring approach used to measure the indicators. Also provide any data supporting the rationale and justification. Explain the reasons for any differences between the verification of operational status or the quality assurance and control practices proposed, and the manufacturer's recommendations. (If additional space is needed, attach and label accordingly with the appropriate PSEU designation and pollutant):

8) **INDICATOR RANGES**: Provide the rationale and justification for the selection of the indicator ranges. The rationale and justification shall indicate how **EACH** indicator range was selected by either a COMPLIANCE OR PERFORMANCE TEST, a TEST PLAN AND SCHEDULE, or by ENGINEERING ASSESSMENTS. Depending on which method is being used for each indicator range, include the specific information required below for that specific indicator range. (If additional space is needed, attach and label accordingly with the appropriate PSEU designation and pollutant):

- COMPLIANCE OR PERFORMANCE TEST (Indicator ranges determined from control device operating parameter data obtained during a compliance or performance test conducted under regulatory specified conditions or under conditions representative of maximum potential emissions under anticipated operating conditions. Such data may be supplemented by engineering assessments and manufacturer's recommendations). The rationale and justification shall INCLUDE a summary of the compliance or performance test results that were used to determine the indicator range, and documentation indicating that no changes have taken place that could result in a significant change in the control system performance or the selected indicator ranges since the compliance or performance test was conducted.

- TEST PLAN AND SCHEDULE (Indicator ranges will be determined from a proposed implementation plan and schedule for installing, testing, and performing any other appropriate activities prior to use of the monitoring). The rationale and justification shall INCLUDE the proposed implementation plan and schedule that will provide for use of the monitoring as expeditiously as practicable after approval of this CAM plan, except that in no case shall the schedule for completing installation and beginning operation of the monitoring exceed 180 days after approval.

- ENGINEERING ASSESSMENTS (Indicator Ranges or the procedures for establishing indicator ranges are determined from engineering assessments and other data, such as manufacturers' design criteria and historical monitoring data, because factors specific to the type of monitoring, control device, or PSEU make compliance or performance testing unnecessary). The rationale and justification shall INCLUDE documentation demonstrating that compliance testing is not required to establish the indicator range.

RATIONALE AND JUSTIFICATION:

APPENDIX A

Electronic Submittal