



EUREKA HUNTER PIPELINE, LLC
CLASS II ADMINISTRATIVE UPDATE

Permit No. R13-3007C

Carbide Compressor Station
Wetzel County, West Virginia

January 2016



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

CLASS II ADMINISTRATIVE UPDATE

**Eureka Hunter Pipeline, LLC
Carbide Compressor Station
Wetzel County, West Virginia**

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SECTION I

Project Overview

EUREKA HUNTER PIPELINE, LLC
Carbide Compressor Station
Class II Administrative Update

PROJECT OVERVIEW

Eureka Hunter Pipeline, LLC owns and operates the Carbide Compressor Station located south of State Route 20 approximately two miles east from the community of Hastings in Wetzel County (See Appendix B – Site Location Map). The station receives natural gas and produced fluids from local production wells. This Inlet Gas is compressed, dehydrated and injected into pipelines for transportation to facilities owned by others for further processing. The received produced fluids are separated into Condensate and Produced Water (Brine) and accumulated in tanks prior to transportation to others.

The facility currently operates under Permit R13-3007C. Eureka Hunter is seeking to amend this permit through a Class II Administrative Update allow installation of two additional line heaters. There are no other equipment or operational changes being requested at this time.

Additionally, Eureka is also seeking to correct a typographical error in Section 9.1 of the permit. Citations for the Reboiler (S7) and the Line Heater S17) were accidentally reversed in Section 9.1.2 and 9.1.3.

SECTION II

Application Form



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

**APPLICATION FOR NSR PERMIT
AND
TITLE V PERMIT REVISION
(OPTIONAL)**

PLEASE CHECK ALL THAT APPLY TO **NSR (45CSR13)** (IF KNOWN):

- ☐ CONSTRUCTION ☐ MODIFICATION ☐ RELOCATION
☐ CLASS I ADMINISTRATIVE UPDATE ☐ TEMPORARY
☒ CLASS II ADMINISTRATIVE UPDATE ☐ AFTER-THE-FACT

PLEASE CHECK TYPE OF **45CSR30 (TITLE V)** REVISION (IF ANY):

- ☐ ADMINISTRATIVE AMENDMENT ☐ MINOR MODIFICATION
☐ SIGNIFICANT MODIFICATION

IF ANY BOX ABOVE IS CHECKED, INCLUDE TITLE V REVISION INFORMATION AS **ATTACHMENT S** TO THIS APPLICATION

FOR TITLE V FACILITIES ONLY: Please refer to "Title V Revision Guidance" in order to determine your Title V Revision options (Appendix A, "Title V Permit Revision Flowchart") and ability to operate with the changes requested in this Permit Application.

Section I. General

1. Name of applicant (as registered with the WV Secretary of State's Office):

Eureka Hunter Pipeline, LLC

2. Federal Employer ID No. (FEIN):

27-1657844

3. Name of facility (if different from above):

Carbide Compressor Station

4. The applicant is the:

- ☐ OWNER ☐ OPERATOR ☒ BOTH

5A. Applicant's mailing address:

**27710 State Route 7
Marietta, Ohio 45750**

5B. Facility's present physical address:

**15448 Shortline Highway
Hastings, WV 26419**

6. **West Virginia Business Registration.** Is the applicant a resident of the State of West Virginia? ☐ YES ☒ NO

- If **YES**, provide a copy of the **Certificate of Incorporation/Organization/Limited Partnership** (one page) including any name change amendments or other Business Registration Certificate as **Attachment A**.
- If **NO**, provide a copy of the **Certificate of Authority/Authority of L.L.C./Registration** (one page) including any name change amendments or other Business Certificate as **Attachment A**.

7. If applicant is a subsidiary corporation, please provide the name of parent corporation: **Hunter Magnum Resources Corp.**

8. Does the applicant own, lease, have an option to buy or otherwise have control of the *proposed site*? ☒ YES ☐ NO

- If **YES**, please explain: **Applicant owns the property**
- If **NO**, you are not eligible for a permit for this source.

9. Type of plant or facility (stationary source) to be **constructed, modified, relocated, administratively updated** or **temporarily permitted** (e.g., coal preparation plant, primary crusher, etc.): **Natural Gas Compressor Station**

10. Standard Industrial Classification (SIC) code for the facility:

1311

11A. DAQ Plant ID No. (for existing facilities only):

103 – 000491

11B. List all current 45CSR13 and 45CSR30 (Title V) permit numbers associated with this process (for existing facilities only):

R13-3007C

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

12A. – For Modifications, Administrative Updates or Temporary permits at an existing facility, please provide directions to the <i>present location</i> of the facility from the nearest state road; – For Construction or Relocation permits , please provide directions to the <i>proposed new site location</i> from the nearest state road. Include a MAP as Attachment B . From Hastings, proceed east on Route 20 approximately 2 miles to Union Carbide Road. Turn right on this road and follow the gravel road approximately one mile to the facility.		
12.B. New site address (if applicable):	12C. Nearest city or town: Hastings	12D. County: Wetzel
12.E. UTM Northing (KM): 4376.709	12F. UTM Easting (KM): 528.7365	12G. UTM Zone: 17
13. Briefly describe the proposed change(s) at the facility: This Class II Administrative Update is being submitted to allow installation of two additional line heaters.		
14A. Provide the date of anticipated installation or change: March 1 2016 – If this is an After-The-Fact permit application, provide the date upon which the proposed change did happen:		14B. Date of anticipated Start-Up if a permit is granted: March 10, 2016
14C. Provide a Schedule of the planned Installation of/ Change to and Start-Up of each of the units proposed in this permit application as Attachment C (if more than one unit is involved).		
15. Provide maximum projected Operating Schedule of activity/activities outlined in this application: Hours Per Day 24 Days Per Week 7 Weeks Per Year 52		
16. Is demolition or physical renovation at an existing facility involved? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
17. Risk Management Plans. If this facility is subject to 112(r) of the 1990 CAAA, or will become subject due to proposed changes (for applicability help see www.epa.gov/ceppo), submit your Risk Management Plan (RMP) to U. S. EPA Region III.		
18. Regulatory Discussion. List all Federal and State air pollution control regulations that you believe are applicable to the proposed process (<i>if known</i>). A list of possible applicable requirements is also included in Attachment S of this application (Title V Permit Revision Information). Discuss applicability and proposed demonstration(s) of compliance (<i>if known</i>). Provide this information as Attachment D .		
Section II. Additional attachments and supporting documents.		
19. Include a check payable to WVDEP – Division of Air Quality with the appropriate application fee (per 45CSR22 and 45CSR13).		
20. Include a Table of Contents as the first page of your application package.		
21. Provide a Plot Plan , e.g. scaled map(s) and/or sketch(es) showing the location of the property on which the stationary source(s) is or is to be located as Attachment E (Refer to Plot Plan Guidance) . – Indicate the location of the nearest occupied structure (e.g. church, school, business, residence).		
22. Provide a Detailed Process Flow Diagram(s) showing each proposed or modified emissions unit, emission point and control device as Attachment F .		
23. Provide a Process Description as Attachment G . – Also describe and quantify to the extent possible all changes made to the facility since the last permit review (if applicable).		
All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.		
24. Provide Material Safety Data Sheets (MSDS) for all materials processed, used or produced as Attachment H . – For chemical processes, provide a MSDS for each compound emitted to the air.		
25. Fill out the Emission Units Table and provide it as Attachment I .		
26. Fill out the Emission Points Data Summary Sheet (Table 1 and Table 2) and provide it as Attachment J .		

27. Fill out the Fugitive Emissions Data Summary Sheet and provide it as Attachment K .		
28. Check all applicable Emissions Unit Data Sheets listed below:		
<input type="checkbox"/> Bulk Liquid Transfer Operations	<input type="checkbox"/> Haul Road Emissions	<input type="checkbox"/> Quarry
<input type="checkbox"/> Chemical Processes	<input type="checkbox"/> Hot Mix Asphalt Plant	<input type="checkbox"/> Solid Materials Sizing, Handling and Storage Facilities
<input type="checkbox"/> Concrete Batch Plant	<input type="checkbox"/> Incinerator	<input type="checkbox"/> Storage Tanks
<input type="checkbox"/> Grey Iron and Steel Foundry	<input type="checkbox"/> Indirect Heat Exchanger	
<input type="checkbox"/> General Emission Unit, specify:		
<input type="checkbox"/> Natural Gas Compressor Engines		
Fill out and provide the Emissions Unit Data Sheet(s) as Attachment L .		
29. Check all applicable Air Pollution Control Device Sheets listed below:		
<input type="checkbox"/> Absorption Systems	<input type="checkbox"/> Baghouse	<input type="checkbox"/> Flare
<input type="checkbox"/> Adsorption Systems	<input type="checkbox"/> Condenser	<input type="checkbox"/> Mechanical Collector
<input type="checkbox"/> Afterburner	<input type="checkbox"/> Electrostatic Precipitator	<input type="checkbox"/> Wet Collecting System
<input type="checkbox"/> Other Collectors, specify:		
Fill out and provide the Air Pollution Control Device Sheet(s) as Attachment M .		
30. Provide all Supporting Emissions Calculations as Attachment N , or attach the calculations directly to the forms listed in Items 28 through 31.		
31. Monitoring, Recordkeeping, Reporting and Testing Plans. Attach proposed monitoring, recordkeeping, reporting and testing plans in order to demonstrate compliance with the proposed emissions limits and operating parameters in this permit application. Provide this information as Attachment O .		
➤ Please be aware that all permits must be practically enforceable whether or not the applicant chooses to propose such measures. Additionally, the DAQ may not be able to accept all measures proposed by the applicant. If none of these plans are proposed by the applicant, DAQ will develop such plans and include them in the permit.		
32. Public Notice. At the time that the application is submitted, place a Class I Legal Advertisement in a newspaper of general circulation in the area where the source is or will be located (See 45CSR§13-8.3 through 45CSR§13-8.5 and Example Legal Advertisement for details). Please submit the Affidavit of Publication as Attachment P immediately upon receipt.		
33. Business Confidentiality Claims. Does this application include confidential information (per 45CSR31)?		
<input type="checkbox"/> YES <input checked="" type="checkbox"/> 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 found in the General Instructions as Attachment Q .		

Section III. Certification of Information

34. Authority/Delegation of Authority. Only required when someone other than the responsible official signs the application. Check applicable Authority Form below:	
<input type="checkbox"/> Authority of Corporation or Other Business Entity	<input type="checkbox"/> Authority of Partnership
<input type="checkbox"/> Authority of Governmental Agency	<input type="checkbox"/> Authority of Limited Partnership
Submit completed and signed Authority Form as Attachment R .	
All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.	

35A. **Certification of Information.** To certify this permit application, a Responsible Official (per 45CSR§13-2.22 and 45CSR§30-2.28) or Authorized Representative shall check the appropriate box and sign below.

Certification of Truth, Accuracy, and Completeness

I, the undersigned ☒ **Responsible Official** / ☐ **Authorized Representative**, hereby certify that all information contained in this application and any supporting documents appended hereto, is true, accurate, and complete based on information and belief after reasonable inquiry I further agree to assume responsibility for the construction, modification and/or relocation and operation of the stationary source described herein in accordance with this application and any amendments thereto, as well as the Department of Environmental Protection, Division of Air Quality permit issued in accordance with this application, along with all applicable rules and regulations of the West Virginia Division of Air Quality and W.Va. Code § 22-5-1 et seq. (State Air Pollution Control Act). If the business or agency changes its Responsible Official or Authorized Representative, the Director of the Division of Air Quality will be notified in writing within 30 days of the official change.

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.

SIGNATURE _____

(Please use blue ink)

DATE: _____

(Please use blue ink)

35B. Printed name of signee:

Chris Akers

35C. Title:

Chief Operating Officer

35D. E-mail:

cakers@ehp.energy

36E. Phone:

740/868-1334

36F. FAX:

36A. Printed name of contact person (if different from above):

36B. Title:

36C. E-mail:

36D. Phone:

36E. FAX:

PLEASE CHECK ALL APPLICABLE ATTACHMENTS INCLUDED WITH THIS PERMIT APPLICATION:

- | | |
|--|--|
| <input checked="" type="checkbox"/> Attachment A: Business Certificate | <input type="checkbox"/> Attachment K: Fugitive Emissions Data Summary Sheet |
| <input checked="" type="checkbox"/> Attachment B: Map(s) | <input checked="" type="checkbox"/> Attachment L: Emissions Unit Data Sheet(s) |
| <input checked="" type="checkbox"/> Attachment C: Installation and Start Up Schedule | <input type="checkbox"/> Attachment M: Air Pollution Control Device Sheet(s) |
| <input type="checkbox"/> Attachment D: Regulatory Discussion | <input checked="" type="checkbox"/> Attachment N: Supporting Emissions Calculations |
| <input checked="" type="checkbox"/> Attachment E: Plot Plan | <input checked="" type="checkbox"/> Attachment O: Monitoring/Recordkeeping/Reporting/Testing Plans |
| <input checked="" type="checkbox"/> Attachment F: Detailed Process Flow Diagram(s) | <input checked="" type="checkbox"/> Attachment P: Public Notice |
| <input checked="" type="checkbox"/> Attachment G: Process Description | <input type="checkbox"/> Attachment Q: Business Confidential Claims |
| <input type="checkbox"/> Attachment H: Material Safety Data Sheets (MSDS) | <input type="checkbox"/> Attachment R: Authority Forms |
| <input checked="" type="checkbox"/> Attachment I: Emission Units Table | <input type="checkbox"/> Attachment S: Title V Permit Revision Information |
| <input checked="" type="checkbox"/> Attachment J: Emission Points Data Summary Sheet | <input checked="" type="checkbox"/> Application Fee |

Please mail an original and three (3) copies of the complete permit application with the signature(s) to the DAQ, Permitting Section, at the address listed on the first page of this application. Please DO NOT fax permit applications.

FOR AGENCY USE ONLY – IF THIS IS A TITLE V SOURCE:

- ☐ Forward 1 copy of the application to the Title V Permitting Group and:
- ☐ For Title V Administrative Amendments:
- ☐ NSR permit writer should notify Title V permit writer of draft permit,
- ☐ For Title V Minor Modifications:
- ☐ Title V permit writer should send appropriate notification to EPA and affected states within 5 days of receipt,
- ☐ NSR permit writer should notify Title V permit writer of draft permit.
- ☐ For Title V Significant Modifications processed in parallel with NSR Permit revision:
- ☐ NSR permit writer should notify a Title V permit writer of draft permit,
- ☐ Public notice should reference both 45CSR13 and Title V permits,
- ☐ EPA has 45 day review period of a draft permit.

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

SECTION III

Attachments

ATTACHMENT A

Business Registration

State of West Virginia



Certificate

*I, Natalie E. Tennant, Secretary of State of the
State of West Virginia, hereby certify that*

EUREKA HUNTER PIPELINE, LLC

Control Number: 9918W

a limited liability company, organized under the laws of the State of Delaware
has filed its "Application for Certificate of Authority" in my office according to the provisions
of West Virginia Code §31B-10-1002. I hereby declare the organization to be registered as a
foreign limited liability company from its effective date of January 25, 2010, until a certificate
of cancellation is filed with our office.

Therefore, I hereby issue this

CERTIFICATE OF AUTHORITY OF A FOREIGN LIMITED LIABILITY COMPANY

to the limited liability company authorizing it to transact business in West Virginia



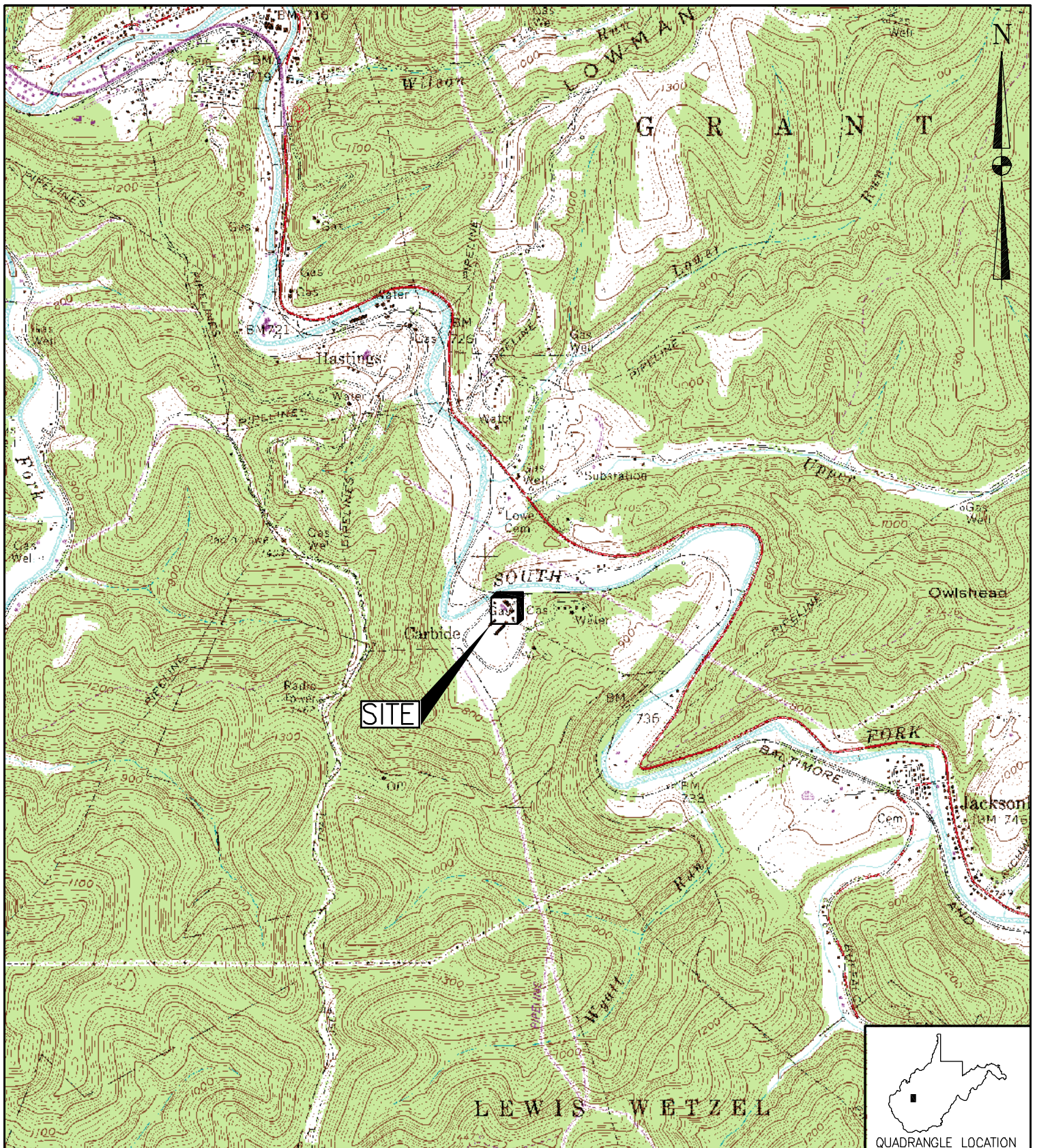
*Given under my hand and the
Great Seal of the State of
West Virginia on this day of
January 25, 2010*

Natalie E. Tennant

Secretary of State

ATTACHMENT B

Site Location Map



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

DRAWN BY	DJF
DATE	8/1/12
CHECKED BY	RAD
SET JOB NO.	212092
SET DWG FILE	CARBIDE STATIONm01.dwg
DRAWING SCALE	1"=2000'



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

EUREKA HUNTER PIPELINE, LLC

CARBIDE STATION
WETZEL COUNTY, WEST VIRGINIA
SITE LOCATION MAP

DRAWING NO.

FIGURE 1

REV.

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ATTACHMENT C

Construction Schedule

ATTACHMENT C
EUREKA HUNTER PIPELINE, LLC
Carbide Compressor Station
Construction Schedule

The proposed line heater can be installed within two weeks of receipt of the permit approval..

ATTACHMENT D

Regulatory Analysis

ATTACHMENT D
EUREKA HUNTER PIPELINE, LLC
Carbide Compressor Station
Regulatory Analysis

Both State and Federal environmental regulations governing air emissions apply to Eureka Hunter Pipeline's Carbide Compressor Station near Hastings, West Virginia. The West Virginia Department of Environmental Protection (WVDEP) has been delegated the authority to implement certain federal air quality requirements for the state. Air quality regulations that potentially affect the expansion are discussed herein.

1.1 PSD and NSR

The facility will remain a minor source with respect to Prevention of Significant Deterioration (PSD) regulations as it will not have the potential to emit more than the annual emission thresholds of any PSD regulated pollutant.

The facility is not within any area designated as non-attainment for fine particulates (2.5 PM) or any other criteria pollutant. Consequently, NSR requirements are not applicable to this project at projected potential emission rates.

1.2 Title V Operating Permit Program

West Virginia has incorporated provisions of the federal Title V operating permit program. Thresholds for inclusion under the Title V program are 10 tpy of any single Hazardous Air Pollutant (HAP) or 25 tons of any combination of HAP and/or 100 tpy of all other regulated pollutants. Potential emissions at this facility are below these triggers. Additionally, any facility operating under certain federal standard falls under the Title V program, regardless of emission rates. The facility is regulated under certain New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAPs). However, none of these applicable standards trigger inclusion in the Title V program.

1.3 New Source Performance Standards

New Source Performance Standards (NSPS) regulations promulgated under 40 CFR 60 require new and reconstructed facilities to control emissions to the level achievable by Best-Available Control Technology (BACT). Specific NSPS requirements potentially applicable to the planned engine swap are as follows:

- 40 CFR 60, Subpart JJJJ – Stationary Spark Ignition Internal Combustion Engines

- 40 CFR 60, Subpart OOOO - Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution

1.3.1 Subpart JJJJ

This subpart governs emissions from new stationary spark ignition internal combustion engines (SI ICE) manufactured after July 1, 2007. Currently, engines driving the compressors at this facility are SI ICE units manufactured after this date. Accordingly, this rule applies to those engines. The planned modification associated with this Administrative Update does not change this status.

1.3.2 Subpart OOOO

This NSPS specifically addresses certain operations and/or equipment within the oil and gas industry for facilities that are constructed or modified after August 23, 2011. This rule is applicable to the Carbide Compressor Station. More specifically, the existing compressor engines and condensate tanks at this facility are regulated by this rule. This rule does not address line heaters. Thus, the equipment addition associated with this Administrative Update does not change this status

1.4 **National Emission Standards for Hazardous Air Pollutants**

National Emission Standards for Hazardous Air Pollutants (NESHAPs) promulgated under 40 CFR 63 regulate the emission of Hazardous Air Pollutants (HAPs) from certain industrial processes. In general, these rules apply to major sources of HAPs with a major source being defined as having the potential to emit more than 10 tpy of any individual HAP or 25 tpy of total HAPs. Emissions standards under these rules have been established as the Maximum Achievable Control Technology (MACT) for each source category. The following NESHAP source category standard is potentially applicable to the planned compressor engine swap:

- 40 CFR 63, Subpart ZZZZ – NESHAP from Stationary Reciprocating Internal Combustion Engines

1.4.1 Subpart ZZZZ

This Subpart governs emissions from a stationary reciprocating internal combustion engine (RICE) located both at major and area source of HAPs. The facility will not be a major source of HAPs, but will be considered an area source of HAPs. Hence, this rule is applicable to the facility. In accordance with 40 CFR 63.6590(a)(2)(iii), one of the existing engines at Carbide is considered an Existing Stationary RICE. That engine must the testing and maintenance requirements of this rule. The planned additional heaters do not impact the applicability of this rule.

1.5 Chemical Accident Prevention

Subparts B-D of 40 CFR 68 present the requirements for the assessment and subsequent preparation of a Risk Management Plan (RMP) for a facility that stores more than a threshold quantity of a regulated substance listed in 40 CFR 68.130. If a facility stores, handles or processes one or more regulated substances in an amount greater than its corresponding threshold, the facility must prepare and implement an RMP. The proposed facility will store more than 10,000 lbs of individual substances listed in Table 3 in 40 CFR 68.130 and flammable mixtures again containing several of the substances listed in Table 3 in 40 CFR 68.130. Hence, an RMP is required. An RMP will be prepared and submitted in accordance with 40 CFR 68.150 prior to the facility exceeding the threshold storage quantity.

The equipment changes associated with this Administrative Update do not change this status

1.6 West Virginia State Requirements

1.6.1 45 CSR 2

The facility is subject to the opacity requirement of 45 CSR 2. Emissions from the any emission source at the facility cannot exceed 10% over any six minute period.

1.6.2 45 CSR 4

This regulation prohibits the emission of objectionable odors. Eureka Hunter Pipeline is obligated to run the station in a manner that does not produce objectionable odors.

1.6.3 45 CSR 10

This regulation limits emissions of sulfur oxides. As the sulfur content of the Inlet liquid contains no measurable sulfur, anticipated emissions of sulfur oxides is negligible. Thus, while parts of this rule may be applicable to the planned facility, no actions are required on the part of Eureka Hunter Pipeline to attain compliance.

1.6.4 45 CSR 13

The state regulations applicable to the permitting of the proposed addition of two line heaters are in Title 45 Series 13 of the Code of State Regulations. The facility will continue to have the potential to emit VOCs in excess of the thresholds that define a Stationary Source. Additionally, as the facility is regulated under a federal New Source Performance Standard, it is required to have a permit.

It is important to note that the facility's potential to emit is less than the thresholds that would classify the facility as a Major Source under 45 CSR 14.

1.6.5 45 CSR 16

This series of regulations is an incorporation, by reference, of the New Source Performance Standards codified under 40 CFR 60. As discussed under the federal regulations, the facility is subject to the emission limitations, monitoring, testing and recordkeeping of 40 CFR 60, Subpart JJJJ.

1.6.6 45 CSR 30

The state regulations applicable to Title V operating permits are in Title 45 Series 30. The planned facility, as noted above, does not have the potential to emit any regulated pollutant above the threshold that would define it as a major facility. Although the facility is subject to a New Source Performance Standard, it is not obligated to submit a Title V application and obtain a Title V permit.

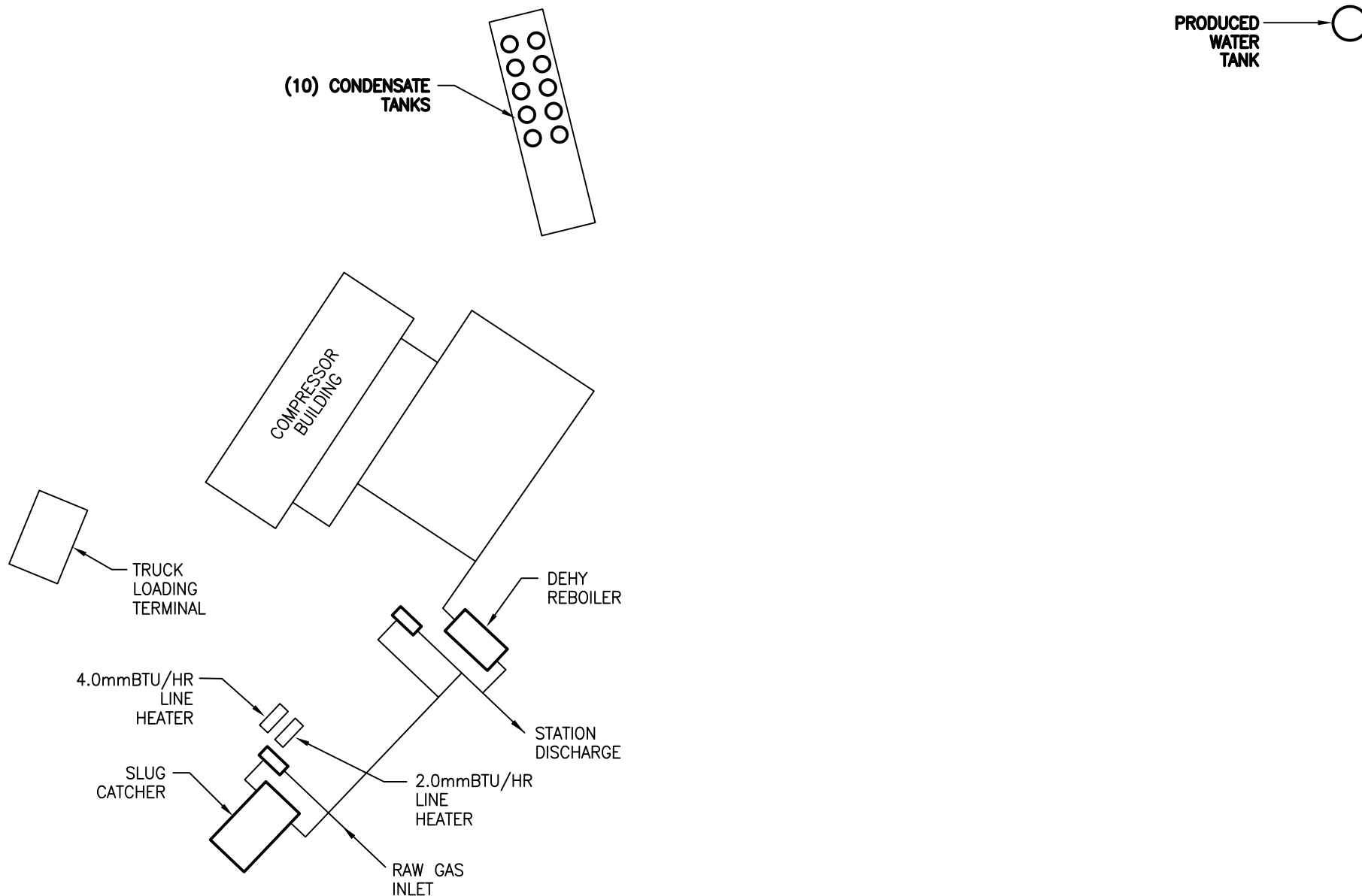
The equipment changes associated with this Administrative Update do not change this status.

1.6.7 Other Applicable Requirements

Through Series 34, WVDEP has adopted the National Emission Standards for Hazardous Air Pollutants for Source Categories. This topic has been addressed above.

ATTACHMENT E

Site Layout Diagram



DRAWN BY	DJF
DATE	1/28/16
CHECKED BY	RAD
SET JOB NO.	213066-03
SET DWG FILE	CARBIDE STATIONa01.dwg
DRAWING SCALE	N.T.S.



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

EUREKA HUNTER PIPELINE, LLC

CARBIDE STATION
WETZEL COUNTY, WEST VIRGINIA
SITE LAYOUT

DRAWING NAME

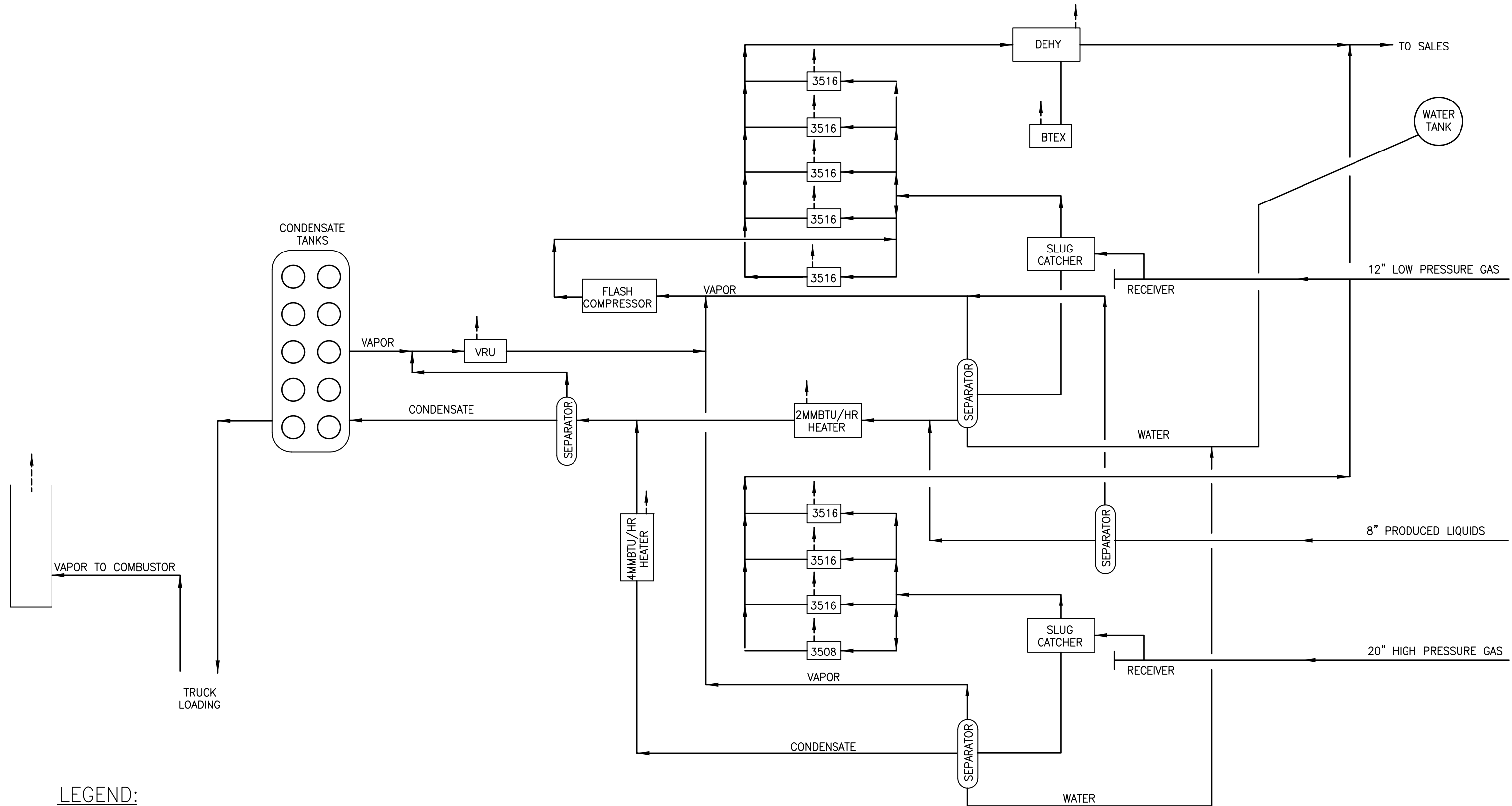
FIGURE 2

REV.

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ATTACHMENT F

Process Flow Diagram



LEGEND:

↑
EMISSION POINT

DRAWN BY	DJF
DATE	1/29/16
CHECKED BY	RAD
SET JOB NO.	213066-03
SET DWG FILE	CARBIDE STATION FLOW DIAGRAMb01.dwg
DRAWING SCALE	N.T.S.



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

EUREKA HUNTER PIPELINE, LLC
CARBIDE STATION
WETZEL COUNTY, WEST VIRGINIA
PROCESS FLOW DIAGRAM

DRAWING NAME

FIGURE 2

REV.

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ATTACHMENT G

Process Description

ATTACHMENT G
Eureka Hunter Pipeline, LLC
Carbide Compressor Station
Process Description

Raw gas and produced liquids are received at this facility from local production wells via three pipelines entering the station: 8-inch, 12-inch and 20-inch lines. The following text presents an overview of the operations at this facility and a description of the proposed modification to its permit.

High pressure gas is received via the 20-inch line, passed through a slug catcher and then returned to this high pressure gas line for transportation to a regional natural gas processing facility owned and operated by others. This gas is not passed through any other processes at this facility.

Low pressure inlet gas is received via a 12-inch pipeline and passed through an inlet separator, compressed, dehydrated, blended with the high pressure gas and injected into the 20-inch pipeline for transportation to the regional natural gas processing facility. Liquids separated from this gas stream are sent to a three-way separator where the pressure is reduced, allowing dissolved gases to flash off. This flash gas is compressed and re-blended with the low pressure inlet gas. The remaining liquids are separated into organic and water phases.

Produced Liquids are received at the facility via an 8-inch liquids line. These liquids are mostly produced water (brine), but also contain condensate. This liquid is passed through a three-way inlet separator where the pressure is reduced, allowing entrained gas to flash off. This flash gas is also routed to the flash gas compressor referenced above and blended with the low pressure inlet gas prior to compression. The three-way separator also separates the water (brine) and organic phases (condensate), routing them to separate accumulation tanks. Brine is accumulated in a single 2 million gallon tank. This brine is re-used by others for development of wells, thereby minimizing the demand for fresh water for that purpose.

Condensate is accumulated in a series of ten 630 BBL tanks prior to truck transportation to others for further processing. Emissions from these atmospheric pressure tanks are collected and compressed by a vapor recovery compressor where the vapors are sufficiently compressed to be introduced into the low pressure inlet gas line and processed with the low pressure inlet gas. The permitted control system for the condensate truck loading is an enclosed combustor.

This Class II Administrative Update seeks to gain approval for installation of a two additional line heaters. No new NSPS or NESHAPS requirements are triggered by this installation.

This Class II Administrative Update also seeks to update the list of minor tank storage with the addition of several 500 gallon lube oil tanks. No measurable emissions are associated with these tanks.

No other changes are proposed for any other equipment or process.

Lastly, this Class II Administrative Update also seeks to correct a typographical error in the current permit. Section 9.1.2 presents the emission limits for the 0.75 MMBTU/Hr **Line Heater (S17)** and Section 9.1.3 presents the emission limits for the 1.5 MMBTU/Hr **Reboiler (S7)**. They were inadvertently reversed.

ATTACHMENT I

Emission Unit Table

Attachment I

Emission Units Table

(includes all emission units and air pollution control devices
that will be part of this permit application review, regardless of permitting status)

Emission Unit ID ¹	Emission Point ID ²	Emission Unit Description	Year Installed/ Modified	Design Capacity	Type ³ and Date of Change	Control Device ⁴
S1	E1	CAT 3516B ENGINE	2012	1380 HP	EXIST	C1
S2	E2	CAT 3516B ENGINE	2012	1380 HP	EXIST	C2
S3	E3	CAT 3516B ENGINE	2012	1380 HP	EXIST	C3
S4	E4	CAT 3516B ENGINE	2012	1380 HP	EXIST	C4
S5A	E5A	CAT 3406 NA ENGINE	2013	215 HP	EXIST	C5A / NSCR
S6A	E6A	CAT 3406 NA ENGINE	2013	215 HP	EXIST	C6A / NSCR
S7	E7	DEHYDRATION RE-BOILER	2012	1.5 MM BTU/Hr	EXIST	None
S8	E8	CAT 3516B ENGINE	2012	1380 HP	EXIST	C8
S9	E9	CAT 3516B ENGINE	2012	1380 HP	EXIST	C9
S10	E10	CAT 3516B ENGINE	2012	1380 HP	EXIST	C10
S11	E11	CAT 3516B ENGINE	2012	1380 HP	EXIST	C11
S14	E16	TRUCK LOADING	2012	N/A	EXIST	VCU (S15)
S17	E17	LINE HEATER	2013	750 MBTU/Hr	EXIST	None
S17-A	E17-A	LINE HEATER	2016	4.0 MMBTU/Hr	NEW	None

S17-B	E17-B	LINE HEATER	2016	2.0 MMBTU/Hr	NEW	None
S15	E16	Truck Loading VCU	2014		EXIST	N/A
S15-A	E16	Truck Loading VCU Pilot	2014		EXIST	N/A
S18	---	Pigging and Blowdowns	2012	N/A	EXIST	None
S19	----	Fugitive Emissions	2012	N/A	EXIST	None
S20	E18	CAT 3608B ENGINE	2015	2750 HP	EXIST	C20

¹ For Emission Units (or Sources) use the following numbering system: 1S, 2S, 3S,... or other appropriate designation.

² For Emission Points use the following numbering system: 1E, 2E, 3E, ... or other appropriate designation.

³ New, modification, removal

⁴ For Control Devices use the following numbering system: 1C, 2C, 3C,... or other appropriate designation.

ATTACHMENT J

Emission Points Data Summary Sheet

ATTACHMENT J

Emission Points Data Summary Sheet

Table 1: Emissions Data

Emission Point ID No. (Must match Emission Units Table & Plot Plan)	Emission Point Type ¹	Emission Unit Vented Through This Point (Must match Emission Units Table & Plot Plan)		Air Pollution Control Device (Must match Emission Units Table & Plot Plan)		Vent Time for Emission Unit (chemical processes only)		All Regulated Pollutants - Chemical Name/CAS ³ (Speciate VOCs & HAPS)	Maximum Potential Uncontrolled Emissions ⁴		Maximum Potential Controlled Emissions ⁵		Emission Form or Phase (At exit conditions, Solid, Liquid or Gas/Vapor)	Est. Method Used ⁶	Emission Concentration ⁷ (ppmv or mg/m ⁴)
		ID No.	Source	ID No.	Device Type	Short Term ²	Max (hr/yr)		lb/hr	ton/yr	lb/hr	ton/yr			
E1	Upward Vertical Stack	S1	Engine #1	C1	SCR	C	8760	NO _x	1.52	6.66	1.52	6.66	Gas	EE	
								CO	8.82	38.64	0.61	2.67	Gas	EE	
								VOC	2.01	8.80	1.00	4.40	Gas	EE	
								PM10	0.103	0.45	0.103	0.45	Solid	EE	
								SO2	0.006	0.027	0.006	0.027	Gas	EE	
								Benzene (71-43-2)	0.0008	0.00	0.0004	0.00	Gas	EE	
								Formaldehyde (50-00-0)	1.247	5.46	0.1825	0.80	Gas	EE	
E2	Upward Vertical Stack	S2	Engine #2	C2	SCR	C	8760	NO _x	1.52	6.66	5.91	25.88	Gas	EE	
								CO	8.82	38.64	0.28	1.23	Gas	EE	
								VOC	2.01	8.80	0.23	1.01	Gas	EE	
								PM10	0.103	0.45	0.11	0.48	Solid	EE	
								SO2	0.006	0.027	0.007	0.029	Gas	EE	
								Benzene (71-43-2)	0.0008	0.00	0.0014	0.01	Gas	EE	
								Formaldehyde (50-00-0)	1.247	5.46	0.0369	0.16	Gas	EE	

Emission Point ID No. (Must match Emission Units Table & Plot Plan)	Emission Point Type ¹	Emission Unit Vented Through This Point (Must match Emission Units Table & Plot Plan)		Air Pollution Control Device (Must match Emission Units Table & Plot Plan)		Vent Time for Emission Unit (chemical processes only)		All Regulated Pollutants - Chemical Name/CAS ³ (Speciate VOCs & HAPS)	Maximum Potential Uncontrolled Emissions ⁴		Maximum Potential Controlled Emissions ⁵		Emission Form or Phase (At exit conditions, Solid, Liquid or Gas/Vapor)	Est. Method Used ⁶	Emission Concentration ⁷ (ppmv or mg/m ⁴)
		ID No.	Source	ID No.	Device Type	Short Term ²	Max (hr/yr)		lb/hr	ton/yr	lb/hr	ton/yr			
E3	Upward Vertical Stack	S3	Engine #3	C3	SCR	C	8760	NO _x	1.52	6.66	5.91	25.88	Gas	EE	
								CO	8.82	38.64	0.28	1.23	Gas	EE	
								VOC	2.01	8.80	0.23	1.01	Gas	EE	
								PM10	0.103	0.45	0.11	0.48	Solid	EE	
								SO2	0.006	0.027	0.007	0.029	Gas	EE	
								Benzene (71-43-2)	0.0008	0.00	0.0014	0.01	Gas	EE	
								Formaldehyde (50-00-0)	1.247	5.46	0.0369	0.16	Gas	EE	
E4	Upward Vertical Stack	S4	Engine #4	C4	SCR	C	8760	NO _x	1.52	6.66	5.91	25.88	Gas	EE	
								CO	8.82	38.64	0.28	1.23	Gas	EE	
								VOC	2.01	8.80	0.23	1.01	Gas	EE	
								PM10	0.103	0.45	0.11	0.48	Solid	EE	
								SO2	0.006	0.027	0.007	0.029	Gas	EE	
								Benzene (71-43-2)	0.0008	0.00	0.0014	0.01	Gas	EE	
								Formaldehyde (50-00-0)	1.247	5.46	0.0369	0.16	Gas	EE	
E5A	Upward Vertical Stack	S5A	Flash Gas Comp.	C5A	NSCR	C	8760	NO _x	7.669	33.59	0.46	2.02	Gas	EE	
								CO	7.669	33.59	0.46	2.02	Gas	EE	
								VOC	0.123	0.54	0.06	0.27	Gas	EE	
								PM10	0.037	0.16	0.037	0.16	Solid	EE	
								SO2	0.00	0.01	0.00	0.01	Gas	EE	
								Formaldehyde (50-00-0)	0.128	0.56	0.06	0.28	Gas	EE	

Emission Point ID No. (Must match Emission Units Table & Plot Plan)	Emission Point Type ¹	Emission Unit Vented Through This Point (Must match Emission Units Table & Plot Plan)		Air Pollution Control Device (Must match Emission Units Table & Plot Plan)		Vent Time for Emission Unit (chemical processes only)		All Regulated Pollutants - Chemical Name/CAS ³ (Speciate VOCs & HAPS)	Maximum Potential Uncontrolled Emissions ⁴		Maximum Potential Controlled Emissions ⁵		Emission Form or Phase (At exit conditions, Solid, Liquid or Gas/Vapor)	Est. Method Used ⁶	Emission Concentration ⁷ (ppmv or mg/m ⁴)
		ID No.	Source	ID No.	Device Type	Short Term ²	Max (hr/yr)		lb/hr	ton/yr	lb/hr	ton/yr			
E6A	Upward Vertical Stack	S6A	VRU Comp.	C6A	NSCR	C	8760	NO _x	7.669	33.59	0.46	2.02	Gas	EE	
								CO	7.669	33.59	0.46	2.02	Gas	EE	
								VOC	0.123	0.54	0.06	0.27	Gas	EE	
								PM10	0.037	0.16	0.037	0.16	Solid	EE	
								SO ₂	0.00	0.01	0.00	0.01	Gas	EE	
								Formaldehyde (50-00-0)	0.128	0.56	0.06	0.28	Gas	EE	
E7	Upward Vertical Stack	S7	Dehy Reboiler Vent	None	C	C	8760	NO _x	0.15	0.67	0.15	0.67	Gas	EE	
								CO	0.13	0.56	0.13	0.56	Gas	EE	
								VOC	0.23	1.01	0.23	1.01	Gas	EE	
								PM10	0.012	0.00	0.012	0.00	Solid	EE	
								SO ₂	0.001	0.00	0.001	0.00	Gas	EE	
								Benzene (71-43-2)	0.005	0.02	0.005	0.02	Gas	EE	
								Formaldehyde (50-00-0)	0.00	0.00	0.00	0.00	Gas	EE	

Emission Point ID No. (Must match Emission Units Table & Plot Plan)	Emission Point Type ¹	Emission Unit Vented Through This Point (Must match Emission Units Table & Plot Plan)		Air Pollution Control Device (Must match Emission Units Table & Plot Plan)		Vent Time for Emission Unit (chemical processes only)		All Regulated Pollutants - Chemical Name/CAS ³ (Speciate VOCs & HAPS)	Maximum Potential Uncontrolled Emissions ⁴		Maximum Potential Controlled Emissions ⁵		Emission Form or Phase (At exit conditions, Solid, Liquid or Gas/Vapor)	Est. Method Used ⁶	Emission Concentration ⁷ (ppmv or mg/m ⁴)
		ID No.	Source	ID No.	Device Type	Short Term ²	Max (hr/yr)		lb/hr	ton/yr	lb/hr	ton/yr			
E8	Upward Vertical Stack	S8	Engine #5	C8	SCR	C	8760	NO _x	1.52	6.66	5.91	25.88	Gas	EE	
								CO	8.82	38.64	0.28	1.23	Gas	EE	
								VOC	2.01	8.80	0.23	1.01	Gas	EE	
								PM10	0.103	0.45	0.11	0.48	Solid	EE	
								SO2	0.006	0.027	0.007	0.029	Gas	EE	
								Benzene (71-43-2)	0.0008	0.00	0.0014	0.01	Gas	EE	
								Formaldehyde (50-00-0)	1.247	5.46	0.0369	0.16	Gas	EE	
E9	Upward Vertical Stack	S9	Engine #6	C9	SCR	C	8760	NO _x	1.52	6.66	5.91	25.88	Gas	EE	
								CO	8.82	38.64	0.28	1.23	Gas	EE	
								VOC	2.01	8.80	0.23	1.01	Gas	EE	
								PM10	0.103	0.45	0.11	0.48	Solid	EE	
								SO2	0.006	0.027	0.007	0.029	Gas	EE	
								Benzene (71-43-2)	0.0008	0.00	0.0014	0.01	Gas	EE	
								Formaldehyde (50-00-0)	1.247	5.46	0.0369	0.16	Gas	EE	

Emission Point ID No. (Must match Emission Units Table & Plot Plan)	Emission Point Type ¹	Emission Unit Vented Through This Point (Must match Emission Units Table & Plot Plan)		Air Pollution Control Device (Must match Emission Units Table & Plot Plan)		Vent Time for Emission Unit (chemical processes only)		All Regulated Pollutants - Chemical Name/CAS ³ (Speciate VOCs & HAPS)	Maximum Potential Uncontrolled Emissions ⁴		Maximum Potential Controlled Emissions ⁵		Emission Form or Phase (At exit conditions, Solid, Liquid or Gas/Vapor)	Est. Method Used ⁶	Emission Concentration ⁷ (ppmv or mg/m ⁴)
		ID No.	Source	ID No.	Device Type	Short Term ²	Max (hr/yr)		lb/hr	ton/yr	lb/hr	ton/yr			
E10	Upward Vertical Stack	S10	Engine #7	C10	SCR	C	8760	NO _x	1.52	6.66	5.91	25.88	Gas	EE	
								CO	8.82	38.64	0.28	1.23	Gas	EE	
								VOC	2.01	8.80	0.23	1.01	Gas	EE	
								PM10	0.103	0.45	0.11	0.48	Solid	EE	
								SO2	0.006	0.027	0.007	0.029	Gas	EE	
								Benzene (71-43-2)	0.0008	0.00	0.0014	0.01	Gas	EE	
								Formaldehyde (50-00-0)	1.247	5.46	0.0369	0.16	Gas	EE	
E11	Upward Vertical Stack	S11	Engine #8	C11	SCR	C	8760	NO _x	1.52	6.66	5.91	25.88	Gas	EE	
								CO	8.82	38.64	0.28	1.23	Gas	EE	
								VOC	2.01	8.80	0.23	1.01	Gas	EE	
								PM10	0.103	0.45	0.11	0.48	Solid	EE	
								SO2	0.006	0.027	0.007	0.029	Gas	EE	
								Benzene (71-43-2)	0.0008	0.00	0.0014	0.01	Gas	EE	
								Formaldehyde (50-00-0)	1.247	5.46	0.0369	0.16	Gas	EE	

Emission Point ID No. (Must match Emission Units Table & Plot Plan)	Emission Point Type ¹	Emission Unit Vented Through This Point (Must match Emission Units Table & Plot Plan)		Air Pollution Control Device (Must match Emission Units Table & Plot Plan)		Vent Time for Emission Unit (chemical processes only)		All Regulated Pollutants - Chemical Name/CAS ³ (Speciate VOCs & HAPS)	Maximum Potential Uncontrolled Emissions ⁴		Maximum Potential Controlled Emissions ⁵		Emission Form or Phase (At exit conditions, Solid, Liquid or Gas/Vapor)	Est. Method Used ⁶	Emission Concentration ⁷ (ppmv or mg/m ⁴)
		ID No.	Source	ID No.	Device Type	Short Term ²	Max (hr/yr)		lb/hr	ton/yr	lb/hr	ton/yr			
E14	N/A	S14	N/A (Vapors to Tanks)		Vapor Balance	1Hr	8760	NO _x					Gas	EE	
								CO					Gas	EE	
								VOC	38	41.6	0.76	0.83	Gas	EE	
								PM10					Solid	EE	
								SO2					Gas	EE	
													Gas	EE	
													Gas	EE	
E15	Upward Vertical Stack	S17	Line Heater		None	C	8760	NO _x	0.08	0.33	0.08	0.33	Gas	EE	
								CO	0.06	0.28	0.06	0.28	Gas	EE	
								VOC	0.00	0.02	0.00	0.02	Gas	EE	
								PM10	0.01	0.03	0.01	0.03	Solid	EE	
								SO2	0.00	0.00	0.00	0.00	Gas	EE	
													Gas	EE	
													Gas	EE	

Emission Point ID No. (Must match Emission Units Table & Plot Plan)	Emission Point Type ¹	Emission Unit Vented Through This Point (Must match Emission Units Table & Plot Plan)		Air Pollution Control Device (Must match Emission Units Table & Plot Plan)		Vent Time for Emission Unit (chemical processes only)		All Regulated Pollutants - Chemical Name/CAS ³ (Speciate VOCs & HAPS)	Maximum Potential Uncontrolled Emissions ⁴		Maximum Potential Controlled Emissions ⁵		Emission Form or Phase (At exit conditions, Solid, Liquid or Gas/Vapor)	Est. Method Used ⁶	Emission Concentration ⁷ (ppmv or mg/m ⁴)
		ID No.	Source	ID No.	Device Type	Short Term ²	Max (hr/yr)		lb/hr	ton/yr	lb/hr	ton/yr			
E14	N/A	S14	N/A (Vapors to Tanks)		Vapor Balance	1Hr	8760	NO _x					Gas	EE	
								CO					Gas	EE	
								VOC	38	41.6	0.76	0.83	Gas	EE	
								PM10					Solid	EE	
								SO2					Gas	EE	
													Gas	EE	
													Gas	EE	
E17	Upward Vertical Stack	S17	Line Heater		None	C	8760	NO _x	0.08	0.33	0.08	0.33	Gas	EE	
								CO	0.06	0.28	0.06	0.28	Gas	EE	
								VOC	0.00	0.02	0.00	0.02	Gas	EE	
								PM10	0.01	0.03	0.01	0.03	Solid	EE	
								SO2	0.00	0.00	0.00	0.00	Gas	EE	
													Gas	EE	
													Gas	EE	

Emission Point ID No. (Must match Emission Units Table & Plot Plan)	Emission Point Type ¹	Emission Unit Vented Through This Point (Must match Emission Units Table & Plot Plan)		Air Pollution Control Device (Must match Emission Units Table & Plot Plan)		Vent Time for Emission Unit (chemical processes only)		All Regulated Pollutants - Chemical Name/CAS ³ (Speciate VOCs & HAPS)	Maximum Potential Uncontrolled Emissions ⁴		Maximum Potential Controlled Emissions ⁵		Emission Form or Phase (At exit conditions, Solid, Liquid or Gas/Vapor)	Est. Method Used ⁶	Emission Concentration ⁷ (ppmv or mg/m ⁴)
		ID No.	Source	ID No.	Device Type	Short Term ²	Max (hr/yr)		lb/hr	ton/yr	lb/hr	ton/yr			
E17-A (NEW)	Upward Vertical Stack	S17-A	Line Heater		None	C	8760	NO _x	0.40	1.75	0.40	1.75	Gas	EE	
								CO	0.34	1.47	0.34	1.47	Gas	EE	
								VOC	0.02	0.10	0.02	0.10	Gas	EE	
								PM10	0.03	0.13	0.03	0.13	Solid	EE	
								SO2	<0.01	0.01	<0.01	0.01	Gas	EE	
								CO2e	483	2,116	483	2,116	Gas	EE	
								Total HAPs	0.01	0.03	0.01	0.03	Gas	EE	
E17-B (NEW)	Upward Vertical Stack	S17-B	Line Heater		None	C	8760	NO _x	0.20	0.88	0.20	0.88	Gas	EE	
								CO	0.17	0.74	0.17	0.74	Gas	EE	
								VOC	0.01	0.05	0.01	0.05	Gas	EE	
								PM10	0.02	0.07	0.02	0.07	Solid	EE	
								SO2	<.01	<0.01	<.01	<0.01	Gas	EE	
								CO2e	242	1058	242	1058	Gas	EE	
								Total HAPs	<0.01	0.02	<0.01	0.02	Gas	EE	

Emission Point ID No. (Must match Emission Units Table & Plot Plan)	Emission Point Type ¹	Emission Unit Vented Through This Point (Must match Emission Units Table & Plot Plan)		Air Pollution Control Device (Must match Emission Units Table & Plot Plan)		Vent Time for Emission Unit (chemical processes only)		All Regulated Pollutants - Chemical Name/CAS ³ (Speciate VOCs & HAPS)	Maximum Potential Uncontrolled Emissions ⁴		Maximum Potential Controlled Emissions ⁵		Emission Form or Phase (At exit conditions, Solid, Liquid or Gas/Vapor)	Est. Method Used ⁶	Emission Concentration ⁷ (ppmv or mg/m ⁴)
		ID No.	Source	ID No.	Device Type	Short Term ²	Max (hr/yr)		lb/hr	ton/yr	lb/hr	ton/yr			
E18	Upward Vertical Stack	S20	Upward Vertical Stack	C20	SCR	C	8760	NO _x	2.61	11.44	2.61	11.44	Gas	EE	
								CO	14.37	62.93	1.04	4.58	Gas	EE	
								VOC	5.70	24.09	1.72	7.55	Gas	EE	
								PM10	0.16	0.71	0.16	0.71	Solid	EE	
								SO2	0.01	0.04	0.01	0.04	Gas	EE	
								CO2e	2304	10,092	2304	10,092	Gas	EE	
													Gas	EE	
								NO _x					Gas	EE	
								CO					Gas	EE	
								VOC					Gas	EE	
								PM10					Solid	EE	
								SO2					Gas	EE	
								CO2e					Gas	EE	
													Gas	EE	

The EMISSION POINTS DATA SUMMARY SHEET provides a summation of emissions by emission unit. Note that un-captured process emission unit emissions are not typically considered to be fugitive and must be accounted for on the appropriate EMISSIONS UNIT DATA SHEET and on the EMISSION POINTS DATA SUMMARY SHEET. Please note that total emissions from the source are equal to all vented emissions, all fugitive emissions, plus all other emissions (e.g., un-captured emissions). Please complete the FUGITIVE EMISSIONS DATA SUMMARY SHEET for fugitive emission activities.

1. Please add descriptors such as upward vertical stack, downward vertical stack, horizontal stack, relief vent, rain cap, etc.
2. Indicate by "C" if venting is continuous. Otherwise, specify the average short-term venting rate with units, for intermittent venting (i.e., 15 min/hr). Indicate as many rates as needed to clarify frequency of venting (e.g., 5 min/day, 2 days/wk).
3. List all regulated air pollutants. Speciate VOCs, including all HAPs. Follow chemical name with Chemical Abstracts Service (CAS) number. **LIST** Acids, CO, CS₂, VOCs, H₂S, Inorganics, Lead, Organics, O₃, NO, NO₂, SO₂, SO₃, etc. **DO NOT LIST** CO₂, H₂, H₂O, N₂, O₂, and Noble Gases.
4. Give maximum potential emission rate with no control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g., 5 lb VOC/20 minute batch).
5. Give maximum potential emission rate with proposed control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g., 5 lb VOC/20 minute batch).
6. Indicate method used to determine emission rate as follows:
MB = material balance; ST = stack test (give date of test); EE = engineering estimate; O = other (specify).

ATTACHMENT J

Emission Points Data Summary Sheet

Table 2: Release Parameter Data								
Emission Point ID No. (Must match Emission Units Table)	Inner Diameter (ft.)	Exit Gas			Emission Point Elevation (ft)		UTM Coordinates (km)	
		Temp. (°F)	Volumetric Flow ¹ (acfm) at operating conditions	Velocity (fps)	Ground Level (Height above mean sea level)	Stack Height ² (Release height of emissions above ground level)	Northing	Easting
E1	1.67	1005	9216	70	740	22		
E2	1.67	1005	9216	70	740	22		
E3	1.67	1005	9216	70	740	22		
E4	1.67	1005	9216	70	740	22		
E5A	0.5	992	678	57	740	8		
E6A	0.5	992	447	38	740	8		
E7	0.667	600	700 (est.)	30	740	20		
E8	1.67	1005	9216	70	740	22		
E9	1.67	1005	9216	70	740	22		
E10	1.67	1005	9216	70	740	22		
E11	1.67	1005	9216	70	740	22		
E12	Removed							
E13	Removed							
E16	1.58	1400	600 (est.)	25	740	20		
E17	0.5	1100	627 (est.)	53	740	8		
E17-A	0.67	1100	3326 (est.)	39	740	12		
E17-B	0.67	1100	2072 (est.)	25	740	12		
E18	2.00	1050	16,187	82	740	22		

¹ Give at operating conditions. Include inerts.

² Release height of emissions above ground level.

ATTACHMENT L

Emission Unit Data Sheets

NATURAL GAS FIRED BOILER/LINE HEATER DATA SHEET

Source ID # ¹	Status ²	Design Heat Input (mmBtu/hr) ³	Hours of Operation (hrs/yr) ⁴	Fuel Heating Value (Btu/scf) ⁵	
S7	EXIST	1.50 mmBTU/Hr	8760	1084 BTU/scf (LHV)	
S17	EXIST	0.75 mmBTU/Hr	8760	1084 BTU/scf (LHV)	
S17-A	NEW	4.0 mmBTU/Hr	8760	1084 BTU/scf (LHV)	
S17-B	NEW	2.0 mmBTU/Hr	8760	1084 BTU/scf (LHV)	

- Enter the appropriate Source Identification Numbers (Source ID #) for each boiler or line heater located at the compressor station. Boilers should be designated BLR-1, BLR-2, BLR-3, etc. Heaters or Line Heaters should be designated HTR-1, HTR-2, HTR-3, etc. Enter glycol dehydration unit Reboiler Vent data on the *Glycol Dehydration Unit Data Sheet*.
- Enter the Status for each boiler or line heater using the following:

EXIST Existing Equipment
REM Equipment Removed

NEW Installation of New Equipment
- Enter boiler or line heater design heat input in mmBtu/hr.
- Enter the annual hours of operation in hours/year for each boiler or line heater.
- Enter the fuel heating value in Btu/standard cubic foot.

STORAGE TANK DATA SHEET

Source ID # ¹	Status ²	Content ³	Volume ⁴	Dia ⁵	Throughput ⁶	Orientation ⁷	Liquid Height ⁸
T01-T04	REM	Condensate	250 BBL Each	11	306,600 Gallons Each	VERT	12 feet
T05	EXIST	Produced Water	2 Million	86	30 million gallons	VERT	30 feet
T06-T08	REM	Lube Oil	500 Gallon	4.0	1500 Gallons Each	HORZ	2 feet
T09	EXIST	Used Oil	300 Gallons	4.0	2000 Gallons	HORZ	2 feet
T10	EXIST	Ethylene Glycol	500 Gallon	4.0	2000 Gallons	HORZ	2 feet
T11	EXIST	TEG	500 Gallon	4.0	1000 Gallons	HORZ	2 feet
T12-T21	EXIST	Condensate	630 BBL Each	15	550,000 Gallons Each	VERT	10 feet
T22-T30	EXIST + NEW	Lube Oil	500 Gallon	4.0	1500 Gallons Each	HORZ	2 feet
T31-T32	NEW	Lube Oil	70 Gallon	2.0	210 Gallons Each	HORZ	1 foot

- Enter the appropriate Source Identification Numbers (Source ID #) for each storage tank located at the compressor station. Tanks should be designated T01, T02, T03, etc.
- Enter storage tank Status using the following:

EXIST Existing Equipment
REM Equipment Removed

NEW Installation of New Equipment
- Enter storage tank content such as condensate, pipeline liquids, glycol (DEG or TEG), lube oil, etc.
- Enter storage tank volume in gallons.
- Enter storage tank diameter in feet.
- Enter storage tank throughput in gallons per year.
- Enter storage tank orientation using the following:

VERT Vertical Tank

HORZ Horizontal Tank
- Enter storage tank average liquid height in feet.

ATTACHMENT N

Supporting Calculations

Eureka Hunter, LLC
EMISSIONS SUMMARY

Carbide Station
Wetzel County

Source	Description	NOx lb/hr	CO lb/hr	CO _{2e} lb/hr	VOC lb/hr	SO2 lb/hr	H2S lb/hr	PM lb/hr	benzene lb/hr	formaldehyde lb/hr	Total HAPs lb/hr
S1	Compressor Engine #1	1.52	0.61	1519.34	1.00	0.006	0.00	0.103	0.0004	0.1825	0.3270
S2	Compressor Engine #2	1.52	0.61	1519.34	1.00	0.006	0.00	0.103	0.0004	0.1825	0.3270
S3	Compressor Engine #3	1.52	0.61	1519.34	1.00	0.006	0.00	0.103	0.0004	0.1825	0.3270
S4	Compressor Engine #4	1.52	0.61	1519.57	1.00	0.006	0.00	0.103	0.0004	0.1825	0.3270
S5A	Rep. Flash Gas Compressor	0.46	0.46	280.82	0.06	0.005	0.00	0.037	0.0030	0.0664	0.0867
S6A	Replacement VRU Compressor	0.46	0.46	280.82	0.06	0.005	0.00	0.037	0.0030	0.0664	0.0867
S7	Dehy Reboiler Vent	0.15	0.13	183.53	0.23	0.001	0.00	0.012	0.0052		0.3210
S8	Compressor Engine #5	1.52	0.61	1519.34	1.00	0.006	0.00	0.103	0.0004	0.1825	0.3270
S9	Compressor Engine #6	1.52	0.61	1519.34	1.00	0.006	0.00	0.103	0.0004	0.1825	0.3270
S10	Compressor Engine #7	1.52	0.61	1519.34	1.00	0.006	0.00	0.103	0.0004	0.1825	0.3270
S11	Compressor Engine #8	1.52	0.61	1519.34	1.00	0.006	0.00	0.103	0.0004	0.1825	0.3270
S12	Compressor Engine #9 (REM)	0	0	0	0	0	0	0	0	0	0
S13	Compressor Engine #10 (REM)	0.00	0.00	0.00	0.00	0.000	0.00	0.000	0.0000	0.0000	0.0000
S14	Truck Loading (Un-Captured)				0.49						
S15	Truck Loading VCU	0.06	0.32	172.11	0.38			0.001			
S15-A	VCU Pilot	0.12	0.10	143.47	0.01			0.009			
S17	Line Heater	0.08	0.06	90.57	0.00	0.000	0.00	0.006			
S17-A	Line Heater (NEW)	0.40	0.34	483.11	0.02	0.002	0.00	0.030	0.0000	0.0003	0.0075
S17-B	Line Heater (NEW)	0.20	0.17	241.56	0.01	0.001	0.00	0.015	0.0000	0.0002	0.0038
S18	Pigging and Blowdowns				N/A						
S19	Fugitive				0.54						
S20	Compressor #11	2.61	1.04	2306.07	1.72	0.010	0.00	0.161	0.0004	0.3135	0.5367
Total		16.71	7.95	16,337	9.85	0.07	0.00	1.13	0.01	1.91	3.66
	Existing Permit	16.11	7.45	15,612	9.81	0.07	0.00	1.08	0.01	1.91	3.65
	Change	0.60	0.50	724.66	0.03	0.00	0.00	0.05	0.00	0.00	0.01

Source		NOx tpy	CO tpy	CO _{2e} tpy	VOC tpy	SO2 tpy	H2S tpy	PM tpy	benzene tpy	formaldehyde tpy	Total HAPs tpy
S1	Compressor Engine #1	6.66	2.67	6654.70	4.40	0.027	0.00	0.45	0.00	0.80	1.43
S2	Compressor Engine #2	6.66	2.67	6654.70	4.40	0.027	0.00	0.45	0.00	0.80	1.43
S3	Compressor Engine #3	6.66	2.67	6654.70	4.40	0.027	0.00	0.45	0.00	0.80	1.43
S4	Compressor Engine #4	6.66	2.67	6654.70	4.40	0.027	0.00	0.45	0.00	0.80	1.43
S5A	Rep. Flash Gas Compressor	2.02	2.02	1229.98	0.28	0.005	0.00	0.16	0.01	0.29	0.38
S6A	Replacement VRU Compressor	2.02	2.02	1229.98	0.28	0.005	0.00	0.16	0.01	0.29	0.38
S7	Dehy Reboiler Vent	0.67	0.56	803.88	1.01	0.001	0.00	0.00	0.02		1.41
S8	Compressor Engine #5	6.66	2.67	6654.70	4.40	0.027	0.00	0.45	0.00	0.80	1.43
S9	Compressor Engine #6	6.66	2.67	6654.70	4.40	0.027	0.00	0.45	0.00	0.80	1.43
S10	Compressor Engine #7	6.66	2.67	6654.70	4.40	0.027	0.00	0.45	0.00	0.80	1.43
S11	Compressor Engine #8	6.66	2.67	6654.70	4.40	0.027	0.00	0.45	0.00	0.80	1.43
S12	Compressor Engine #9 (REM)	0.00	0.00	0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00
S13	Compressor Engine #10 (REM)	0.00	0.00	0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00
S14	Truck Loading (Un-captured)				0.54						
S15	Truck Loading VCU	0.06	0.35	126.16	0.41			0.00			
S15-A	VCU Pilot	0.26	0.22	314.20	0.01			0.02			
S17	Line Heater	0.33	0.28	396.70	0.02	0.002	0.00	0.02			
S17-A	Line Heater (NEW)	1.75	1.47	2116.04	0.10	0.011	0.00	0.13	0.00	0.00	0.03
S17-B	Line Heater (NEW)	0.88	0.74	1058.02	0.05	0.005	0.00	0.07	0.00	0.00	0.02
S18	Pigging and Blowdowns				1.70						
S19	Fugitive				2.37						
S20	Compressor Engine #11	11.44	4.58	10100.58	7.55	0.043	0.00	0.71	0.00	1.37	2.35
Total		72.73	33.55	70613.11	49.51	0.29	0.00	4.90	0.07	8.35	16.02
	Existing Permit	70.10	31.34	67,439	49.36	0.27	0.00	4.70	0.07	8.35	15.98
	Change	2.63	2.21	3174.01	0.14	0.02	0.00	0.20	0.00	0.00	0.05

Eureka Hunter, LLC
ENGINE EMISSIONS

Carbide Station
Wetzel County

Existing Source S1

Engine Data:

Engine Manufacturer	CAT
Engine Model	3516B
Type (Rich-burn or Low Emission)	Low Emissions
Aspiration (Natural or Turbocharged)	Natural
Turbocharge Cooler Temperature	130 deg. F
Manufacturer Rating	1,380 hp
Speed at Above Rating	1,400 rpm
Configuration (In-line or Vee)	V-16
Number of Cylinders	16
Engine Bore	6.700 inches
Engine Stroke	7.500 inches
Fuel Heat Content (LHV)	1,007 BTU/scf
Engine Displacement	4,231 cu. in.
Fuel Consumption	7,500 Btu/bhp-hr

Emission Rates:

	g/bhp-hr	lb/hr	tons/year	g/hr	lb/day
Oxides of Nitrogen, NOx	0.50	1.52	6.66	690	36.51
Carbon Monoxide CO	0.20	0.61	2.67	276	14.60
VOC (NMNEHC)	0.33	1.00	4.40	455	24.10
CO ₂	499	1518	6,649	688,620	36435.56

AP-42
4strokelean
lb/mmbtu

Comment

453.59 grams = 1 pound
2,000 pounds = 1 ton

Total Annual Hours of Operation

8,760

SO ₂	0.0062	0.0272	0.0006
PM _{2.5}	0.0008	0.0035	7.71E-05
PM (Condensable)	0.1026	0.4493	0.00991
CH ₄ CO _{2e}	0.4793	2.0991	0.002205
N ₂ O CO _{2e}	0.7091	3.1058	0.000221
acrolein	0.0532	0.2330	0.00514
acetaldehyde	0.0865	0.3790	0.00836
formaldehyde	0.0600	0.1825	0.0528
biphenyl	0.0002	0.0009	0.000212
benzene	0.0004	0.0019	0.00044
toluene	0.0004	0.0017	0.000408
ethylbenzene	4E-05	0.0002	3.97E-05
xylene	0.0002	0.0008	0.000184
methanol	0.0024	0.0107	0.0025
n-hexane	0.0011	0.0047	0.00111
total HAPs	0.327	1.4324	0.071194

Mfg. Spec Used

Exhaust Parameters:

Exhaust Gas Temperature	1,005 deg. F
Exhaust Gas Flow Rate	9216 acfm
Total Exhaust Gas Volume Flow, wet	9,216 acfm
Total Exhaust Gas Volume Flow, wet	153.6 acf per sec
Exhaust Stack Height	260 inches
	21.67 feet
Exhaust Stack Inside Diameter	20 inches
	1.667 feet

Eureka Hunter ,LLC
ENGINE EMISSIONS

Carbide Station
Wetzel County

Existing Source S2

Engine Data:

Engine Manufacturer	CAT
Engine Model	3516B
Type (Rich-burn or Low Emission)	Low Emissions
Aspiration (Natural or Turbocharged)	Natural
Turbocharge Cooler Temperature	130 deg. F
Manufacturer Rating	1,380 hp
Speed at Above Rating	1,400 rpm
Configuration (In-line or Vee)	V-16
Number of Cylinders	16
Engine Bore	6.700 inches
Engine Stroke	7.500 inches
Fuel Heat Content (LHV)	1,007 BTU/scf
Engine Displacement	4,231 cu. in.
Fuel Consumption	7,500 Btu/bhp-hr

Emission Rates:

	g/bhp-hr	lb/hr	tons/year	g/hr	lb/day
Oxides of Nitrogen, NOx	0.50	1.52	6.66	690	36.51
Carbon Monoxide CO	0.20	0.61	2.67	276	14.60
VOC (NMNEHC)	0.33	1.00	4.40	455	24.10
CO ₂	499	1518	6,649	688,620	36435.56

AP-42
4strokelean
lb/mmbtu

Comment

453.59 grams = 1 pound
2,000 pounds = 1 ton

Total Annual Hours of Operation

8,760

SO ₂	0.0062	0.0272	0.0006
PM _{2.5}	0.0008	0.0035	7.71E-05
PM (Condensable)	0.1026	0.4493	0.00991
CH ₄ CO _{2e}	0.4793	2.0991	0.002205
N ₂ O CO _{2e}	0.7091	3.1058	0.000221
acrolein	0.0532	0.2330	0.00514
acetaldehyde	0.0865	0.3790	0.00836
formaldehyde	0.0600	0.1825	0.0528
biphenyl	0.0002	0.0009	0.000212
benzene	0.0004	0.0019	0.00044
toluene	0.0004	0.0017	0.000408
ethylbenzene	4E-05	0.0002	3.97E-05
xylene	0.0002	0.0008	0.000184
methanol	0.0024	0.0107	0.0025
n-hexane	0.0011	0.0047	0.00111
total HAPs	0.327	1.4324	0.071194

Mfg. Spec Used

Exhaust Parameters:

Exhaust Gas Temperature	1,005	deg. F
Exhaust Gas Flow Rate	9216	acfm
Total Exhaust Gas Volume Flow, wet	9,216	acfm
Total Exhaust Gas Volume Flow, wet	153.6	acf per sec
Exhaust Stack Height	260	inches
	21.67	feet
Exhaust Stack Inside Diameter	20	inches
	1.667	feet

Eureka Hunter, LLC
ENGINE EMISSIONS

Carbide Station
Wetzel County

Existing Source S3

Engine Data:

Engine Manufacturer	CAT
Engine Model	3516B
Type (Rich-burn or Low Emission)	Low Emissions
Aspiration (Natural or Turbocharged)	Natural
Turbocharge Cooler Temperature	130 deg. F
Manufacturer Rating	1,380 hp
Speed at Above Rating	1,400 rpm
Configuration (In-line or Vee)	V-16
Number of Cylinders	16
Engine Bore	6.700 inches
Engine Stroke	7.500 inches
Fuel Heat Content (LHV)	1,007 BTU/scf
Engine Displacement	4,231 cu. in.
Fuel Consumption	7,500 Btu/bhp-hr

Emission Rates:

	g/bhp-hr	lb/hr	tons/year	g/hr	lb/day
Oxides of Nitrogen, NOx	0.50	1.52	6.66	690	36.51
Carbon Monoxide CO	0.20	0.61	2.67	276	14.60
VOC (NMNEHC)	0.33	1.00	4.40	455	24.10
CO ₂	499	1518	6,649	688,620	36435.56

AP-42
4strokelean
lb/mmmbtu

Comment

453.59 grams = 1 pound
2,000 pounds = 1 ton

Total Annual Hours of Operation

8,760

SO ₂	0.0062	0.0272	0.0006
PM _{2.5}	0.0008	0.0035	7.71E-05
PM (Condensable)	0.1026	0.4493	0.00991
CH ₄ CO _{2e}	0.4793	2.0991	0.002205
N ₂ O CO _{2e}	0.7091	3.1058	0.000221
acrolein	0.0532	0.2330	0.00514
acetaldehyde	0.0865	0.3790	0.00836
formaldehyde	0.0600	0.1825	0.0528
biphenyl	0.0002	0.0009	0.000212
benzene	0.0004	0.0019	0.00044
toluene	0.0004	0.0017	0.000408
ethylbenzene	4E-05	0.0002	3.97E-05
xylene	0.0002	0.0008	0.000184
methanol	0.0024	0.0107	0.0025
n-hexane	0.0011	0.0047	0.00111
total HAPs	0.327	1.4324	0.071194

Mfg. Spec Used

Exhaust Parameters:

Exhaust Gas Temperature	1,005	deg. F
Exhaust Gas Flow Rate	9216	acfm
Total Exhaust Gas Volume Flow, wet	9,216	acfm
Total Exhaust Gas Volume Flow, wet	153.6	acf per sec
Exhaust Stack Height	260	inches
	21.67	feet
Exhaust Stack Inside Diameter	20	inches
	1.667	feet

Eureka Hunter, LLC
ENGINE EMISSIONS

Carbide Station
Wetzel County

Existing Source S4

Engine Data:

Engine Manufacturer	CAT
Engine Model	3516B
Type (Rich-burn or Low Emission)	Low Emissions
Aspiration (Natural or Turbocharged)	Natural
Turbocharge Cooler Temperature	130 deg. F
Manufacturer Rating	1,380 hp
Speed at Above Rating	1,400 rpm
Configuration (In-line or Vee)	V-16
Number of Cylinders	16
Engine Bore	6.700 inches
Engine Stroke	7.500 inches
Fuel Heat Content (LHV)	1,007 BTU/scf
Engine Displacement	4,231 cu. in.
Fuel Consumption	7,500 Btu/bhp-hr

Emission Rates:

	g/bhp-hr	lb/hr	tons/year	g/hr	lb/day
Oxides of Nitrogen, NOx	0.50	1.52	6.66	690	36.51
Carbon Monoxide CO	0.20	0.61	2.67	276	14.60
VOC (NMNEHC)	0.33	1.00	4.40	455	24.10
CO ₂	499	1518	6,649	688,620	36435.56

AP-42
4strokelean
lb/mmbtu

Comment

453.59 grams = 1 pound
2,000 pounds = 1 ton

Total Annual Hours of Operation

8,760

SO ₂	0.0062	0.0272	0.0006
PM _{2.5}	0.0008	0.0035	7.71E-05
PM (Condensable)	0.1026	0.4493	0.00991
CH ₄ CO _{2e}	0.4793	2.0991	0.002205
N ₂ O CO _{2e}	0.7091	3.1058	0.000221
acrolein	0.0532	0.2330	0.00514
acetaldehyde	0.0865	0.3790	0.00836
formaldehyde	0.0600	0.1825	0.0528
biphenyl	0.0002	0.0009	0.000212
benzene	0.0004	0.0019	0.00044
toluene	0.0004	0.0017	0.000408
ethylbenzene	4E-05	0.0002	3.97E-05
xylene	0.0002	0.0008	0.000184
methanol	0.0024	0.0107	0.0025
n-hexane	0.0011	0.0047	0.00111
total HAPs	0.327	1.4324	0.071194

Mfg. Spec Used

Exhaust Parameters:

Exhaust Gas Temperature	1,005	deg. F
Exhaust Gas Flow Rate	9216	acfm
Total Exhaust Gas Volume Flow, wet	9,216	acfm
Total Exhaust Gas Volume Flow, wet	153.6	acf per sec
Exhaust Stack Height	260	inches
	21.67	feet
Exhaust Stack Inside Diameter	20	inches
	1.667	feet

Eureka Hunter, LLC
ENGINE EMISSIONS

Carbide Station
Wetzel County

Existing Source S8

Engine Data:

Engine Manufacturer	CAT
Engine Model	3516B
Type (Rich-burn or Low Emission)	Low Emissions
Aspiration (Natural or Turbocharged)	Natural
Turbocharge Cooler Temperature	130 deg. F
Manufacturer Rating	1,380 hp
Speed at Above Rating	1,400 rpm
Configuration (In-line or Vee)	V-16
Number of Cylinders	16
Engine Bore	6.700 inches
Engine Stroke	7.500 inches
Fuel Heat Content (LHV)	1,007 BTU/scf
Engine Displacement	4,231 cu. in.
Fuel Consumption	7,500 Btu/bhp-hr

Emission Rates:

	g/bhp-hr	lb/hr	tons/year	g/hr	lb/day
Oxides of Nitrogen, NOx	0.50	1.52	6.66	690	36.51
Carbon Monoxide CO	0.20	0.61	2.67	276	14.60
VOC (NMNEHC)	0.33	1.00	4.40	455	24.10
CO ₂	499	1518	6,649	688,620	36435.56

AP-42
4strokelean
lb/mmbtu

Comment

453.59 grams = 1 pound
2,000 pounds = 1 ton

Total Annual Hours of Operation

8,760

SO ₂	0.0062	0.0272	0.0006
PM _{2.5}	0.0008	0.0035	7.71E-05
PM (Condensable)	0.1026	0.4493	0.00991
CH ₄ CO _{2e}	0.4793	2.0991	0.002205
N ₂ O CO _{2e}	0.7091	3.1058	0.000221
acrolein	0.0532	0.2330	0.00514
acetaldehyde	0.0865	0.3790	0.00836
formaldehyde	0.0600	0.1825	0.0528
biphenyl	0.0002	0.0009	0.000212
benzene	0.0004	0.0019	0.00044
toluene	0.0004	0.0017	0.000408
ethylbenzene	4E-05	0.0002	3.97E-05
xylene	0.0002	0.0008	0.000184
methanol	0.0024	0.0107	0.0025
n-hexane	0.0011	0.0047	0.00111
total HAPs	0.327	1.4324	0.071194

Mfg. Spec Used

Exhaust Parameters:

Exhaust Gas Temperature	1,005	deg. F
Exhaust Gas Flow Rate	9216	acfm
Total Exhaust Gas Volume Flow, wet	9,216	acfm
Total Exhaust Gas Volume Flow, wet	153.6	acf per sec
Exhaust Stack Height	260	inches
	21.67	feet
Exhaust Stack Inside Diameter	20	inches
	1.667	feet

Eureka Hunter, LLC
ENGINE EMISSIONS

Carbide Station
Wetzel County

New Source S9

Engine Data:

Engine Manufacturer	CAT
Engine Model	3516B
Type (Rich-burn or Low Emission)	Low Emissions
Aspiration (Natural or Turbocharged)	Natural
Turbocharge Cooler Temperature	130 deg. F
Manufacturer Rating	1,380 hp
Speed at Above Rating	1,400 rpm
Configuration (In-line or Vee)	V-16
Number of Cylinders	16
Engine Bore	6.700 inches
Engine Stroke	7.500 inches
Fuel Heat Content (LHV)	1,007 BTU/scf
Engine Displacement	4,231 cu. in.
Fuel Consumption	7,500 Btu/bhp-hr

Emission Rates:

	g/bhp-hr	lb/hr	tons/year	g/hr	lb/day
Oxides of Nitrogen, NOx	0.50	1.52	6.66	690	36.51
Carbon Monoxide CO	0.20	0.61	2.67	276	14.60
VOC (NMNEHC)	0.33	1.00	4.40	455	24.10
CO ₂	499	1518	6,649	688,620	36435.56

AP-42
4strokelean
lb/mmbtu

Comment

453.59 grams = 1 pound
2,000 pounds = 1 ton

Total Annual Hours of Operation

8,760

SO ₂	0.0062	0.0272	0.0006
PM _{2.5}	0.0008	0.0035	7.71E-05
PM (Condensable)	0.1026	0.4493	0.00991
CH ₄ CO _{2e}	0.4793	2.0991	0.002205
N ₂ O CO _{2e}	0.7091	3.1058	0.000221
acrolein	0.0532	0.2330	0.00514
acetaldehyde	0.0865	0.3790	0.00836
formaldehyde	0.0600	0.1825	0.0528
biphenyl	0.0002	0.0009	0.000212
benzene	0.0004	0.0019	0.00044
toluene	0.0004	0.0017	0.000408
ethylbenzene	4E-05	0.0002	3.97E-05
xylene	0.0002	0.0008	0.000184
methanol	0.0024	0.0107	0.0025
n-hexane	0.0011	0.0047	0.00111
total HAPs	0.327	1.4324	0.071194

Mfg. Spec Used

Exhaust Parameters:

Exhaust Gas Temperature	1,005	deg. F
Exhaust Gas Flow Rate	9216	acfm
Total Exhaust Gas Volume Flow, wet	9,216	acfm
Total Exhaust Gas Volume Flow, wet	153.6	acf per sec
Exhaust Stack Height	260	inches
	21.67	feet
Exhaust Stack Inside Diameter	20	inches
	1.667	feet

Eureka Hunter, LLC
ENGINE EMISSIONS

Carbide Station
Wetzel County

Existing Source S10

Engine Data:

Engine Manufacturer	CAT
Engine Model	3516B
Type (Rich-burn or Low Emission)	Low Emissions
Aspiration (Natural or Turbocharged)	Natural
Turbocharge Cooler Temperature	130 deg. F
Manufacturer Rating	1,380 hp
Speed at Above Rating	1,400 rpm
Configuration (In-line or Vee)	V-16
Number of Cylinders	16
Engine Bore	6.700 inches
Engine Stroke	7.500 inches
Fuel Heat Content (LHV)	1,007 BTU/scf
Engine Displacement	4,231 cu. in.
Fuel Consumption	7,500 Btu/bhp-hr

Emission Rates:

	g/bhp-hr	lb/hr	tons/year	g/hr	lb/day
Oxides of Nitrogen, NOx	0.50	1.52	6.66	690	36.51
Carbon Monoxide CO	0.20	0.61	2.67	276	14.60
VOC (NMNEHC)	0.33	1.00	4.40	455	24.10
CO ₂	499	1518	6,649	688,620	36435.56

AP-42
4strokelean
lb/mmbtu

Comment

453.59 grams = 1 pound
2,000 pounds = 1 ton

Total Annual Hours of Operation

8,760

SO ₂	0.0062	0.0272	0.0006
PM _{2.5}	0.0008	0.0035	7.71E-05
PM (Condensable)	0.1026	0.4493	0.00991
CH ₄ CO _{2e}	0.4793	2.0991	0.002205
N ₂ O CO _{2e}	0.7091	3.1058	0.000221
acrolein	0.0532	0.2330	0.00514
acetaldehyde	0.0865	0.3790	0.00836
formaldehyde	0.0600	0.1825	0.0528
biphenyl	0.0002	0.0009	0.000212
benzene	0.0004	0.0019	0.00044
toluene	0.0004	0.0017	0.000408
ethylbenzene	4E-05	0.0002	3.97E-05
xylene	0.0002	0.0008	0.000184
methanol	0.0024	0.0107	0.0025
n-hexane	0.0011	0.0047	0.00111
total HAPs	0.327	1.4324	0.071194

Mfg. Spec Used

Exhaust Parameters:

Exhaust Gas Temperature	1,005 deg. F
Exhaust Gas Flow Rate	9216 acfm
Total Exhaust Gas Volume Flow, wet	9,216 acfm
Total Exhaust Gas Volume Flow, wet	153.6 acf per sec
Exhaust Stack Height	260 inches
	21.67 feet
Exhaust Stack Inside Diameter	20 inches
	1.667 feet

Eureka Hunter, LLC
ENGINE EMISSIONS

Carbide Station
Wetzel County

Existing Source S11

Engine Data:

Engine Manufacturer	CAT
Engine Model	3516B
Type (Rich-burn or Low Emission)	Low Emissions
Aspiration (Natural or Turbocharged)	Natural
Turbocharge Cooler Temperature	130 deg. F
Manufacturer Rating	1,380 hp
Speed at Above Rating	1,400 rpm
Configuration (In-line or Vee)	V-16
Number of Cylinders	16
Engine Bore	6.700 inches
Engine Stroke	7.500 inches
Fuel Heat Content (LHV)	1,007 BTU/scf
Engine Displacement	4,231 cu. in.
Fuel Consumption	7,500 Btu/bhp-hr

Emission Rates:

	g/bhp-hr	lb/hr	tons/year	g/hr	lb/day
Oxides of Nitrogen, NOx	0.50	1.52	6.66	690	36.51
Carbon Monoxide CO	0.20	0.61	2.67	276	14.60
VOC (NMNEHC)	0.33	1.00	4.40	455	24.10
CO ₂	499	1518	6,649	688,620	36435.56

AP-42
4strokelean
lb/mmbtu

Comment

453.59 grams = 1 pound
2,000 pounds = 1 ton

Total Annual Hours of Operation

8,760

SO ₂	0.0062	0.0272	0.0006
PM _{2.5}	0.0008	0.0035	7.71E-05
PM	0.1026	0.4493	0.00991
CH ₄ CO _{2e}	0.4793	2.0991	0.002205
N ₂ O CO _{2e}	0.7091	3.1058	0.000221
acrolein	0.0532	0.2330	0.00514
acetaldehyde	0.0865	0.3790	0.00836
formaldehyde	0.0600	0.1825	0.0528
biphenyl	0.0002	0.0009	0.000212
benzene	0.0004	0.0019	0.00044
toluene	0.0004	0.0017	0.000408
ethylbenzene	4E-05	0.0002	3.97E-05
xylene	0.0002	0.0008	0.000184
methanol	0.0024	0.0107	0.0025
n-hexane	0.0011	0.0047	0.00111
total HAPs	0.327	1.4324	0.071194

Mfg. Spec Used

Exhaust Parameters:

Exhaust Gas Temperature	1,005	deg. F
Exhaust Gas Flow Rate	9216	acfm
Total Exhaust Gas Volume Flow, wet	9,216	acfm
Total Exhaust Gas Volume Flow, wet	153.6	acf per sec
Exhaust Stack Height	260	inches
	21.67	feet
Exhaust Stack Inside Diameter	20	inches
	1.667	feet

Eureka Hunter, LLC
ENGINE EMISSIONS

Carbide Station
Wetzel County

Source S12 (REMOVED)

Engine Data:

Engine Manufacturer	CAT
Engine Model	3516B
Type (Rich-burn or Low Emission)	Low Emissions
Aspiration (Natural or Turbocharged)	Natural
Turbocharge Cooler Temperature	130 deg. F
Manufacturer Rating	1,380 hp
Speed at Above Rating	1,400 rpm
Configuration (In-line or Vee)	V-16
Number of Cylinders	16
Engine Bore	6.700 inches
Engine Stroke	7.500 inches
Fuel Heat Content (LHV)	1,007 BTU/scf
Engine Displacement	4,231 cu. in.
Fuel Consumption	7,500 Btu/bhp-hr

Emission Rates:

	g/bhp-hr	lb/hr	tons/year	g/hr	lb/day
Oxides of Nitrogen, NOx	0.50	1.52	6.66	690	36.51
Carbon Monoxide CO	0.20	0.61	2.67	276	14.60
VOC (NMNEHC)	0.33	1.00	4.40	455	24.10
CO ₂	499	1518	6,649	688,620	36435.56

AP-42
4strokelean
lb/mmmbtu

Comment

453.59 grams = 1 pound
2,000 pounds = 1 ton

Total Annual Hours of Operation

8,760

SO ₂	0.0062	0.0272	0.0006
PM _{2.5}	0.0008	0.0035	7.71E-05
PM (Condensable)	0.1026	0.4493	0.00991
CH ₄ CO _{2e}	0.4793	2.0991	0.002205
N ₂ O CO _{2e}	0.7091	3.1058	0.000221
acrolein	0.0532	0.2330	0.00514
acetaldehyde	0.0865	0.3790	0.00836
formaldehyde	0.0600	0.1825	0.0528
biphenyl	0.0002	0.0009	0.000212
benzene	0.0004	0.0019	0.00044
toluene	0.0004	0.0017	0.000408
ethylbenzene	4E-05	0.0002	3.97E-05
xylene	0.0002	0.0008	0.000184
methanol	0.0024	0.0107	0.0025
n-hexane	0.0011	0.0047	0.00111
total HAPs	0.327	1.4324	0.071194

Mfg. Spec Used

Exhaust Parameters:

Exhaust Gas Temperature	1,005 deg. F
Exhaust Gas Flow Rate	9216 acfm
Total Exhaust Gas Volume Flow, wet	9,216 acfm
Total Exhaust Gas Volume Flow, wet	153.6 acf per sec
Exhaust Stack Height	260 inches
	21.67 feet
Exhaust Stack Inside Diameter	20 inches
	1.667 feet

Eureka Hunter, LLC
ENGINE EMISSIONS

Carbide Station
Wetzel County

Source S20

Engine Data:

Engine Manufacturer	CAT
Engine Model	3608B
Type (Rich-burn or Low Emission)	Low Emissions
Aspiration (Natural or Turbocharged)	Natural
Turbocharge Cooler Temperature	130 deg. F
Manufacturer Rating	2,370 hp
Speed at Above Rating	1,000 rpm
Configuration (In-line or Vee)	In Line
Number of Cylinders	8
Engine Bore	11.810 inches
Engine Stroke	11.810 inches
Fuel Heat Content (LHV)	1,007 BTU/scf
Engine Displacement	10,350 cu. in.
Fuel Consumption (LHV)	6,840 Btu/bhp-hr

CO 93% Control
VOC 50% Control

Emission Rates:

	g/bhp-hr	lb/hr	tons/year	g/hr	lb/day
Oxides of Nitrogen, NOx	0.50	2.61	11.44	1,185	62.70
Carbon Monoxide CO	0.20	1.04	4.58	474	25.08
VOC (NMNEHC)	0.33	1.72	7.55	782	41.38
CO ₂	441	2304	10,092	1,045,170	55300.98

AP-42
4strokelean
lb/mmbtu

Comment

453.59 grams = 1 pound
2,000 pounds = 1 ton

Total Annual Hours of Operation

8,760

SO ₂	0.0097	0.0426	0.0006
PM _{2.5}	0.0012	0.0055	7.71E-05
PM (Condensable)	0.1606	0.7036	0.00991
CH ₄ CO _{2e}	0.7506	3.2878	0.002205
N ₂ O CO _{2e}	1.1106	4.8644	0.000221
acrolein	0.0833	0.3650	0.00514
acetaldehyde	0.1355	0.5936	0.00836
formaldehyde	0.0600	0.3135	0.0528
biphenyl	0.0002	0.0008	0.000212
benzene	0.0004	0.0017	0.00044
toluene	0.0004	0.0016	0.000408
ethylbenzene	4E-05	0.0002	3.97E-05
xylene	0.0002	0.0007	0.000184
methanol	0.0022	0.0097	0.0025
n-hexane	0.001	0.0043	0.00111
total HAPs	0.5367	2.3507	0.071194

Mfg. Spec Used

Exhaust Parameters:

Exhaust Gas Temperature	857	deg. F
Exhaust Gas Flow Rate	16187	acfm
Total Exhaust Gas Volume Flow, wet	16,187	acfm
Total Exhaust Gas Volume Flow, wet	269.8	acf per sec
Exhaust Stack Height	260	inches
	21.67	feet
Exhaust Stack Inside Diameter	24	inches
	2.000	feet

Eureka Hunter, LLC
ENGINE EMISSIONS

Carbide Station
Wetzel County

Source S13 (REMOVED)

Engine Data:

Engine Manufacturer	CAT
Engine Model	3516B
Type (Rich-burn or Low Emission)	Low Emissions
Aspiration (Natural or Turbocharged)	Natural
Turbocharge Cooler Temperature	130 deg. F
Manufacturer Rating	1,380 hp
Speed at Above Rating	1,400 rpm
Configuration (In-line or Vee)	V-16
Number of Cylinders	16
Engine Bore	6.700 inches
Engine Stroke	7.500 inches
Fuel Heat Content (LHV)	1,007 BTU/scf
Engine Displacement	4,231 cu. in.
Fuel Consumption	7,500 Btu/bhp-hr

Emission Rates:

	g/bhp-hr	lb/hr	tons/year	g/hr	lb/day
Oxides of Nitrogen, NOx	0.50	1.52	6.66	690	36.51
Carbon Monoxide CO	0.20	0.61	2.67	276	14.60
VOC (NMNEHC)	0.33	1.00	4.40	455	24.10
CO ₂	499	1518	6,649	688,620	36435.56

AP-42
4strokelean
lb/mmbtu

Comment

453.59 grams = 1 pound
2,000 pounds = 1 ton

Total Annual Hours of Operation

8,760

SO ₂	0.0062	0.0272	0.0006
PM _{2.5}	0.0008	0.0035	7.71E-05
PM (Condensable)	0.1026	0.4493	0.00991
CH ₄ CO _{2e}	0.4793	2.0991	0.002205
N ₂ O CO _{2e}	0.7091	3.1058	0.000221
acrolein	0.0532	0.2330	0.00514
acetaldehyde	0.0865	0.3790	0.00836
formaldehyde	0.0600	0.1825	0.0528
biphenyl	0.0002	0.0009	0.000212
benzene	0.0004	0.0019	0.00044
toluene	0.0004	0.0017	0.000408
ethylbenzene	4E-05	0.0002	3.97E-05
xylene	0.0002	0.0008	0.000184
methanol	0.0024	0.0107	0.0025
n-hexane	0.0011	0.0047	0.00111
total HAPs	0.327	1.4324	0.071194

Mfg. Spec Used

Exhaust Parameters:

Exhaust Gas Temperature	1,005	deg. F
Exhaust Gas Flow Rate	9216	acfm
Total Exhaust Gas Volume Flow, wet	9,216	acfm
Total Exhaust Gas Volume Flow, wet	153.6	acf per sec
Exhaust Stack Height	260	inches
	21.67	feet
Exhaust Stack Inside Diameter	20	inches
	1.667	feet

DEHYDRATOR EMISSIONS

Carbide Station
Wetzel County

Burner/Still Vent Emissions
Existing Source S7

Reboiler Burner

Burner Duty Rating 1500.0 Mbtu/hr
Burner Efficiency 98.0 %
Gas Heat Content (LHV) 1006.9 Btu/scf
Total Gas Consumption 36484.7 scfd 13.32 MMscf/yr
H2S Concentration 0.000 Mole %

NOx	0.1520	lbs/hr	0.666	TPY
CO	0.1277	lbs/hr	0.559	TPY
CO2e	183.5	lbs/hr	803.9	TPY
VOC	0.0084	lbs/hr	0.037	TPY
SO2	0.0009	lbs/hr	0.004	TPY
PM	0.0116	lbs/hr	0.051	TPY
H2S	0.000251	lbs/hr	0.0010996	TPY

Still Vent Emissions

From Gri GlyCalc 4.0

Dry Gas Rate 80,000 MCFD
Glycol Circulation Rate 2.5 Gal/min
Treating Temperature 90 Deg F
Treating Pressure 900 psi

Total HC	0.5189	lbs/hr	2.273	TPY
Total VOC	0.2230	lbs/hr	0.977	TPY
Total HAP	0.3210	lbs/hr	1.406	TPY
benzene	0.0052	lbs/hr	0.023	TPY
toluene	0.0049	lbs/hr	0.021	TPY
ethyl benzene	0.0042	lbs/hr	0.018	TPY
xylene	0.0050	lbs/hr	0.022	TPY
n-hexane	0.129	lbs/hr	0.565	TPY

Total Dehy Emissions

NOx	0.1520	lbs/hr	0.666	TPY
CO	0.1277	lbs/hr	0.559	TPY
VOC	0.2314	lbs/hr	1.013	TPY
SO2	0.0009	lbs/hr	0.001	TPY
PM	0.0116	lbs/hr	0.000	TPY

Eureka Hunter, LLC
ENGINE EMISSIONS

Carbide Station
Wetzel County

Source S5A

Engine Data:

Engine Manufacturer	CAT	
Engine Model	3406 NA	
Type (Rich-burn or Low Emission)	Rich Burn	
Aspiration (Natural or Turbocharged)	natural	
Turbocharge Cooler Temperature	N/A	deg. F
Manufacturer Rating	215	hp
Speed at Above Rating	1,800	rpm
Configuration (In-line or Vee)	In Line	
Number of Cylinders	6	
Engine Bore	4.790	inches
Engine Stroke	6.000	inches
Fuel Heat Content (LHV)	1,114	BTU/scf
Engine Displacement	649	cu. in.
Fuel Consumption (HHV)	8,754	Btu/bhp-hr

Emission Rates:

	g/bhp-hr	lb/hr	tons/year	g/hr	lb/day	AP-42 4strokerich lb/mmbtu
Oxides of Nitrogen, NOx	0.97	0.46	2.02	209	11.06	
Carbon Monoxide CO	0.97	0.46	2.02	209	11.06	
VOC (NMNEHC)	0.14	0.06	0.28	29	1.54	
CO ₂	573	272	1,190	123,195	6518.37	

Comment

453.59 grams = 1 pound
2,000 pounds = 1 ton

Total Annual Hours of Operation

8,760

SO ₂		0.0011	0.0049			0.0006
PM _{2.5}		0.0179	0.0783			0.0095
PM (Condensable)		0.0187	0.0817			0.00991
CH ₄ CO _{2e}		9.0906	39.8168			0.23
N ₂ O CO _{2e}		0.1289	0.5648			0.000221
acrolein		0.0049	0.0217			0.00263
acetaldehyde		0.0053	0.0230			0.00279
formaldehyde mfr control rate	0.1400	0.0664	0.2906			0.0205
benzene		0.003	0.0130			0.00158
toluene		0.0011	0.0046			0.00056
methanol		0.0058	0.0252			0.00306
xylene		0.0004	0.0016			0.00019
total HAPs		0.0867	0.3798			0.03131

Mfg. Spec Used

Factor From 40 CFR 98, Table C-2

Mfg. Spec Used

Exhaust Parameters:

Exhaust Gas Temperature	1,155	deg. F
Exhaust Gas Flow Rate	1032	acfm

Total Exhaust Gas Volume Flow, wet	1,032	acfm
Total Exhaust Gas Volume Flow, wet	17.2	acf per sec

Exhaust Stack Height	84	inches
	7.00	feet

Exhaust Stack Inside Diameter	6	inches
	0.500	feet

Exhaust Stack Velocity	87.6	ft/sec	4	x	acfm
	5,255.9	ft/min	3.1416	x	(stack diameter)^2

Eureka Hunter, LLC
ENGINE EMISSIONS

Carbide Station
Wetzel County

Source S6A

Engine Data:

Engine Manufacturer	CAT	
Engine Model	3406 NA	
Type (Rich-burn or Low Emission)	Rich Burn	
Aspiration (Natural or Turbocharged)	natural	
Turbocharge Cooler Temperature	N/A	deg. F
Manufacturer Rating	215	hp
Speed at Above Rating	1,800	rpm
Configuration (In-line or Vee)	In Line	
Number of Cylinders	6	
Engine Bore	4.790	inches
Engine Stroke	6.000	inches
Fuel Heat Content (HHV)	1,114	BTU/scf
Engine Displacement	649	cu. in.
Fuel Consumption (HHV)	8,754	Btu/bhp-hr

Emission Rates:

	g/bhp-hr	lb/hr	tons/year	g/hr	lb/day	AP-42 4strokerich lb/mmbtu	
Oxides of Nitrogen, NOx	0.97	0.46	2.02	209	11.06		Comment
Carbon Monoxide CO	0.97	0.46	2.02	209	11.06		453.59 grams = 1 pound
VOC (NMNEHC)	0.14	0.06	0.28	29	1.54		2,000 pounds = 1 ton
CO ₂	573	272	1,190	123,195	6518.37		

Total Annual Hours of Operation

SO ₂	8,760	0.0011	0.0049			0.0006	
PM _{2.5}		0.0179	0.0783			0.0095	
PM (Condensable)		0.0187	0.0817			0.00991	
CH ₄ CO _{2e}		9.0906	39.8168			0.23	Mfg. Spec Used
N ₂ O CO _{2e}		0.1289	0.5648			0.000221	Factor From 40 CFR 98, Table C-2
acrolein		0.0049	0.0217			0.00263	
acetaldehyde		0.0053	0.0230			0.00279	
formaldehyde mfr control rate	0.1400	0.0664	0.2906			0.0205	Mfg. Spec Used
benzene		0.003	0.0130			0.00158	
toluene		0.0011	0.0046			0.00056	
methanol		0.0058	0.0252			0.00306	
xylene		0.0004	0.0016			0.00019	
total HAPs		0.0867	0.3798			0.03131	

Exhaust Parameters:

Exhaust Gas Temperature	1,155	deg. F
Exhaust Gas Flow Rate	1032	acfm
Total Exhaust Gas Volume Flow, wet	1,032	acfm
Total Exhaust Gas Volume Flow, wet	17.2	acf per sec
Exhaust Stack Height	84	inches
	7.00	feet
Exhaust Stack Inside Diameter	6	inches
	0.500	feet

Exhaust Stack Velocity	87.6	ft/sec	4	x	acfm
	5,255.9	ft/min	3.1416	x	(stack diameter)^2

Eureka Hunter, LLC

Carbide Station
Wetzel County

Potential Emission Rates

Source VCU-1

Enclosed Vapor Combustor

Destruction Efficiency 99.0 %
Gas Heat Content (HHV) 3000.0 Btu/scf (est.)
Max Flow to T-E 0.0035 MMSCFD 0.6318 MMCF/Yr
Max BTUs to Flare 0.9 MMBTU/Hr 1,895 MMBTU/Yr

NOx	0.06	lbs/hr	0.06	tpy
CO	0.32	lbs/hr	0.35	tpy
CO2	102.28	lbs/hr	110.77	tpy
CO2e	172.11	lb/hr	126.16	tpy
VOC	0.38	lb/hr	0.41	tpy
CH4	0.00	lbs/hr	0.0021	tpy
N2O	0.0002	lbs/hr	0.0002	tpy
PM	0.0011	lb/hr	0.0024	tpy

Notes: Truck loading vapor to VCU is assumed to be 100% VOC.
Truck max Loading Emission are 3456 scfd (excluding displaced air)
Thus, max to flare is 0.0035 MMSCFD
Annual truck loading to flares is 0.6350 MMSCF/Yr.

Factors Used

AP-42 Table 13.5-1	NOx	0.068 Lbs/MMBTU
AP-42 Table 13.5-1	CO	0.37 Lbs/MMBTU
40 CFR 98 Table C-1	CO2	116.89 Lbs/MMBTU
40 CFR 98 Table C-2	CH4	0.0022 Lbs/MMBTU
40 CFR 98 Table C-2	N2O	0.00022 Lbs/MMBTU
AP-42 Table 1.4-2	PM	7.6 lb/MMSCF

Eureka Hunter, LLC

Carbide Station

Wetzel County

Potential Emission Rates

Source S15-A

Combustor Auxiliary Fuel

Burner Duty Rating 2400.00 Mbtu/hr
Burner Efficiency 99.0 %
Gas Heat Content (HHV) 2200.0 Btu/scf (Propane)
Total Gas Consumption 13223.1 scfd
H2S Concentration 0.000 Mole %
Hours of Operation 4380

NOx	0.1188	lbs/hr	0.260	TPY
CO	0.0998	lbs/hr	0.219	TPY
CO2e	143	lbs/hr	314	TPY
CO2	143	lbs/hr	312	TPY
CH4	0.0027	lbs/hr	0.006	TPY
N2O	0.0026	lbs/hr	0.006	TPY
VOC	0.0065	lbs/hr	0.014	TPY
SO2	0.0007	lbs/hr	0.002	TPY
PM10	0.0090	lbs/hr	0.020	TPY

Note: Only operates during truck loading. As truck loading is limited to 12 hrs per day. Auxiliary Fuel usage will be a max of 4380 hours per year.

AP-42 Factors Used

NOx	100 Lbs/MMCF	
CO	84 Lbs/MMCF	
CO ₂	120,000 Lbs/MMCF	Global Warming Potential = 1
VOC	5.5 Lbs/MMCF	
PM	7.6 Lbs/MMCF	
SO ₂	0.6 Lbs/MMCF	
CH ₄	2.3 Lbs/MMCF	Global Warming Potential = 21
N ₂ O	2.2 Lbs/MMCF	Global Warming Potential = 310

Note: EPA Emission factors are based on gas at 1020 BTU/CF. Thus, emission factors must be corrected for higher BTU gas.

Eureka Hunter, LLC

Carbide Station
Wetzel County

Potential Emission Rates

Source 17

Line Heater HTR-1 (Existing)

Burner Duty Rating 750.0 Mbtu/hr
 Burner Efficiency 98.0 %
 Gas Heat Content (HHV) 1114.2 Btu/scf
 Total Gas Consumption 16484.5 scfd
 H2S Concentration 0.000 Mole %
 Hours of Operation 8760

NOx	0.0750	lbs/hr	0.329	TPY
CO	0.0630	lbs/hr	0.276	TPY
CO2e	91	lbs/hr	397	TPY
CO2	90	lbs/hr	394	TPY
CH4	0.0017	lbs/hr	0.008	TPY
N2O	0.0017	lbs/hr	0.007	TPY
VOC	0.0041	lbs/hr	0.018	TPY
SO2	0.0005	lbs/hr	0.002	TPY
H2S	0.0000	lbs/hr	0.000	TPY
PM10	0.0057	lbs/hr	0.025	TPY
CHOH	0.0001	lbs/hr	0.000	TPY
Benzene	0.0000	lbs/hr	0.000	TPY
N-Hexane	0.0014	lbs/hr	0.006	TPY
Toluene	0.0000	lbs/hr	0.000	TPY
Total HAPs	0.0014	lbs/hr	0.006	TPY

AP-42 Factors Used

NOx	100 Lbs/MMCF	
CO	84 Lbs/MMCF	
CO ₂	120,000 Lbs/MMCF	Global Warming Potential = 1
VOC	5.5 Lbs/MMCF	
PM	7.6 Lbs/MMCF	
SO ₂	0.6 Lbs/MMCF	
CH ₄	2.3 Lbs/MMCF	Global Warming Potential = 25
N ₂ O	2.2 Lbs/MMCF	Global Warming Potential = 298
HCOH	0.075 Lbs/MMCF	
Benzene	0.0021 Lbs/MMCF	
n-Hexane	1.8 Lbs/MMCF	
Toluene	0.0034 Lbs/MMCF	

Note: EPA Emission factors are based on gas at 1020 BTU/CF. Thus, emission factors must be corrected for higher BTU gas.

Eureka Hunter, LLC

Carbide Station
Wetzel County

Potential Emission Rates

Source 17-A

Line Heater HTR-2 (NEW)

Burner Duty Rating	4000.0 Mbtu/hr
Burner Efficiency	98.0 %
Gas Heat Content (HHV)	1114.2 Btu/scf
Total Gas Consumption	87917.1 scfd
H2S Concentration	0.000 Mole %
Hours of Operation	8760

NOx	0.4002	lbs/hr	1.753	TPY
CO	0.3361	lbs/hr	1.472	TPY
CO2e	483	lbs/hr	2116	TPY
CO2	480	lbs/hr	2103	TPY
CH4	0.0092	lbs/hr	0.040	TPY
N2O	0.0088	lbs/hr	0.039	TPY
VOC	0.0220	lbs/hr	0.096	TPY
SO2	0.0024	lbs/hr	0.011	TPY
H2S	0.0000	lbs/hr	0.000	TPY
PM10	0.0304	lbs/hr	0.133	TPY
CHOH	0.0003	lbs/hr	0.001	TPY
Benzene	0.0000	lbs/hr	0.000	TPY
N-Hexane	0.0072	lbs/hr	0.032	TPY
Toluene	0.0000	lbs/hr	0.000	TPY
Total HAPs	0.0075	lbs/hr	0.033	TPY

AP-42 Factors Used

NOx	100 Lbs/MMCF	
CO	84 Lbs/MMCF	
CO ₂	120,000 Lbs/MMCF	Global Warming Potential = 1
VOC	5.5 Lbs/MMCF	
PM	7.6 Lbs/MMCF	
SO ₂	0.6 Lbs/MMCF	
CH ₄	2.3 Lbs/MMCF	Global Warming Potential = 25
N ₂ O	2.2 Lbs/MMCF	Global Warming Potential = 298
HCOH	0.075 Lbs/MMCF	
Benzene	0.0021 Lbs/MMCF	
n-Hexane	1.8 Lbs/MMCF	
Toluene	0.0034 Lbs/MMCF	

Note: EPA Emission factors are based on gas at 1020 BTU/CF. Thus, emission factors must be corrected for higher BTU gas.

Eureka Hunter, LLC

Carbide Station
Wetzel County

Potential Emission Rates

Source 17-B

Line Heater HTR-3 (NEW)

Burner Duty Rating 2000.0 Mbtu/hr
 Burner Efficiency 98.0 %
 Gas Heat Content (HHV) 1114.2 Btu/scf
 Total Gas Consumption 43958.6 scfd
 H2S Concentration 0.000 Mole %
 Hours of Operation 8760

NOx	0.2001	lbs/hr	0.876	TPY
CO	0.1681	lbs/hr	0.736	TPY
CO2e	242	lbs/hr	1058	TPY
CO2	240	lbs/hr	1052	TPY
CH4	0.0046	lbs/hr	0.020	TPY
N2O	0.0044	lbs/hr	0.019	TPY
VOC	0.0110	lbs/hr	0.048	TPY
SO2	0.0012	lbs/hr	0.005	TPY
H2S	0.0000	lbs/hr	0.000	TPY
PM10	0.0152	lbs/hr	0.067	TPY
CHOH	0.0002	lbs/hr	0.001	TPY
Benzene	0.0000	lbs/hr	0.000	TPY
N-Hexane	0.0036	lbs/hr	0.016	TPY
Toluene	0.0000	lbs/hr	0.000	TPY
Total HAPs	0.0038	lbs/hr	0.016	TPY

AP-42 Factors Used

NOx	100 Lbs/MMCF	
CO	84 Lbs/MMCF	
CO ₂	120,000 Lbs/MMCF	Global Warming Potential = 1
VOC	5.5 Lbs/MMCF	
PM	7.6 Lbs/MMCF	
SO ₂	0.6 Lbs/MMCF	
CH ₄	2.3 Lbs/MMCF	Global Warming Potential = 25
N ₂ O	2.2 Lbs/MMCF	Global Warming Potential = 298
HCOH	0.075 Lbs/MMCF	
Benzene	0.0021 Lbs/MMCF	
n-Hexane	1.8 Lbs/MMCF	
Toluene	0.0034 Lbs/MMCF	

Note: EPA Emission factors are based on gas at 1020 BTU/CF. Thus, emission factors must be corrected for higher BTU gas.

Eureka Hunter, LLC
FUGITIVE EMISSIONS

Carbide Station
Wetzel County

Fugitive VOC Emissions

Volatile Organic Compounds, non-methane and non-ethane from gas analysis:
Hydrogen Sulfide in Gas Stream

13.23 weight percent
0.00 ppm by volume

Emission Source:	Number	Oil & Gas Production*	VOC %	VOC, lb/hr	H2S, wt. %	H2S, lb/hr
Valves:						
Gas/Vapor:	40	0.00992 lb/hr	13.2	0.053	0.000	0.0000
Light Liquid:	8	0.00550 lb/hr	100.0	0.044		
Heavy Liquid (Oil):	-	0.00002 lb/hr	100.0	0.000		
Relief Valves:	16	0.01940 lb/hr	13.2	0.041	0.000	0.0000
Open-ended Lines, gas:		0.00441 lb/hr	13.2	0.000	0.000	0.0000
Open-ended Lines, liquid:	-	0.00031 lb/hr	100.0	0.000		
Pump Seals:						
Gas:	-	0.00529 lb/hr	100.0	0.000	0.000	0.0000
Light Liquid:	6	0.02866 lb/hr	100.0	0.172		
Heavy Liquid (Oil):	-	0.00133 lb/hr	100.0	0.000		
Compressor Seals, Gas:	74	0.01940 lb/hr	13.2	0.190	0.000	0.0000
Connectors:						
Gas:	160	0.00044 lb/hr	13.2	0.009	0.000	0.0000
Light Liquid:	30	0.00046 lb/hr	100.0	0.014		
Heavy Liquid (Oil):	-	0.00002 lb/hr	100.0	0.000		
Flanges:						
Gas:	120	0.00086 lb/hr	13.2	0.014	0.000	0.0000
Light Liquid:	24	0.00024 lb/hr	100.0	0.006		
Heavy Liquid:	0	0.00000086 lb/hr	100.0	0.000		

Fugitive Calculations:

	lb/hr	t/y
VOC	0.542	2.375
H2S	0.000	0.000

Notes: * TNRCC approved numbers per their interoffice memorandum dated November 29, 1995

Eureka Hunter, LLC
GAS ANALYSIS INFORMATION

Carbide Station
Wetzel County

Fuel Gas Composition Information:

	Fuel Gas mole %	Fuel M.W. lb/lb-mole	Fuel S.G.	Fuel Wt. %	LHV, dry Btu/scf	HHV, dry Btu/scf	AFR vol/vol	VOC NM / NE	Z Factor	GPM
Nitrogen, N2	0.497	0.139	0.005	0.707			-		0.0050	
Carbon Dioxide, CO2	0.243	0.107	0.004	0.543			-		0.0024	
Hydrogen Sulfide, H2S	0.000	0.000	0.000	0.000	0.0	0.0	0.000		0.0000	
Helium, He	-	-	-	-			-		-	
Oxygen, O2	0.001	0.000	0.000	0.002			-		0.0000	
Methane, CH4	81.714	13.109	0.453	66.550	743.1	825.3	7.787		0.8155	
Ethane, C2H6	12.425	3.736	0.129	18.967	201.1	219.9	2.072		0.1232	3.305
Propane	3.412	1.505	0.052	7.638	79.0	85.8	0.813	7.638	0.0335	0.935
Iso-Butane	0.446	0.259	0.009	1.316	13.4	14.5	0.138	1.316	0.0043	0.145
Normal Butane	0.731	0.425	0.015	2.157	22.0	23.8	0.226	2.157	0.0071	0.229
Iso Pentane	0.196	0.141	0.005	0.718	7.3	7.8	0.075	0.718	0.0020	0.071
Normal Pentane	0.152	0.110	0.004	0.557	5.6	6.1	0.058	0.557	0.0015	0.055
Hexane	0.120	0.103	0.004	0.525	5.3	5.7	0.054	0.525	0.0012	0.049
Heptane	0.063	0.063	0.002	0.320	3.2	3.5	0.033	0.320	0.0006	0.029
	100.000	19.698	0.680		1,080.0	1,192.5	11.257	13.231	0.9964	4.819

Ideal Gross (HHV) 1,192.5
Ideal Gross (sat'd) 1,172.5
GPM -
Real Gross (HHV) 1,196.8
Real Net (LHV) 1,083.9

Eureka Hunter, LLC

Carbide Station
Wetzel County

Fuel Gas Composition Information:

	Fuel Gas mole %	Fuel M.W. lb/lb-mole	Fuel S.G.	Fuel Wt. %	LHV, dry Btu/scf	HHV, dry Btu/scf	AFR vol/vol	VOC NM / NE	Z Factor	GPM
Nitrogen, N2	0.504	0.141	0.005	0.776			-		0.0050	
Carbon Dioxide, CO2	0.250	0.110	0.004	0.605			-		0.0025	
Hydrogen Sulfide, H2S	0.000	0.000	0.000	0.000	0.0	0.0	0.000		0.0000	
Helium, He	-	-	-	-			-		-	
Oxygen, O2	0.001	0.000	0.000	0.002			-		0.0000	
Methane, CH4	87.600	14.054	0.485	77.279	796.6	884.8	8.348		0.8742	
Ethane, C2H6	9.925	2.984	0.103	16.411	160.7	175.6	1.655		0.0984	2.640
Propane	1.000	0.441	0.015	2.425	23.1	25.2	0.238	2.425	0.0098	0.274
Iso-Butane	0.150	0.087	0.003	0.479	4.5	4.9	0.046	0.479	0.0015	0.049
Normal Butane	0.400	0.232	0.008	1.278	12.0	13.0	0.124	1.278	0.0039	0.125
Iso Pentane	0.060	0.043	0.001	0.238	2.2	2.4	0.023	0.238	0.0006	0.022
Normal Pentane	0.040	0.029	0.001	0.159	1.5	1.6	0.015	0.159	0.0004	0.014
Hexane	0.050	0.043	0.001	0.237	2.2	2.4	0.023	0.237	0.0005	0.020
Heptane	0.020	0.020	0.001	0.110	1.0	1.1	0.010	0.110	0.0002	0.009
	100.000	18.186	0.628		1,003.9	1,111.0	10.484	4.927	0.9971	3.154

Ideal Gross (HHV)	1,111.0
Ideal Gross (sat'd)	1,092.4
GPM	-
Real Gross (HHV)	1,114.2
Real Net (LHV)	1,006.9

GAS DATA INFORMATION

Specific Gravity of Air, @ 29.92 in. Hg and 60 -F, 28.9625
 One mole of gas occupies, @ 14.696 psia & 32 -F 359.2 cu ft. per lb-mole
 One mole of gas occupies, @ 14.696 psia & 60 -F 379.64 cu ft. per lb-mole

Hydrogen Sulfide (H₂S) conversion chart:

<u>0</u> grains H ₂ S/100 scf	=	<u>0.00000</u> mole % H ₂ S
		<u>0.0</u> ppmv H ₂ S
<u>0</u> mole % H ₂ S	=	<u>0</u> grains H ₂ S/100 scf
		<u>0.0</u> ppmv H ₂ S
<u>0</u> ppmv H ₂ S	=	<u>0.000</u> grains H ₂ S/100 scf
		<u>0.00000</u> mole % H ₂ S

Ideal Gas at 14.696 psia and 60°F

		MW lb/mol	Specific Gravity	Lb per Cu Ft	Cu Ft per Lb	LHV, dry Btu/scf	HHV, dry Btu/scf	LHV Btu/lb	HHV Btu/lb	cu ft of air / 1 cu ft of gas	Z factor
Nitrogen	N ₂	28.013	0.9672	0.0738	13.552	0	0	0	0	0	0.9997
Carbon Dioxide	CO ₂	44.010	1.5196	0.1159	8.626	0	0	0	0	0	0.9964
Hydrogen Sulfide	H ₂ S	34.076	1.1766	0.0898	11.141	587	637	6,545	7,100	7.15	0.9846
Helium	He	4.003	0.1382	0.0105	94.848						1.0006
Oxygen	O ₂	31.999	1.1048	0.0843	11.864	0	0	0	0	0	0.9992
Methane	CH ₄	16.043	0.5539	0.0423	23.664	909.4	1,010.0	21,520	23,879	9.53	0.9980
Ethane	C ₂ H ₆	30.070	1.0382	0.0792	12.625	1,618.7	1,769.6	20,432	22,320	16.68	0.9919
Propane	C ₃ H ₈	44.097	1.5226	0.1162	8.609	2,314.9	2,516.1	19,944	21,661	23.82	0.9825
Iso-Butane	C ₄ H ₁₀	58.124	2.0069	0.1531	6.532	3,000.4	3,251.9	19,629	21,257	30.97	0.9711
Normal Butane	C ₄ H ₁₀	58.124	2.0069	0.1531	6.532	3,010.8	3,262.3	19,680	21,308	30.97	0.9667
Iso Pentane	C ₅ H ₁₂	72.151	2.4912	0.1901	5.262	3,699.0	4,000.9	19,478	21,052	38.11	1.0000
Normal Pentane	C ₅ H ₁₂	72.151	2.4912	0.1901	5.262	3,706.9	4,008.9	19,517	21,091	38.11	1.0000
Hexane	C ₆ H ₁₄	86.178	2.9755	0.2270	4.405	4,403.8	4,755.9	19,403	20,940	45.26	0.9879
Heptane	C ₇ H ₁₆	100.205	3.4598	0.2639	3.789	5,100.0	5,502.5	22,000	23,000	52.41	0.9947

Real Gas at 14.696 psia and 60°F

		MW lb/mol	Specific Gravity	Lb per Cu Ft	Cu Ft per Lb	LHV, dry Btu/scf	HHV, dry Btu/scf	LHV Btu/lb	HHV Btu/lb	cu ft of air / 1 cu ft of gas	Gal/Mole
Nitrogen	N ₂	28.013	0.9672	0.0738	13.552	0	0	0	0	0	4.1513
Carbon Dioxide	CO ₂	44.010	1.5196	0.1159	8.626	0	0	0	0	0	6.4532
Hydrogen Sulfide	H ₂ S	34.076	1.1766	0.0898	11.141	621	672	6,545	7,100	7.15	5.1005
Helium	He	4.003	0.1382	0.0105	94.848						3.8376
Oxygen	O ₂	31.999	1.1048	0.0843	11.864	0	0	0	0	0	3.3605
Methane	CH ₄	16.043	0.5539	0.0423	23.664	911	1,012	21,520	23,879	9.53	6.4172
Ethane	C ₂ H ₆	30.070	1.0382	0.0792	12.625	1,631	1,783	20,432	22,320	16.68	10.126
Propane	C ₃ H ₈	44.097	1.5226	0.1162	8.609	2,353	3,354	19,944	21,661	23.82	10.433
Iso-Butane	C ₄ H ₁₀	58.124	2.0069	0.1531	6.532	3,101	3,369	19,629	21,257	30.97	12.386
Normal Butane	C ₄ H ₁₀	58.124	2.0069	0.1531	6.532	3,094	3,370	19,680	21,308	30.97	11.937
Iso Pentane	C ₅ H ₁₂	72.151	2.4912	0.1901	5.262	3,709	4,001	19,478	21,052	38.11	13.86
Normal Pentane	C ₅ H ₁₂	72.151	2.4912	0.1901	5.262	3,698	4,009	19,517	21,091	38.11	13.713
Hexane	C ₆ H ₁₄	86.178	2.9755	0.2270	4.405	4,404	4,756	19,403	20,940	45.26	15.566
Heptane	C ₇ H ₁₆	100.205	3.4598	0.2639	3.789	5,101	5,503	22,000	23,000	52.41	17.468

16.3227

17.468

ATTACHMENT O

Monitoring, Recordkeeping, Reporting and Testing Plan

ATTACHMENT O
EUREKA HUNTER PIPELINE, LLC
Carbide Compressor Station
Monitoring, Recordkeeping, Reporting and Testing Plan

I. Monitoring

Eureka Hunter will apply the existing line heater permit conditions to the two new line heaters.

II. Recordkeeping

Eureka Hunter will apply the existing line heater permit conditions to the two new line heaters. All inspections, preventive maintenance, failures, duration of failure events, replacements and/or repairs of the flare will be recorded, signed and dated by an authorized representative.

All records will be kept either on site or at the nearest office location for a period of at least five (5) years.

III. Testing

No testing is proposed for the two planned line heaters. Testing will be performed as directed by the Department, should the Department determine such testing is warranted.

IV. Reporting

Eureka will continue to submit certified emission statements on an annual basis in accordance with WVDEP, Division of Air Quality requirements.

ATTACHMENT P

Public Notice Affidavit

**To Be Provided Upon Receipt
of Affidavit**

AIR QUALITY PERMIT NOTICE

Notice of Application

Notice is given that Eureka Hunter Pipeline, LLC has applied to the West Virginia Department of Environmental Protection, Division of Air Quality, for a Class II Administrative Update for its Carbide Compressor Station on County Route 20/12) in Wetzel County, West Virginia, approximately two road miles east of the community of Hastings.

The applicant estimates the following potential increases to discharge for following Regulated Air Pollutants will be:

2.63 tons of Nitrogen Oxides per year
2.21 tons of Carbon Monoxide per year
3,174 tons of Green House Gases per year
0.20 tons of Particulate Matter per year
0.14 tons of Volatile Organics per year

The facility is currently operational. Written comments will be received by the West Virginia Department of Environmental Protection, Division of Air Quality, 601 57th Street, SE, Charleston, WV 25304, for at least 30 calendar days from the date of publication of this notice.

Any questions regarding this permit application should be directed to the DAQ at (304) 926-0499, extension 1250, during normal business hours.

Dated this the (Day) day of (Month), (Year).

By: Mr. Chris Akers, Executive Vice President
Eureka Hunter Pipeline, LLC
777 Post Oak Blvd., Suite 650
Houston, Texas 77056