JAY-BEE OIL & GAS, INC.

APPLICATION FOR
CLASS I ADMINISTRATIVE UPDATE

Big Moses Production Facility
Tyler County, West Virginia

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

APPLICATION FOR CLASS I ADMINISTRATIVE UPDATE

Jay-Bee Oil & Gas, Inc.

Big Moses Compressor Station

Tyler County, West Virginia

Table of Contents

SECTION I

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):*
Jay-Bee Oil & Gas, Inc.

2. Federal Employer ID No. ***(FEIN):***
55-0738862

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

4. The applicant is the:
☐ **OWNER** ☐ **OPERATOR** ☒ **BOTH**

5A. Applicant's mailing address:
3570 Shields Hill Road
Cairo, WV 26337

5B. Facility's present physical address:
None. Off of Big Moses Road near Alma, WV

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: **N/A**

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 has a lease agreement with the land owner for installation of the well pad and all equipment necessary to manage produced liquid and gas**
- 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 Well Pad and Production Facility**

10. North American Industry Classification System **(NAICS)** code for the facility:
211111

11A. DAQ Plant ID No. (for existing facilities only):
ID No. 095-00027

11B. List all current 45CSR13 and 45CSR30 (Title V) permit numbers associated with this process (for existing facilities only):
R13-3225

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 *present location* of the facility from the nearest state road;
- For **Construction** or **Relocation permits,** please provide directions to the *proposed new site location* from the nearest state road. Include a **MAP** as **Attachment B**.

From Clarksburg, take US Route 50 west approximately 25 miles to Route 18 north (West Union Exist). Turn right on to Route 18 (north) and travel approximately 20 miles to the community of Alma. Pass through Alma. Continue on Route 18 approximately 1 mile to the intersection with County Route 1/3 (Indian Creek Road). Turn right onto Indian Creek Road and travel 2.9 miles. Turn right onto Big Moses Road. Bear right in 400 feet to entrance to the pad access road.

12.B. New site address (if applicable):	12C. Nearest city or town: **Alma**	12D. County: **Tyler**
12.E. UTM Northing (KM): **4364.529**	12F. UTM Easting (KM): **518.180**	12G. UTM Zone: **17**

13. Briefly describe the proposed change(s) at the facility: Dehydrate and compress produced natural gas to allow discharge into a gathering line owned by others.

14A. Provide the date of anticipated installation or change: **Upon Approval** – 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: **Upon Approval**

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? ☐ **YES** ☒ **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 *(if known).* 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 *(if known).* 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:

☐ Bulk Liquid Transfer Operations	☐ Haul Road Emissions	☐ Quarry
☐ Chemical Processes*	☐ Hot Mix Asphalt Plant	☐ Solid Materials Sizing, Handling and Storage Facilities
☐ Concrete Batch Plant	☐ Incinerator	☒ Storage Tanks
☐ Grey Iron and Steel Foundry	☒ Natural Gas Compressors	
☒ Dehydration		

***Leak Source Data Sheet Only**

Fill out and provide the **Emissions Unit Data Sheet(s)** as **Attachment L.**

29. Check all applicable **Air Pollution Control Device Sheets** listed below:

☐ Absorption Systems	☐ Baghouse	☐ Flare
☐ Adsorption Systems	☐ Condenser	☐ Mechanical Collector
☐ Afterburner	☐ Electrostatic Precipitator	☐ Wet Collecting System

☐ 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)?

☐ **YES** ☒ **NO**

- If **YES,** identify each segment of information on each page that is submitted as confidential and provide justification for each segment claimed confidential, including the criteria under 45CSR§31-4.1, and in accordance with the DAQ's "***Precautionary Notice – Claims of Confidentiality"*** guidance 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:

☐ Authority of Corporation or Other Business Entity	☐ Authority of Partnership
☐ Authority of Governmental Agency	☐ 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: 5-13-2016 *(Please use blue ink)*

35B. Printed name of signee: **Shane Dowell**		35C. Title: **Office Manger**
35D. E-mail: **sdowell@jaybeeoil.com**	36E. Phone: **304/628-3119**	36F. FAX: **304/628-3119**
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:

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

Attachments

ATTACHMENT A

Business Registration

Attachment A

Attached Current WV Business Certificate

WEST VIRGINIA
STATE TAX DEPARTMENT
BUSINESS REGISTRATION
CERTIFICATE

ISSUED TO:
JAY-BEE OIL & GAS INC
RR 1 BOX 5
CAIRO, WV 26337-9701

BUSINESS REGISTRATION ACCOUNT NUMBER: **1043-4424**

This certificate is issued on: 06/11/2010

This certificate is issued by
the West Virginia State Tax Commissioner
in accordance with W.Va. Code s. 11-12.

The person or organization identified on this certificate is registered to conduct business in the State of West Virginia at the location above.

This certificate is not transferrable and must be displayed at the location for which issued.

This certificate shall be permanent until cessation of the business for which the certificate of registration was granted or until it is suspended, revoked, or cancelled by the Tax Commissioner.

Change in name or change of location shall be considered a cessation of the business and a new certificate shall be required.

TRAVELING/STREET VENDORS: Must carry a copy of this certificate in every vehicle operated by them.
CONTRACTORS, DRILLING OPERATORS, TIMBER/LOGGING OPERATIONS: Must have a copy of this certificate displayed at every job site within West Virginia.

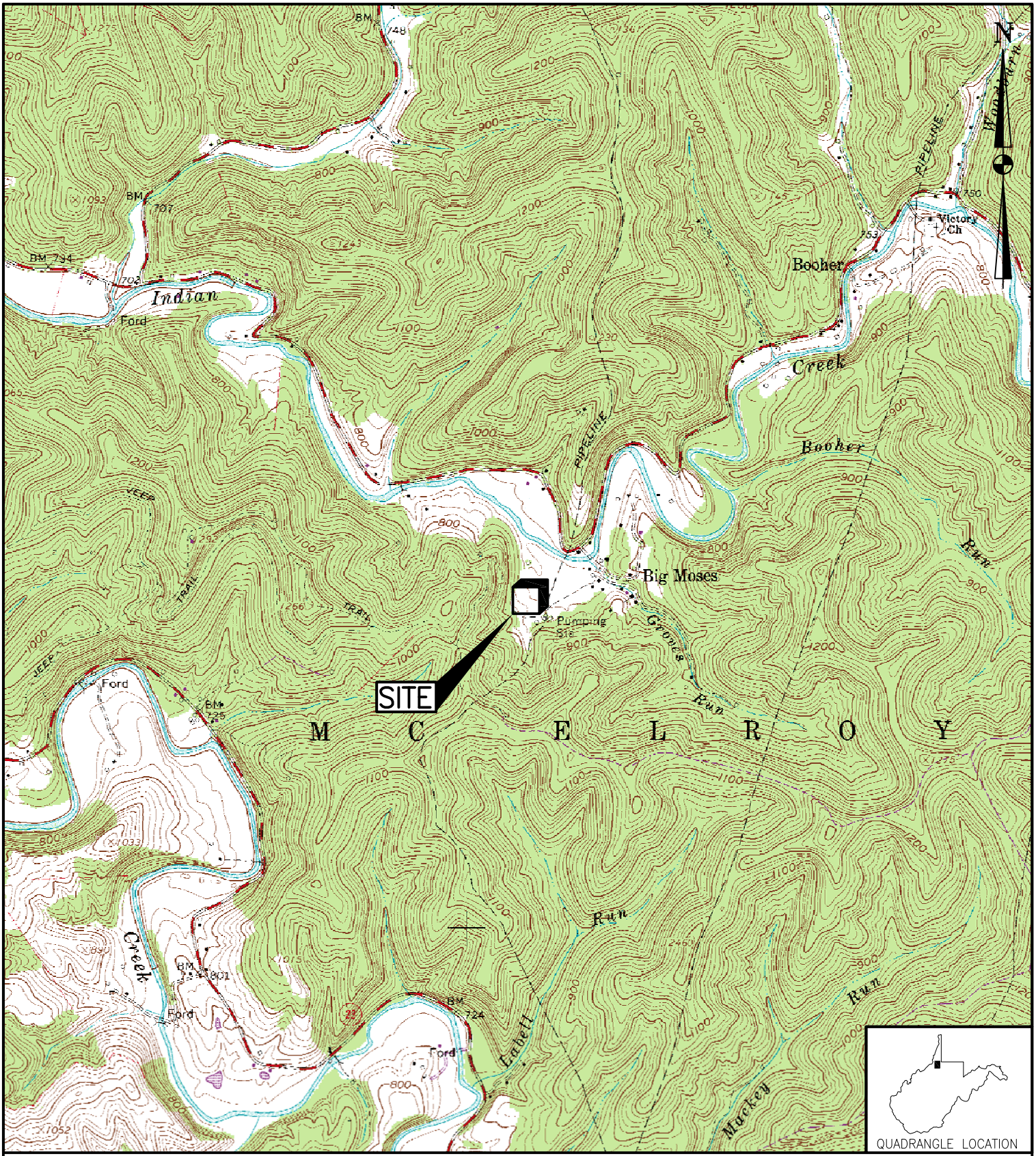
atl.006 v.1
L1388190464

SCANNED

JUN 24 2010

ATTACHMENT B

Site Location Map



REFERENCE: USGS 7.5' QUADRANGLE MAP OF: SHIRLEY, WEST VIRGINIA; DATED 1961, PHOTOREVISED 1989.

DRAWN BY	DJF
DATE	10/13/14
CHECKED BY	RAD
SET JOB NO.	214054
SET DWG FILE	BIG MOSES CSm01.dwg
DRAWING SCALE	1"=2000'

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

JAY-BEE OIL & GAS, INC.

BIG MOSES COMPRESSOR STATION
TYLER COUNTY, WEST VIRGINIA
SITE LOCATION MAP

DRAWING NO. FIGURE 1

REV. 0

Plot: env045 10/13/2014 15:27 G:\JAY-BEE OIL&GAS\214054\BIG MOSESm01.dwg

ATTACHMENT C

Construction Schedule

Jay-Bee Oil & Gas, Inc.
Big Moses Compressor Station
Attachment C – Construction Schedule

The requested Class I Administrative Update seeks approval for removal of one RICE engine from the permit and operational restrictions on a second RICE engine. Additionally, this application also seeks approval for operational restrictions on one of the three dehydration units. Accordingly, there is nothing to construct associated with this request. Hence, there is no construction schedule.

ATTACHMENT D

Regulatory Analysis

Big Moses Compressor Station
Attachment D
Regulatory Analysis

Both State and Federal environmental regulations governing air emissions apply to the planned Big Moses Compressor Station. 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 modification 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 with the voluntary restrictions (catalytic converters on engines).

The facility is within an area designated as non-attainment for fine particulates. Consequently, the facility is subject to the New Source Review (NSR) regulations. NOx and fine particulate emissions (PM2.5) will remain below the annual emission thresholds triggering NSR. Consequently, NSR requirements are not applicable to this project.

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. Additionally, facilities regulated under certain New Source Performance Standards (NSPS) require facilities to have Title V permits.

The facility will remain a minor source. Additionally, the NSPS regulating this facility does not trigger a Title V permit. Hence, a Title V permit will not be required for the Big Moses Compressor Station.

1.3 Aggregation

Source aggregation determinations are typically made based on the following criteria:

- Whether the facilities are under common control,
- Whether the facilities belong to the same Major Group (i.e. the first two digit code) as described in the Standard Industrial Classification Manual, 1972, as amended by the 1977 Supplement;

- Whether the facilities are located on one or more contiguous or adjacent properties; and the distance between all pollutant emitting activities,
- Whether the facilities can operate independently

Only if all criteria are met does a permitting authority aggregate the facilities into a single source.

The proposed reduction of operations at Big Moses will not impact the current aggregation analysis.

1.4 New Source Performance Standards

The proposed equipment removal and restrictions will not impact its current standing with respect to any New Source Performance Standards.

1.5 National Emission Standards for Hazardous Air Pollutants

The proposed equipment removal and restrictions will not impact its current standing with respect to any National Emission Standards for Hazardous Air Pollutants.

1.6 Chemical Accident Prevention

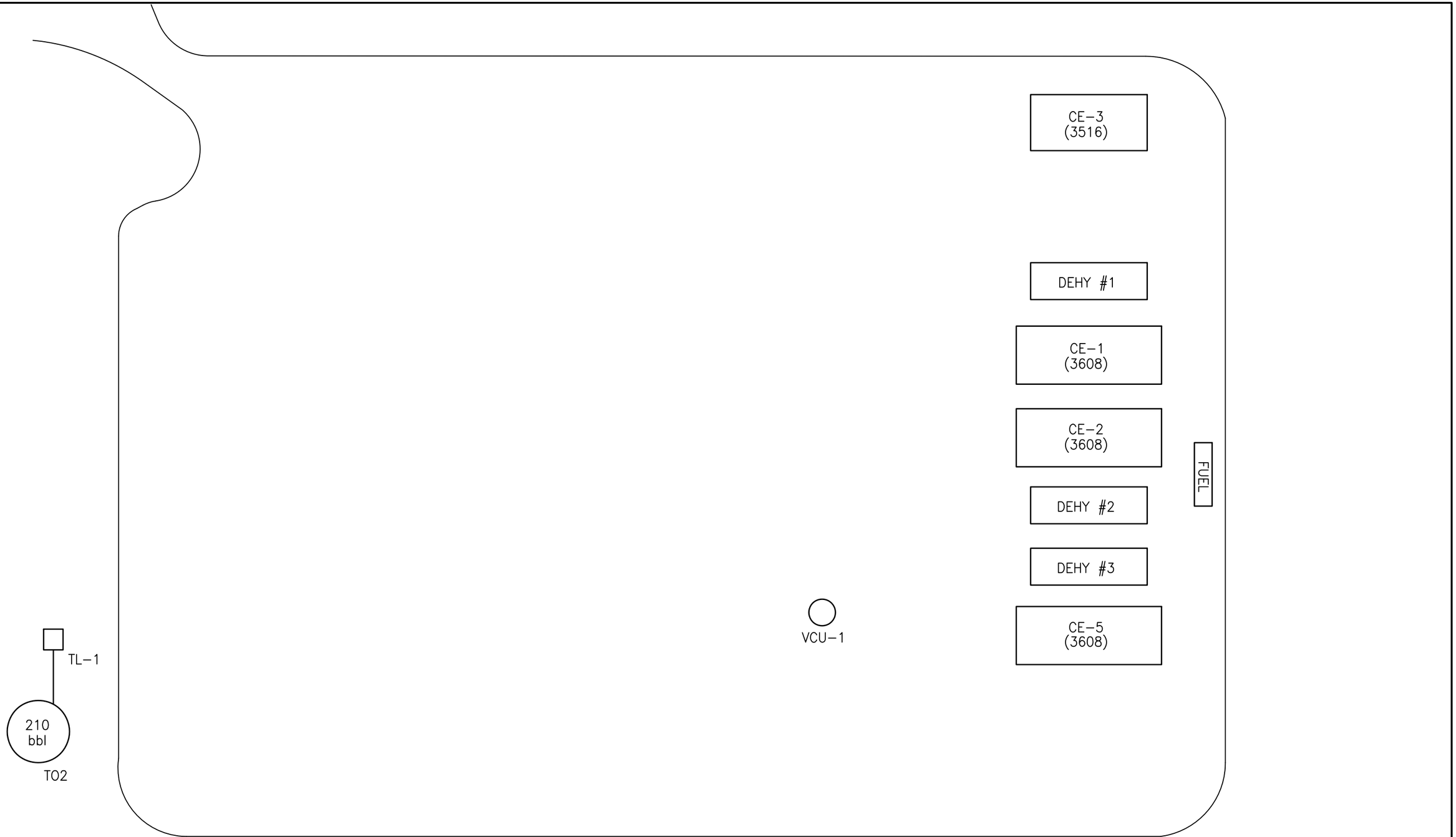
Subparts B-D of 40 CFR 68 present the requirements for the assessment and subsequent preparation of a Risk Management Plan (RMP) for a facility that stores more than a threshold quantity of a regulated substance listed in 40 CFR 68.130. If a facility stores, handles or processes one or more regulated substances in an amount greater than its corresponding threshold, the facility must prepare and implement an RMP. The Big Moses Compressor Station will still have the potential to store more than 10,000 lbs of a flammable mixture containing several of the substances listed in Table 3 in 40 CFR 68.130. However, an RMP is not required as this facility qualifies for the exclusion provided for remote oil and gas production facilities (40 CFR 68.115).

1.7 West Virginia State Requirements

The proposed equipment removal and restrictions will not impact its current standing with respect to any West Virginia regulatory requirements.

ATTACHMENT E

Site Layout Diagram



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DATE	11/3/14
CHECKED BY	RAD
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DRAWING SCALE	N.T.S.

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JAY–BEE OIL & GAS, INC.

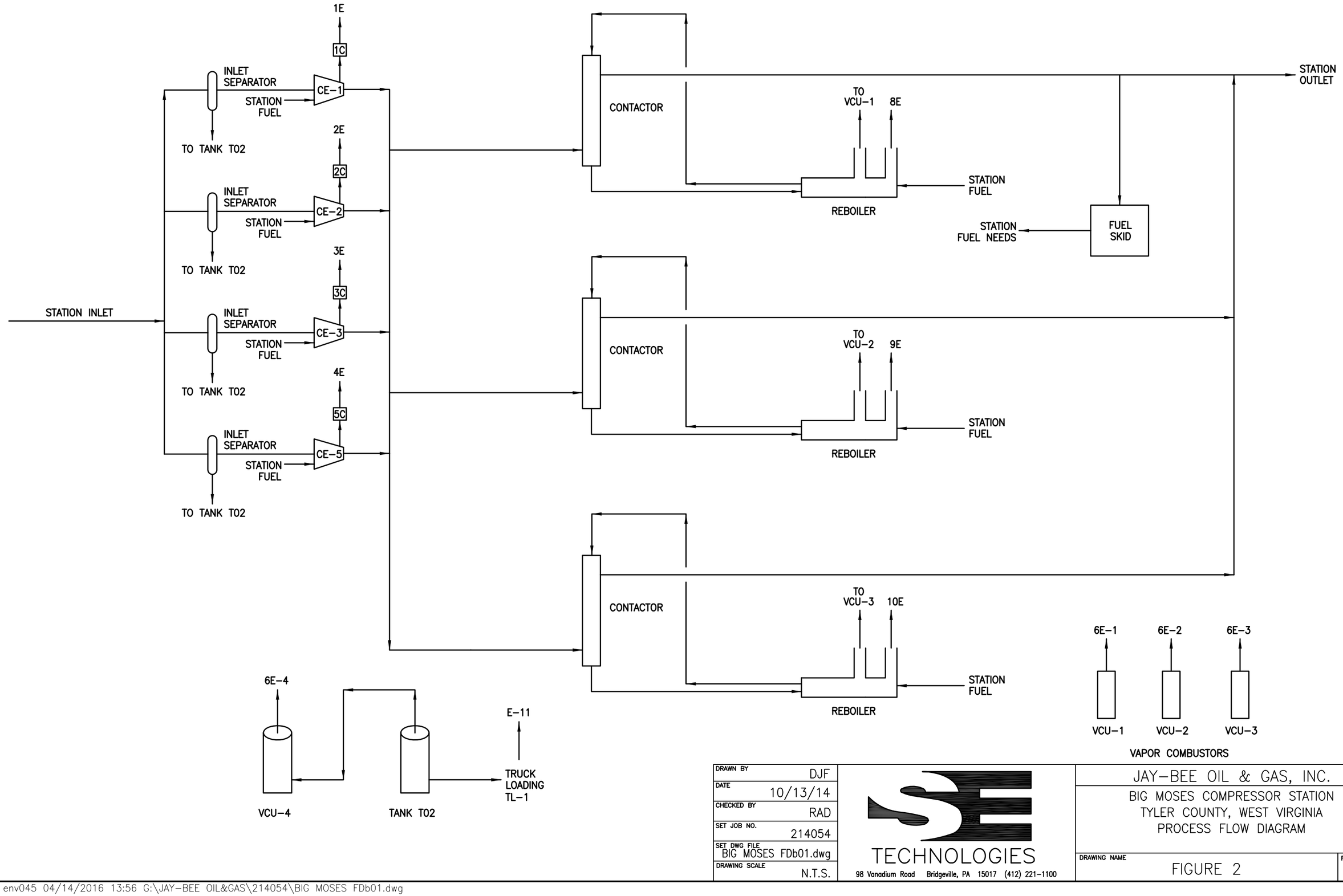
BIG MOSES COMPRESSOR STATION
TYLER COUNTY, WEST VIRGINIA
SITE LAYOUT

DRAWING NAME: FIGURE 3

REV.: 1

ATTACHMENT F

Process Flow Diagram



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

JAY-BEE OIL & GAS, INC.

BIG MOSES COMPRESSOR STATION
TYLER COUNTY, WEST VIRGINIA
PROCESS FLOW DIAGRAM

DRAWING NAME: FIGURE 2

REV. 1

ATTACHMENT G

Process Description

Jay-Bee Oil & Gas, Inc.
Big Moses Compressor Station
Process Description

Jay-Bee Oil & Gas, Inc. currently operates the Big Moses Compressor Station under Permit No. R13-3225. This station receives, compresses and dehydrates natural gas from area Jay-Bee well pads prior to injection into a gathering line owned and operated by others. This facility is contiguous with the planned Icon Midstream Big Moses Liquids Management Facility and it has been determined that the two facilities must be aggregated for evaluation of major source status. As part of the application for the Icon Midstream facility, it was stated that several reductions would be made at the contiguous Jay-Bee station in order to ensure that potential emissions of the combined facilities would not exceed major source thresholds.

At this time Jay-Bee is seeking approval for the removal of certain equipment from its permit and the placement of restrictions on other equipment. More specifically, Jay-Bee is seeking the following modifications to its permit:

- Removal of one inlet gas compressor and Caterpillar 3608LE driver (Emission Unit CE-6)
- Placement of restrictions on one inlet gas compressor and Caterpillar 3608LE driver (Emission Unit CE-5)
- Placement of restrictions on one dehydration unit (Emission Units RSV-3 and RBV-3)
- Associated reduction of blowdown and fugitive emissions from fittings.

Compressor driver engine CE-5 will be restricted to 1000 hours per year. Dehydration Unit #3 (Emission Units RSV-3 and RBV-3 will be restricted to 1750 hours per year.

No new equipment will be installed as part of this Class I Administrative Update. Additionally, there are no other operational changes other than the limitations noted above.

Upon completion of this Class I Administrative Update, emission sources at this facility will include the following:

- Four Inlet Gas Compressor Driver Engines (one with restriction to 1000 hrs per year)
- Three 1.0 MMBTU/Hr TEG Re-boilers **(**one restricted to 1750 Hrs per year)
- Three Dehydration units (one restricted to 1750 Hrs per year**)**
- Four Enclosed Combustors managing low pressure vapors from the produced fluids storage tank, truck loading and dehydration still vents.
- Engine Blowdowns
- One 210 BBL Produce Fluids Tank
- Truck Loading of Produced Fluids
- Fugitive Emissions – Facility Roadways
- Fugitive Emissions – Component Leaks

ATTACHMENT I

Emission Unit Table

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]
CE-1	1E	Residue Gas Compressor Engine (Caterpillar 3608 LE)	2014	2370 Hp	EXIST	1C (SCR)
CE-2	2E	Residue Gas Compressor Engine (Caterpillar 3608 LE)	2014	2370 Hp	EXIST	2C (SCR)
CE-3	3E	Residue Gas Compressor Engine (Caterpillar 3516 LE)	2014	1380 Hp	EXIST	3C (SCR)
CE-5	**4E**	**Residue Gas Compressor Engine (Caterpillar 3608 LE)**	**2014**	**2370 Hp**	**MOD**	**5C (SCR)**
CE-6	**5E**	**Residue Gas Compressor Engine (Caterpillar 3608 LE)**	**2014**	**2370 Hp**	**REM**	**6C (SCR)**
RSV-1	6E-1	Dehy Still and Flash Tank	2014	60 MMSCFD	EXIST	VCU-1
RSV-2	6E-2	Dehy Still and Flash Tank	2014	60 MMSCFD	EXIST	VCU-2
RSV-3	**6E-3**	**Dehy Still and Flash Tank**	**2014**	**60 MMSCFD**	**MOD**	**VCU-3**
T02	6E-4	Produced Fluids Tank	2014	210 BBL	EXIST	VCU-4
RBV-1	8E	Dehydration Unit Re-Boiler	2014	1.0 MMBTU/Hr	EXIST	None
RBV-2	9E	Dehydration Unit Re-Boiler	2014	1.0 MMBTU/Hr	EXIST	None
RBV-3	**10E**	**Dehydration Unit Re-Boiler**	**2014**	**1.0 MMBTU/Hr**	**MOD**	**None**
TL-1	11E	Truck Loading	2014	384,000 Gallons/Yr.	EXIST	None
---	---	Fugitive VOC Emissions – Fittings and Connections	2014	N/A	EXIST	None
---	---	Haul Roads	2014	1 Trucks per day max.	EXIST	None

[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 Sheets

EMISSIONS SUMMARY SHEET

Emission Point ID No.	Emission Point Type[1]	Emission Unit Vented Through This Point		Air Pollution Control Device		All Regulated Pollutants - Chemical Name/CAS[2] *(Speciate VOCs & HAPS)*	Maximum Potential Uncontrolled Emissions [3]		Maximum Potential Controlled Emissions [4]		Emission Form or Phase *(At exit conditions, Solid, Liquid or Gas/Vapor)*	Est. Method Used [5]
		ID No.	Source	ID No.	Device Type		lb/hr	ton/yr	lb/hr	ton/yr		
1E	Upward Vertical Stack	CE-1	Engine	1C	SCR	NOx	2.87	12.59	2.87	12.59	Gas	EE
						CO	14.37	62.93	1.11	4.85	Gas	EE
						VOC	6.79	29.75	2.87	12.59	Gas	EE
						PM	0.18	0.80	0.18	0.80	Solid	EE
						HCOH	1.41	1.26	0.29	1.26	Gas	EE
						Total HAPs	1.74	7.64	0.62	2.72	Gas	EE
						CO2e	2820	12,352	2820	12,352	Gas	EE
2E	Upward Vertical Stack	CE-2	Engine	2C	SCR	NOx	2.87	12.59	2.87	12.59	Gas	EE
						CO	14.37	62.93	1.11	4.85	Gas	EE
						VOC	6.79	29.75	2.87	12.59	Gas	EE
						PM	0.18	0.80	0.18	0.80	Solid	EE
						HCOH	1.41	1.26	0.29	1.26	Gas	EE
						Total HAPs	1.74	7.64	0.62	2.72	Gas	EE
						CO2e	2820	12,352	2820	12,352	Gas	EE
4E	Upward Vertical Stack	CE-5	Engine	5C	SCR	NOx	2.87	1.44	2.87	1.44	Gas	EE
						CO	14.37	0.55	1.11	0.55	Gas	EE
						VOC	6.79	1.44	2.87	1.44	Gas	EE
						PM	0.18	0.09	0.18	0.09	Solid	EE
						HCOH	1.41	0.14	0.29	0.14	Gas	EE
						Total HAPs	1.74	0.31	0.62	0.31	Gas	EE
						CO2e	2820	1,410	2820	1,410	Gas	EE
3E	Upward Vertical Stack	CE-3	Engine	3C	SCR	NOx			1.52	6.66	Gas	EE
						CO			0.61	2.67	Gas	EE
						VOC			0.88	3.68	Gas	EE
						PM			0.11	0.50	Solid	EE
						HCOH			0.30	1.33	Gas	EE
						Total HAPs			0.51	2.24	Gas	EE
						CO2e			1749	7662	Gas	EE

6E-1	Upward Vertical Stack	RSV-1	Still Vent	VCU-1	Enclosed Combustor	NOx	<0.01	<0.01	0.03	0.11	Gas	EE
						CO	<0.01	<0.01	0.02	0.09	Gas	EE
						VOC	85.68	375.3	1.71	7.51	Gas	EE
						PM	<0.01	<0.01	<0.01	0.01	Solid	EE
						Benzene	0.77	3.39	<0.01	0.07	Gas	EE
						Total HAPs	9.37	41.1	0.19	0.82	Gas	EE
						CO2e	<1	<1	99	136	Gas	EE
6E-2	Upward Vertical Stack	RSV-2	Still Vent	VCU-2	Enclosed Combustor	NOx	<0.01	<0.01	0.03	0.11	Gas	EE
						CO	<0.01	<0.01	0.02	0.09	Gas	EE
						VOC	85.68	375.3	1.71	7.51	Gas	EE
						PM	<0.01	<0.01	<0.01	0.01	Solid	EE
						HCOH	0.77	3.39	<0.01	0.07	Gas	EE
						Total HAPs	9.37	41.1	0.19	0.82	Gas	EE
						CO2e	<1	<1	99	136	Gas	EE
6E-3	Upward Vertical Stack	RSV-3	Still Vent	VCU-3	Enclosed Combustor	NOx	<0.01	<0.01	0.03	0.02	Gas	EE
						CO	<0.01	<0.01	0.02	0.02	Gas	EE
						VOC	85.68	74.97	1.71	1.50	Gas	EE
						PM	<0.01	<0.01	<0.01	<0.01	Solid	EE
						HCOH	0.77	0.68	<0.01	<0.01	Gas	EE
						Total HAPs	9.37	8.21	0.19	0.16	Gas	EE
						CO2e	<1	<1	99	27	Gas	EE
6E-4	Upward Vertical Stack	T02	Tank Vent	VCU-4	Enclosed Combustor	NOx	<0.01	<0.01	0.08	0.35	Gas	EE
						CO	<0.01	<0.01	0.44	1.93	Gas	EE
						VOC	36.03	157.8	0.72	3.16	Gas	EE
						PM	<0.01	<0.01	<0.01	0.01	Solid	EE
						Total HAPs	1.17	5.11	0.01	0.10	Gas	EE
						CO2e	<1	<1	139	609	Gas	EE
8E	Upward Vertical Stack	RBV-1	Dehy #1 Reboiler Vent		None	NOx	0.10	0.44	0.10	0.44	Gas	EE
						CO	0.08	0.37	0.08	0.37	Gas	EE
						VOC	<0.01	0.02	<0.01	0.02	Gas	EE
						PM	<0.01	<0.01	<0.01	<0.01	Solid	EE
						Total HAPs	<0.01	<0.01	<0.01	<0.01	Gas	EE
						CO2e	121	529	121	529	Gas	EE

9E	Upward Vertical Stack	RBV-2	Dehy #2 Reboiler Vent		None	NOx CO VOC PM HCOH Total HAPs CO2e	0.10 0.08 <0.01 <0.01 <0.01 121	0.44 0.37 0.02 <0.01 <0.01 529	0.10 0.08 <0.01 <0.01 <0.01 121	0.44 0.37 0.02 <0.01 <0.01 529	Gas Gas Gas Solid Gas Gas	EE EE EE EE EE EE
10E	Upward Vertical Stack	RBV-3	Dehy #3 Reboiler Vent		None	NOx CO VOC PM HCOH Total HAPs CO2e	0.10 0.08 <0.01 <0.01 <0.01 121	0.09 0.07 <0.01 <0.01 <0.01 106	0.10 0.08 <0.01 <0.01 <0.01 121	0.09 0.07 <0.01 <0.01 <0.01 106	Gas Gas Gas Solid Gas Gas	EE EE EE EE EE EE
11E	Fugitive	TL-1	Truck Loading		None	VOC	7.46	1.19	7.46	1.19	Gas	EE

The EMISSION SUMMARY SHEET provides a summation of emissions by emission unit. Note that uncaptured 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 EMISSIONS 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. uncaptured 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] List all regulated air pollutants. Speciate VOCs, including all HAPs. Follow chemical name with Chemical Abstracts Service (CAS) number. **LIST** Acids, CO, CS_2, VOCs, H_2S, Inorganics, Lead, Organics, O_3, NO, NO_2, SO_2, SO_3, all applicable Greenhouse Gases (including CO_2 and methane), etc. **DO NOT LIST** H_2, H_2O, N_2, O_2, and Noble Gases

[3] 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).

[4] 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).4C

[5] Indicate method used to determine emission rate as follows: MB = material balance; ST = stack test (give date of test); EE = engineering estimate; M = modeling; O = other (specify).

ATTACHMENT L

Emission Unit Data Sheets

NATURAL GAS COMPRESSOR/GENERATOR ENGINE DATA SHEET

Source Identification Number[1]		CE-1		CE-2		CE-5	
Engine Manufacturer and Model		CAT G3608 LE		CAT G3608 LE		CAT G3608 LE	
Manufacturer's Rated bhp/rpm		2370 @ 1000		2370 @ 1000		2370 @ 1000	
Source Status[2]		ES		ES		**MS**	
Date Installed/Modified/Removed[3]		Sept. 2013		Sept. 2013		Upon Receipt of Permit	
Engine Manufactured/Reconstruction Date[4]		7/20/2013		7/20/2013		After Jan 1 2013	
Is this a Certified Stationary Spark Ignition Engine according to 40CFR60 Subpart JJJJ? (Yes or No)[5]		No		No		No	
Engine, Fuel and Combustion Data	Engine Type[6]	LB4S		LB4S		LB4S	
	APCD Type[7]	SCR		SCR		SCR	
	Fuel Type[8]	RG		RG		RG	
	H_2S (gr/100 scf)	<1		<1		<1	
	Operating bhp/rpm	2370 @ 1000		2370 @ 1000		2370 @ 1000	
	BSFC (Btu/bhp-hr)	7675		7675		7675	
	Fuel throughput (ft^3/hr)	14,480		14,480		14,480	
	Fuel throughput ($MMft^3$/yr)	126.8		126.8		126.8	
	Operation (hrs/yr)	8760		8760		**1000**	
Reference[9]	Potential Emissions[10]	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr
AP	NO_X	2.87	12.59	2.87	12.59	2.87	1.44
AP	CO	1.11	4.85	1.11	4.85	1.11	0.55
AP	VOC	2.87	12.59	2.87	12.59	2.87	1.44
AP	SO_2	0.011	0.048	0.011	0.048	0.011	<0.01
AP	PM_{10}	0.182	0.80	0.182	0.80	0.182	0.09
AP	Formaldehyde	0.287	1.26	0.287	1.26	0.287	0.14
AP	Total HAPs	0.621	2.72	0.621	2.72	0.621	0.31
AP	CO2e	2820	12,352	2820	12,352	2820	1,410

NATURAL GAS COMPRESSOR/GENERATOR ENGINE DATA SHEET

Source Identification Number[1]		CE-6		CE-3			
Engine Manufacturer and Model		CAT G3608 LE		CAT G3516 LE			
Manufacturer's Rated bhp/rpm		2370 @ 1000		1380@1400			
Source Status[2]		**RS**		ES			
Date Installed/Modified/Removed[3]		Not Installed		January 2014			
Engine Manufactured/Reconstruction Date[4]		After Jan 1 2013		After January 1, 2010			
Is this a Certified Stationary Spark Ignition Engine according to 40CFR60 Subpart JJJJ? (Yes or No)[5]		No		No			
Engine, Fuel and Combustion Data	Engine Type[6]	LB4S		LB4S			
	APCD Type[7]	SCR		SCR			
	Fuel Type[8]	RG		RG			
	H_2S (gr/100 scf)	<1		<1			
	Operating bhp/rpm	2370 @ 1000		1380@1400			
	BSFC (Btu/bhp-hr)	7674		8210			
	Fuel throughput (ft^3/hr)	14,480		9660			
	Fuel throughput ($MMft^3$/yr)	126.8		82.5			
	Operation (hrs/yr)	8760		8760			
Reference[9]	Potential Emissions[10]	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr
AP	NO_X	2.87	12.59	1.52	6.66		
AP	CO	1.11	4.85	0.61	2.67		
AP	VOC	2.87	12.59	0.88	3.86		
AP	SO_2	0.011	0.048	0.007	0.029		
AP	PM_{10}	0.182	0.80	0.113	0.496		
AP	Formaldehyde	0.287	1.26	0.31	1.34		
AP	Total HAPs	0.621	2.72				
AP	CO2e	2820	12,352	1750	7665		

1. Enter the appropriate Source Identification Number for each natural gas-fueled reciprocating internal combustion compressor/generator engine located at the compressor station. Multiple compressor engines should be designated CE-1, CE-2, CE-3 etc. Generator engines should be designated GE-1, GE-2, GE-3 etc. If more than three (3) engines exist, please use additional sheets.

2. Enter the Source Status using the following codes:

NS	Construction of New Source (installation)	ES	Existing Source
MS	Modification of Existing Source	RS	Removal of Source

3. Enter the date (or anticipated date) of the engine's installation (construction of source), modification or removal.

4. Enter the date that the engine was manufactured, modified or reconstructed.

5. Is the engine a certified stationary spark ignition internal combustion engine according to 40CFR60 Subpart JJJJ. If so, the engine and control device must be operated and maintained in accordance with the manufacturer's emission-related written instructions. You must keep records of conducted maintenance to demonstrate compliance, but no performance testing is required. If the certified engine is not operated and maintained in accordance with the manufacturer's emission-related written instructions, the engine will be considered a non-certified engine and you must demonstrate compliance according to 40CFR§60.4243a(2)(i) through (iii), as appropriate.

   Provide a manufacturer's data sheet for all engines being registered.

6. Enter the Engine Type designation(s) using the following codes:

LB2S	Lean Burn Two Stroke	RB4S	Rich Burn Four Stroke
LB4S	Lean Burn Four Stroke		

7. Enter the Air Pollution Control Device (APCD) type designation(s) using the following codes:

A/F	Air/Fuel Ratio	IR	Ignition Retard
HEIS	High Energy Ignition System	SIPC	Screw-in Precombustion Chambers
PSC	Prestratified Charge	LEC	Low Emission Combustion
NSCR	Rich Burn & Non-Selective Catalytic Reduction	SCR	Lean Burn & Selective Catalytic Reduction

8. Enter the Fuel Type using the following codes:

PQ	Pipeline Quality Natural Gas	RG	Raw Natural Gas

9. Enter the Potential Emissions Data Reference designation using the following codes. Attach all referenced data to this *Compressor/Generator Data Sheet(s)*.

MD	Manufacturer's Data	AP	AP-42	
GR	GRI-HAPCalc™	OT	Other _____	(please list)

10. Enter each engine's Potential to Emit (PTE) for the listed regulated pollutants in pounds per hour and tons per year. PTE shall be calculated at manufacturer's rated brake horsepower and may reflect reduction efficiencies of listed Air Pollution Control Devices. Emergency generator engines may use 500 hours of operation when calculating PTE. PTE data from this data sheet shall be incorporated in the *Emissions Summary Sheet*.

GLYCOL DEHYDRATION EMISSION UNIT DATA SHEET

General Glycol Dehydration Unit Data		Manufacturer and Model		Cameron 5GR-1000-450/210	
		Max Dry Gas Flow Rate (mmscf/day)		60 MMSCFD	
		Design Heat Input (mmBtu/hr)		1.0 MMBTU/Hr (re-boiler)	
		Design Type (DEG or TEG)		TEG	
		Source Status[2]		**MS**	
		Date Installed/Modified/Removed[3]		January 2014	
		Regenerator Still Vent APCD[4]		CC	
		Control Device ID[4]		VCU-1	
		Fuel HV (Btu/scf)		1256 (HHV)	
		H_2S Content (gr/100 scf)		<0.001%	
		Operation (hrs/yr)		**1750**	
Emission Unit ID/ Emission Point ID[1]	Vent	Reference[5]	Potential Emissions[6]	lbs/hr	tons/yr
RBV-3/ 6E-3	Reboiler Vent	AP-42	NO_X	0.100	0.088
		AP-42	CO	0.0840	0.074
		AP-42	VOC	0.0055	0.005
		AP-42	SO_2	<0.0001	<0.001
		AP-42	PM_{10}	0.0076	0.007
RSV-3/ VCU-3	Glycol Regenerator Still Vent	GRI-GLYCalc™	VOC	1.7136	1.4994
		GRI-GLYCalc™	Benzene	0.0155	0.0135
		GRI-GLYCalc™	Ethylbenzene	ND	ND
		GRI-GLYCalc™	Toluene	0.0465	0.0407
		GRI-GLYCalc™	Xylenes	0.0877	0.0767
		GRI-GLYCalc™	n-Hexane	0.0378	0.0331

1. Enter the appropriate Emission Unit ID Numbers and Emission Point ID Numbers for the glycol dehydration unit reboiler vent and glycol regenerator still vent. The glycol dehydration unit reboiler vent and glycol regenerator still vent should be designated RBV-1 and RSV-1, respectively. If the compressor station incorporates multiple glycol dehydration units, a *Glycol Dehydration Emission Unit Data Sheet* shall be completed for each, using Source Identification #s RBV-2 and RSV-2, RBV-3 and RSV-3, etc.

2. Enter the Source Status using the following codes:

NS	Construction of New Source	ES	Existing Source
MS	Modification of Existing Source	RS	Removal of Source

3. Enter the date (or anticipated date) of the glycol dehydration unit's installation (construction of source), modification or removal.

4. Enter the Air Pollution Control Device (APCD) type designation using the following codes and the control device ID number:

NA	None	CD	Condenser
FL	Flare	CC	Condenser/Combustion Combination
TO	Thermal Oxidizer		

5. Enter the Potential Emissions Data Reference designation using the following codes:

MD	Manufacturer's Data	AP	AP-42	
GR	GRI-GLYCalc™	OT	Other _____	(please list)

6. Enter the Reboiler Vent and Glycol Regenerator Still Vent Potential to Emit (PTE) for the listed regulated pollutants in lbs per hour and tons per year. The Glycol Regenerator Still Vent potential emissions may be determined using the most recent version of the thermodynamic software model GRI-GLYCalc™ (Radian International LLC & Gas Research Institute). Attach all referenced Potential Emissions Data (or calculations) and the GRI-GLYCalc *Aggregate Calculations Report* to this *Glycol Dehydration Emission Unit Data Sheet(s)*. This PTE data shall be incorporated in the *Emissions Summary Sheet*.

Include a copy of the GRI-GLYCalc™ analysis. This includes a printout of the aggregate calculations report, which shall include emissions reports, equipment reports, and stream reports.

ATTACHMENT N

Supporting Calculations

Jay-Bee Oil & Gas,LLC

Big Moses
Tyler County, WV

Source	Description	NOx lb/hr	CO lb/hr	CO2e lb/hr	VOC lb/hr	SO2 lb/hr	PM lb/hr	n-Hexane lb/Hr	benzene lb/hr	formaldehyde lb/hr	Total HAPs lb/hr
CE-1	Compressor Engine #1	2.87	1.11	2819.98	2.87	0.011	0.182	0.020	0.008	0.287	0.621
CE-2	Compressor Engine #2	2.87	1.11	2819.98	2.87	0.011	0.182	0.020	0.008	0.287	0.621
CE-3	Compressor Engine #3	1.52	0.61	1749.31	0.61	0.007	0.113	0.013	0.005	0.304	0.511
CE-4	Compressor Engine #4 (**Previously Removed**)	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.000	0.000
CE-5	Compressor Engine #5 **(To Be Restricted to 1000 Hours per year)**	2.87	1.11	2819.98	2.87	0.011	0.182	0.020	0.008	0.287	0.621
CE-6	Compressor Engine #6 **(To Be Removed from Permit)**	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.000	0.000
RBV-1	1.0 MMBTU/Hr Reboiler	0.10	0.08	120.79	0.01	0.001	0.008	0.002	0.002	0.000	0.002
RBV-2	1.0 MMBTU/Hr Reboiler	0.10	0.08	120.79	0.01	0.001	0.008	0.002	0.000	0.000	0.002
RBV-3	Dehy Still Vent **(controlled and Restricted to 1750 Hours per year)**	0.10	0.08	120.79	0.01	0.001	0.008	0.002	0.000	0.000	0.002
RSV-1	Dehy Still Vent (controlled)	0.03	0.02	98.99	1.71	0.000	0.002	0.038	0.016		0.188
RSV-2	Dehy Still Vent (controlled)	0.03	0.02	98.99	1.71	0.000	0.002	0.038	0.016		0.188
RSV-3	Dehy Still Vent (controlled)	0.03	0.02	98.99	1.71	0.000	0.002	0.038	0.016		0.188
---	Blowdowns[1]			N/A	N/A						N/A
T02	Produced Fluids Tank controlled)	0.08	0.44	139.09	0.72		0.004				0.011
TL-1	Truck Loading				7.46						0.510
---	Truck Traffic[2]						6.33				
---	Fittings Fugitive Emissions			21.32	0.35						0.006
Total		10.60	4.68	11,029	22.90	0.04	7.02	0.19	0.08	1.16	3.47

Source		NOx tpy	CO tpy	CO2e tpy	VOC tpy	SO2 tpy	PM tpy	n-Hexane TPY	benzene tpy	formaldehyde tpy	Total HAPs tpy
CE-1	Compressor Engine #1	12.59	4.85	12,352	12.59	0.048	0.80	0.09	0.04	1.26	2.722
CE-2	Compressor Engine #2	12.59	4.85	12,352	12.59	0.048	0.80	0.09	0.04	1.26	2.722
CE-3	Compressor Engine #3	6.66	2.67	7,662	3.86	0.030	0.50	0.06	0.02	1.33	2.238
CE-4	Compressor Engine #4 (**Previously Removed**)	0.00	0.00	0	0.00	0.000	0.00	0.00	0.00	0.00	0.000
CE-5	Compressor Engine #5 **(To Be Restricted to 1000 Hours per year)**	1.44	0.55	1,410	1.44	0.005	0.09	0.01	0.00	0.14	0.311
CE-6	Compressor Engine #6 **(To Be Removed from Permit)**	0.00	0.00	0	0.00	0.000	0.00	0.00	0.00	0.00	0.000
RBV-1	1.0 MMBTU/Hr Reboiler	0.44	0.37	529	0.02	0.003	0.03	0.01	0.00	0.00	0.008
RBV-2	1.0 MMBTU/Hr Reboiler	0.44	0.37	529	0.02	0.003	0.03	0.01	0.00	0.00	0.008
RBV-3	1.0 MMBTU/Hr Reboiler **(To Be Restricted to 1750 Hours per year)**	0.09	0.07	106	0.00	0.001	0.01	0.00	0.00	0.00	0.002
RSV-1	Dehy Still Vent (controlled)	0.11	0.09	136	7.51	0.001	0.01	0.17	0.07		0.821
RSV-2	Dehy Still Vent (controlled)	0.11	0.09	136	7.51	0.001	0.01	0.17	0.07		0.821
RSV-3	Dehy Still Vent **(controlled and Restricted to 1750 Hours per year)**	0.02	0.02	27.28	1.50	0.00	0.00	0.03	0.01	0.00	0.16
---	Blowdowns[1]			248	3.19						0.190
T02	Produced Fluids Tank (controlled)	0.35	1.93	609	3.16		0.02				0.100
TL-1	Truck Loading				1.19						0.080
---	Truck Traffic[2]						0.65				
---	Fittings Fugitive Emissions			93	1.52						0.026
Total		34.84	15.85	36,189	56.10	0.14	2.94	0.62	0.25	3.99	10.21
	Current Permit	59.02	25.36	60,015	85.86	0.23	4.47	0.93	0.37	6.36	16.01
	Change	-24.18	-9.51	-23826	-29.76	-0.09	-1.53	-0.31	-0.12	-2.37	-5.80

[1] See Attachment C for Blowdown Calculations

[4] This represents fugitive dust emissions from tank truck removing accumulated produced water/condensate from the faciity.

Jay-Bee Oil & Gas,LLC
ENGINE EMISSIONS

Big Moses
Tyler County, WV

Controlled Emission Rates

Sources CE-1 and CE-2 CE-2

Engine Data:

Engine Manufacturer	CAT	
Engine Model	3608 LE	
Type (Rich-burn or Low Emission)	Low Emissions	
Aspiration (Natural or Turbocharged)	Natural	
Turbocharge Cooler Temperature	N/A	deg. F
Manufacturer Rating	2,370	hp
Speed at Above Rating	1,000	rpm
Configeration (In-line or Vee)	In-Line	
Number of Cylinders	8	
Engine Bore	11.800	inches
Engine Stroke	11.800	inches
Fuel Heat Content (HHV)	1,256	BTU/scf
Engine Displacement	10,323	cu. in.
Fuel Consumption (HHV)	7,674	Btu/bhp-hr

Emission Rates:	g/bhp-hr	lb/hr	tons/year	g/hr	lb/day	AP-42 4strokelean lb/mmbtu	Comments
Oxides of Nitrogen, NOx	0.55	2.87	12.59	1,304	68.97		453.59 grams = 1 pound
Carbon Monoxide CO	0.21	1.11	4.85	502	26.55		2,000 pounds = 1 ton
VOC (NMNEHC)	0.55	2.87	12.59	1,304	68.97		MFG Spec +10% Used for NOx, CO a
CO2e		2820	12,351.53				Emission factors
CO2	447	2336	10,229.74	1,059,390	56053.37		
Total Annual Hours of Operation	**8,760**						
SO2		0.0109	0.0478			0.0006	
PM (Condensable+ Filterable)		0.1817	0.7958			0.00999	
CH_4 as CO_{2e}	3.70	483.3	2116.9				**Mfg. Spec Used**
N_2O as CO_{2e}		1.1276	4.9390			0.0002	Factor From 40 CFR 98, Table C-2
acrolein		0.0935	0.4095			0.00514	
acetaldehyde		0.152	0.6660			0.00836	
formaldehyde	0.0549	0.2868	1.2564				**Mfg. Spec + 10% Used**
biphenyl		0.0039	0.0169			0.000212	
benzene		0.008	0.0351			0.00044	
toluene		0.0074	0.0325			0.000408	
ethylbenzene		0.0007	0.0032			3.97E-05	
xylene		0.0033	0.0147			0.000184	
methanol		0.0455	0.1992			0.0025	
n-hexane		0.0202	0.0884			0.00111	
total HAPs		0.6214	2.7216			0.018394	

Exhaust Parameters:

Exhaust Gas Temperature	992	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
Exhaust Stack Velocity	70.4	ft/sec
	4,224.3	ft/min

$$\frac{4 \times \text{acfm}}{3.1416 \times (\text{stack diameter})^2}$$

Jay-Bee Oil & Gas,LLC
ENGINE EMISSIONS

Big Moses
Tyler County, WV

Controlled Emission Rates

Source CE-5

Engine Data:

Engine Manufacturer	CAT	
Engine Model	3608 LE	
Type (Rich-burn or Low Emission)	Low Emissions	
Aspiration (Natural or Turbocharged)	Natural	
Turbocharge Cooler Temperature	N/A	deg. F
Manufacturer Rating	2,370	hp
Speed at Above Rating	1,000	rpm
Configeration (In-line or Vee)	In-Line	
Number of Cylinders	8	
Engine Bore	11.800	inches
Engine Stroke	11.800	inches
Fuel Heat Content (HHV)	1,256	BTU/scf
Engine Displacement	10,323	cu. in.
Fuel Consumption (HHV)	7,674	Btu/bhp-hr

Emission Rates:	g/bhp-hr	lb/hr	tons/year	g/hr	lb/day	AP-42 4strokelean lb/mmbtu	
Oxides of Nitrogen, NOx	0.55	2.87	1.44	1,304	68.97		Comments
Carbon Monoxide CO	0.21	1.11	0.55	502	26.55		453.59 grams = 1 pound
VOC (NMNEHC)	0.55	2.87	1.44	1,304	68.97		2,000 pounds = 1 ton
CO2e		2820	1,409.99				MFG Spec +10% Used for NOx, CO a
CO2	447	2336	1,167.78	1,059,390	56053.37		Emission factors
Total Annual Hours of Operation	**1,000**						
SO2		0.0109	0.0055			0.0006	
PM (Condensable+ Filterable)		0.1817	0.0908			0.00999	
CH_4 as CO_{2e}	3.70	483.3	241.7				**Mfg. Spec Used**
N_2O as CO_{2e}		1.1276	0.5638			0.0002	Factor From 40 CFR 98, Table C-2
acrolein		0.0935	0.0467			0.00514	
acetaldehyde		0.152	0.0760			0.00836	
formaldehyde	0.0549	0.2868	0.1434				**Mfg. Spec + 10% Used**
biphenyl		0.0039	0.0019			0.000212	
benzene		0.008	0.0040			0.00044	
toluene		0.0074	0.0037			0.000408	
ethylbenzene		0.0007	0.0004			3.97E-05	
xylene		0.0033	0.0017			0.000184	
methanol		0.0455	0.0227			0.0025	
n-hexane		0.0202	0.0101			0.00111	
total HAPs		0.6214	0.3107			0.018394	

Exhaust Parameters:

Exhaust Gas Temperature	992	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
Exhaust Stack Velocity	70.4	ft/sec
	4,224.3	ft/min

$$\frac{4 \times \text{acfm}}{3.1416 \times (\text{stack diameter})^2}$$

Triad Hunter, LLC
ENGINE EMISSIONS

Stewart Winland
Tyler County, WV

Proposed Emission Rates

Source CE-3

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
Configeration (In-line or Vee)	V-16	
Number of Cylinders	16	
Engine Bore	6.700	inches
Engine Stroke	7.500	inches
Fuel Heat Content	1,018	BTU/scf
Engine Displacement	4,231	cu. in.
Fuel Consumption	8,231	Btu/bhp-hr

Emission Rates:	g/bhp-hr	lb/hr	tons/year	g/hr	lb/day	AP-42 4strokelean lb/mmbtu	
Oxides of Nitrogen, NOx	0.50	1.52	6.66	690	36.51		Comment
Carbon Monoxide CO	0.20	0.61	2.67	276	14.60		453.59 grams = 1 pound
VOC (NMNEHC)	0.29	0.88	3.86	400	21.17		2,000 pounds = 1 ton
CO2e		1749	7661.97				
CO2	483	1469	6436.28	666,540	35267.29		
Total Annual Hours of Operation	**8,760**						
SO2		0.0068	0.0299			0.0006	
PM (Condensable+ Filterable)		0.1135	0.4970			0.00999	
CH_4 as CO_{2e}	3.67	279.13	1222.6			0.0022	**Mfg. Spec Used**
N_2O as CO_{2e}		0.7042	3.0846			0.0002	Factor From 40 CFR 98, Table C-2
acrolein		0.0584	0.2557			0.00514	
acetaldehyde		0.095	0.4159			0.00836	
formaldehyde	0.1000	0.3042	1.3325			0.0528	**Mfg. Spec Used**
biphenyl		0.0002	0.0010			0.000212	
benzene		0.005	0.0219			0.00044	
toluene		0.0046	0.0203			0.000408	
ethylbenzene		0.0005	0.0020			3.97E-05	
xylene		0.0021	0.0092			0.000184	
methanol		0.0284	0.1244			0.0025	
n-hexane		0.0126	0.0552			0.00111	
total HAPs		0.511	2.2381			0.071194	

Exhaust Parameters:

Exhaust Gas Temperature	992	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
Exhaust Stack Velocity	70.4	ft/sec
	4,224.3	ft/min

$$\frac{4 \times \text{acfm}}{3.1416 \times (\text{stack diameter})^2}$$

Jay-Bee Oil & Gas,LLC

Big Moses
Tyler County, WV

Dehy Stil Vent Emissions

SOURCES RSV-1 and RSV-2

Controlled Still Vent Emissions (98% VOC Control)

From Gri GlyCalc 4.0

Dry Gas Rate	60,000	MCFD
Glycol Circulation Ratio	3.0	Gal/lb H2O
Treating Temperature	115	Deg F
Treating Pressure	950	psi

Data From GLYCalc:

Total HC	5.6069	lbs/hr	24.558	TPY
Methane	2.7279	lbs/hr	5.970	TPY
Total VOC	1.7136	lbs/hr	7.506	TPY
Total HAP	0.1875	lbs/hr	0.821	TPY
benzene	0.0155	lbs/hr	0.068	TPY
toluene	0.0465	lbs/hr	0.204	TPY
ethyl benzene	0.0000	lbs/hr	0.000	TPY
xylene	0.0877	lbs/hr	0.384	TPY
n-hexane	0.0378	lbs/hr	0.166	TPY

Combustor Combustion Exhaust Gases

Burner Efficiency	98.0	%	
Gas Heat Content (HHV)	696.5	Btu/scf	
Total Gas Consumption	9020.0	scfd	3.29 MMscf/yr
H2S Concentration	0.000	Mole %	

NOx	0.0257	lbs/hr	0.112	TPY
CO	0.0216	lbs/hr	0.094	TPY
SO2	0.0002	lbs/hr	0.001	TPY

Jay-Bee Oil & Gas,LLC

Big Moses
Tyler County, WV

Dehy Stil Vent Emissions

SOURCE RSV-3

Controlled Still Vent Emissions (98% VOC Control)

From Gri GlyCalc 4.0

Dry Gas Rate	60,000	MCFD
Glycol Circulation Ratio	3.0	Gal/lb H2O
Treating Temperature	115	Deg F
Treating Pressure	950	psi
Hours of Operation	**1000**	

Data From GLYCalc:

Total HC	5.6069	lbs/hr	4.906	TPY
Methane	2.7279	lbs/hr	1.499	TPY
Total VOC	1.7136	lbs/hr	1.499	TPY
Total HAP	0.1875	lbs/hr	0.164	TPY
benzene	0.0155	lbs/hr	0.014	TPY
toluene	0.0465	lbs/hr	0.041	TPY
ethyl benzene	0.0000	lbs/hr	0.000	TPY
xylene	0.0877	lbs/hr	0.077	TPY
n-hexane	0.0378	lbs/hr	0.033	TPY

Combustor Combustion Exhaust Gases

Burner Efficiency	98.0	%	
Gas Heat Content (HHV)	696.5	Btu/scf	
Total Gas Consumption	9020.0	scfd	0.66 MMscf/yr
H2S Concentration	0.000	Mole %	

NOx	0.0257	lbs/hr	0.022	TPY
CO	0.0216	lbs/hr	0.019	TPY
SO2	0.0002	lbs/hr	0.000	TPY

Jay-Bee Oil & Gas,LLC

Big Moses
Tyler County, WV

Potential Emission Rates

Source RBV-1

Burner Duty Rating	1000.0	Mbtu/hr
Burner Efficiency	98.0	%
Gas Heat Content (HHV)	1256.0	Btu/scf
Total Gas Consumption	19497.9	scfd
H2S Concentration	0.000	Mole %
Hours of Operation	8760	

NOx	0.1000	lbs/hr	0.438	TPY
CO	0.0840	lbs/hr	0.368	TPY
CO2	120.0	lbs/hr	525.8	TPY
CO2e	121	lbs/hr	529	tpy
VOC	0.0055	lbs/hr	0.024	TPY
SO2	0.0006	lbs/hr	0.003	TPY
H2S	0.0000	lbs/hr	0.000	TPY
PM10	0.0076	lbs/hr	0.033	TPY
CHOH	0.0001	lbs/hr	0.000	TPY
Benzene	0.0000	lbs/hr	0.000	TPY
N-Hexane	0.0018	lbs/hr	0.008	TPY
Toluene	0.0000	lbs/hr	0.000	TPY
Total HAPs	0.0019	lbs/hr	0.008	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_2O	**2.2**	**Lbs/MMCF**	**Global Warming Potential =310**
HCOH	**0.075**	**Lbs/MMCF**	
Benzene	**0.0021**	**Lbs/MMCF**	
n-Hexane	**1.8**	**Lbs/MMCF**	
Toluene	**0.0034**	**Lbs/MMCF**	

Jay-Bee Oil & Gas,LLC

Big Moses
Tyler County, WV

Potential Emission Rates

Source RBV-2

Burner Duty Rating	1000.0	Mbtu/hr
Burner Efficiency	98.0	%
Gas Heat Content (HHV)	1256.0	Btu/scf
Total Gas Consumption	19497.9	scfd
H2S Concentration	0.000	Mole %
Hours of Operation	8760	

NOx	0.1000	lbs/hr	0.438	TPY
CO	0.0840	lbs/hr	0.368	TPY
CO2	120.0	lbs/hr	525.8	TPY
CO2e	121	lbs/hr	529	tpy
VOC	0.0055	lbs/hr	0.024	TPY
SO2	0.0006	lbs/hr	0.003	TPY
H2S	0.0000	lbs/hr	0.000	TPY
PM10	0.0076	lbs/hr	0.033	TPY
CHOH	0.0001	lbs/hr	0.000	TPY
Benzene	0.0000	lbs/hr	0.000	TPY
N-Hexane	0.0018	lbs/hr	0.008	TPY
Toluene	0.0000	lbs/hr	0.000	TPY
Total HAPs	0.0019	lbs/hr	0.008	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_2O	**2.2**	**Lbs/MMCF**	**Global Warming Potential =310**
HCOH	**0.075**	**Lbs/MMCF**	
Benzene	**0.0021**	**Lbs/MMCF**	
n-Hexane	**1.8**	**Lbs/MMCF**	
Toluene	**0.0034**	**Lbs/MMCF**	

Jay-Bee Oil & Gas,LLC

Big Moses
Tyler County, WV

Potential Emission Rates

Source RBV-3

Burner Duty Rating	1000.0	Mbtu/hr
Burner Efficiency	98.0	%
Gas Heat Content (HHV)	1256.0	Btu/scf
Total Gas Consumption	19497.9	scfd
H2S Concentration	0.000	Mole %
Hours of Operation	**1750**	

NOx	0.1000	lbs/hr	0.088	TPY
CO	0.0840	lbs/hr	0.074	TPY
CO2	120.0	lbs/hr	105.0	TPY
CO2e	121	lbs/hr	106	tpy
VOC	0.0055	lbs/hr	0.0048	TPY
SO2	0.0006	lbs/hr	0.0005	TPY
H2S	0.0000	lbs/hr	0.0000	TPY
PM10	0.0076	lbs/hr	0.0067	TPY
CHOH	0.0001	lbs/hr	0.0001	TPY
Benzene	0.0000	lbs/hr	0.0000	TPY
N-Hexane	0.0018	lbs/hr	0.0016	TPY
Toluene	0.0000	lbs/hr	0.0000	TPY
Total HAPs	0.0019	lbs/hr	0.0016	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_2O	**2.2**	**Lbs/MMCF**	**Global Warming Potential =310**
HCOH	**0.075**	**Lbs/MMCF**	
Benzene	**0.0021**	**Lbs/MMCF**	
n-Hexane	**1.8**	**Lbs/MMCF**	
Toluene	**0.0034**	**Lbs/MMCF**	

Jay-Bee Oil & Gas,LLC

Big Moses
Tyler County, WV

Potential Emission Rates

Source VCU-4

Enclosed Combustor for Tank T02

Destruction Efficiency	98.0	%		
Gas Heat Content (HHV)	2282.0	Btu/scf[1]		
Max Flow to Combustor	12,500	scf/day[2]	4.5625	MMCF/Yr
Max BTUs to Flare	1.189	MMBTU/Hr	10,411.63	MMBTU/Yr

NOx	0.08	lbs/hr	0.35	tpy
CO	0.44	lbs/hr	1.93	tpy
CO2	138.93	lbs/hr	608.51	tpy
CO2e	139.09	lb/hr	609.22	tpy
VOC	0.72	lb/hr	3.1600	tpy
PM	0.00	lb/hr	0.02	tpy
Benzene	0.0000	lb/hr	0.00	tpy
Toluene	0.0000	lb/hr	0.00	tpy
Hexane	0.0009	lb/hr	0.00	tpy
Formaldehyde	0.0000	lb/hr	0.00	tpy
CH4	0.00	lbs/hr	0.0115	tpy
N2O	0.0003	lbs/hr	0.0011	tpy

[1] BTU content of gas is tanken from measurements at one of Bee-Gee's tanks at an area well pad.
[2] Daily tank flash plus working/breathing losses from measurements at one of Bee-Gee's tanks at an area well pad.

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**
AP-42 Table 1.4-3	**Benzene**	**0.0021**	**lb/MMSCF**
AP-42 Table 1.4-3	**Toluene**	**0.0034**	**lb/MMSCF**
AP-42 Table 1.4-3	**Hexane**	**1.8**	**lb/MMSCF**
AP-42 Table 1.4-3	**CHOH**	**0.075**	**lb/MMSCF**

VOC emissions equals non-combusted NMNEHC

Jay-Bee Oil & Gas,LLC

Stewart Winland
Tyler County, WV

Fugitive VOC Emissions

Volatile Organic Compounds, NMNEHC from gas analysis:	17.86	weight percent
Methane from gas analysis:	55.30	weight percent
Total HAPs from Inlet Gas Analysis	0.104	weight percent
Total HAP from Condensate Analysis	10.080	weight percent
Carbon Dioxide from gas analysis:	0.364	weight percent
Gas Density	0.0593	lb/scf

Emission Source:	Number	Oil & Gas Production*	VOC %	VOC, lb/hr	VOC TPY	HAP, lb/Hr	HAP TPY	CO2 lb/Hr	CO2 TPY	CH4 lb/hr	CH4 TPY	CO2e
Valves:												
Gas/Vapor:	**46**	0.02700 scf/hr	17.9	0.013	0.058	0.0001	0.000	0.000	0.001	0.041	0.1784	4.461
Light Liquid:	**15**	0.05000 scf/hr	100.0	0.044	0.195	0.0045	0.020					0.000
Heavy Liquid (Oil):	**-**	0.00050 scf/hr	100.0	0.000	0.000							0.000
Low Bleed Pneumatic	**15**	1.39000 scf/hr	17.9	0.221	0.967	0.0013	0.006	0.684	2.994	0.684	2.9945	77.856
Relief Valves:	**25**	0.04000 scf/hr	17.9	0.011	0.046	0.0001	0.000	0.000	0.001	0.033	0.1436	3.591
Open-ended Lines, gas:	**9**	0.06100 sfc/hr	17.9	0.006	0.025	0.0000	0.000					0.000
Open-ended Lines, liquid:	**-**	0.05000 lb/hr	100.0	0.000	0.000							0.000
Pump Seals:												0.000
Gas:	**-**	0.00529 lb/hr	17.9	0.000	0.000			0.000	0.000	0.000	0.0000	0.000
Light Liquid:	**-**	0.02866 lb/hr	100.0	0.000	0.000							0.000
Heavy Liquid (Oil):	**-**	0.00133 lb/hr	100.0	0.000	0.000							0.000
Compressor Seals, Gas:	**10**	0.01940 lb/hr	17.9	0.035	0.152	0.0000	0.000	0.001	0.003	0.006	0.0279	0.700
Connectors:												0.000
Gas:	**142**	0.00300 scf/hr	17.9	0.005	0.020	0.0000	0.000	0.000	0.000	0.014	0.0612	1.530
Light Liquid:	**30**	0.00700 scf/hr	100.0	0.210	0.920	0.0000	0.000					0.000
Heavy Liquid (Oil):	**-**	0.00030 scf/hr	100.0	0.000	0.000							0.000
Flanges:												0.000
Gas:	**101**	0.00086 lb/hr	17.9	0.016	0.068	0.0000	0.000	0.000	0.001	0.048	0.2104	5.261
Light Liquid:	**44**	0.00300 scf/hr	100.0	0.008	0.034	0.0000	0.000					0.000
Heavy Liquid:		0.0009 scf/hr	100.0	0.000	0.000							0.000

Fugitive Calculations:

	lb/hr	t/y
VOC	**0.347**	**1.518**
HAP	**0.006**	**0.026**
CH4	**0.142**	**0.621**
CO2	**0.002**	**0.007**
CO2e	**21.324**	**93.40**

Notes: *Factors are from 40 CFR 98, Table W-1A (scf/hr), where available. Remaining are API (lb/hr)

Jay-Bee Oil & Gas,LLC

Big Moses Compressor Station
Tyler County, WV

Inlet 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	0.4320	0.121	0.004	0.568			-		0.0043	
Carbon Dioxide, CO2	0.1760	0.077	0.003	0.364			-		0.0018	
Hydrogen Sulfide, H2S		-	-	-			-		-	
Helium, He		-	-	-			-		-	
Oxygen, O2		-	-	-			-		-	
Methane, CH4	73.4440	11.783	0.407	55.302	667.9	741.8	6.999		0.7330	
Ethane, C2H6	18.3570	5.520	0.191	25.908	297.1	324.8	3.062		0.1821	4.883
Propane	5.3460	2.357	0.081	11.065	123.8	134.5	1.273	11.065	0.0525	1.465
Iso-Butane	0.5700	0.331	0.011	1.555	17.1	18.5	0.177	1.555	0.0055	0.185
Normal Butane	1.0070	0.585	0.020	2.747	30.3	32.9	0.312	2.747	0.0097	0.316
Iso Pentane	0.2140	0.154	0.005	0.725	7.9	8.6	0.082	0.725	0.0021	0.078
Normal Pentane	0.2020	0.146	0.005	0.684	7.5	8.1	0.077	0.684	0.0020	0.073
Hexane	0.1560	0.134	0.005	0.631	6.9	7.4	0.071	0.631	0.0015	0.064
Heptane+	0.0960	0.096	0.003	0.452	4.9	5.3	0.050	0.452	0.0010	0.044
	100.000	21.306	0.736		1,163.4	1,281.9	12.102	17.858	0.9956	7.108

Gas Density (STP) = 0.059

Ideal Gross (HHV)	1,281.9
Ideal Gross (sat'd)	1,260.3
GPM	-
Real Gross (HHV)	1,287.6
Real Net (LHV)	1,168.6

Jay-Bee Oil & Gas,LLC

Big Moses Compressor Station
Tyler County, WV

Engine 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	0.392	0.110	0.004	0.530			-		0.0039	
Carbon Dioxide, CO2	0.154	0.068	0.002	0.327			-		0.0015	
Hydrogen Sulfide, H2S	0.000	0.000	0.000	0.000	0.0	0.0	0.000		0.0000	
Helium, He	-	-	-	-			-		-	
Oxygen, O2	-	-	-	-			-		-	
Methane, CH4	78.367	12.572	0.434	60.697	712.7	791.5	7.468		0.7821	
Ethane, C2H6	13.883	4.175	0.144	20.154	224.7	245.7	2.316		0.1377	3.693
Propane	4.458	1.966	0.068	9.491	103.2	112.2	1.062	9.491	0.0438	1.222
Iso-Butane	0.582	0.338	0.012	1.633	17.5	18.9	0.180	1.633	0.0057	0.189
Normal Butane	1.145	0.666	0.023	3.213	34.5	37.4	0.355	3.213	0.0111	0.359
Iso Pentane	0.297	0.214	0.007	1.035	11.0	11.9	0.113	1.035	0.0030	0.108
Normal Pentane	0.296	0.214	0.007	1.031	11.0	11.9	0.113	1.031	0.0030	0.107
Hexane	0.255	0.220	0.008	1.061	11.2	12.1	0.115	1.061	0.0025	0.104
Heptane+	0.171	0.171	0.006	0.827	8.7	9.4	0.090	0.827	0.0017	0.078
	100.000	20.713	0.715		1,134.4	1,250.9	11.812	18.291	0.9959	5.861

Gas Density (STP) = 0.058

Ideal Gross (HHV)	1,250.9
Ideal Gross (sat'd)	1,229.9
GPM	-
Real Gross (HHV)	1,256.0
Real Net (LHV)	1,139.1

Jay-Bee Oil & Gas,LLC

Big Moses
Tyler County, WV

Still Vent 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	0.1800	0.050	0.002	0.244			-		0.0018	
Carbon Dioxide, CO2	0.1390	0.061	0.002	0.296			-		0.0014	
Hydrogen Sulfide, H2S		-	-	-			-		-	
Water	50.0000	9.000	0.311	43.520			-		0.5003	
Oxygen, O2		-	-	-			-		-	
Methane, CH4	35.8000	5.743	0.198	27.772	325.6	361.6	3.412		0.3573	
Ethane, C2H6	8.1500	2.451	0.085	11.850	131.9	144.2	1.359		0.0808	2.168
Propane	3.0000	1.323	0.046	6.397	69.4	75.5	0.715	6.397	0.0295	0.822
Iso-Butane	0.4220	0.245	0.008	1.186	12.7	13.7	0.131	1.186	0.0041	0.137
Normal Butane	0.8440	0.491	0.017	2.372	25.4	27.5	0.261	2.372	0.0082	0.265
Iso Pentane	0.2010	0.145	0.005	0.701	7.4	8.0	0.077	0.701	0.0020	0.073
Normal Pentane	0.2130	0.154	0.005	0.743	7.9	8.5	0.081	0.743	0.0021	0.077
Hexane	0.2604	0.224	0.008	1.085	11.5	12.4	0.118	1.085	0.0026	0.106
Heptane	0.7910	0.793	0.027	3.833	40.3	43.5	0.415	3.833	0.0079	0.363
	100.000	20.680	0.714		632.1	695.0	6.568	16.318	0.9979	4.012

Gas Density (STP) = 0.058

Ideal Gross (HHV)	695.0
Ideal Gross (sat'd)	683.7
GPM	-
Real Gross (HHV)	696.5
Real Net (LHV)	633.5

Jay-Bee Oil & Gas,LLC

Big Moses
Tyler County, WV

Gas to Combustor 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	0.048	0.013	0.000	0.039			-		0.0005	
Carbon Dioxide, CO2	0.102	0.045	0.002	0.129			-		0.0010	
Hydrogen Sulfide, H2S	0.000	0.000	0.000	0.000	0.0	0.0	0.000		0.0000	
Water	-	-	-	-			-		-	
Oxygen, O2	-	-	-	-			-		-	
Methane, CH4	30.137	4.835	0.167	13.851	274.1	304.4	2.872		0.3008	
Ethane, C2H6	29.973	9.013	0.311	25.821	485.2	530.4	5.000		0.2973	7.973
Propane	22.888	10.093	0.348	28.915	529.8	575.9	5.452	28.915	0.2249	6.273
Iso-Butane	3.703	2.152	0.074	6.165	111.1	120.4	1.147	6.165	0.0360	1.205
Normal Butane	7.902	4.593	0.159	13.158	237.9	257.8	2.447	13.158	0.0764	2.478
Iso Pentane	1.818	1.312	0.045	3.759	67.3	72.8	0.693	3.759	0.0182	0.662
Normal Pentane	1.744	1.258	0.043	3.604	64.6	69.9	0.665	3.604	0.0174	0.628
Hexane	0.685	0.590	0.020	1.691	30.2	32.6	0.310	1.691	0.0068	0.280
Heptane	0.999	1.001	0.035	2.868	50.9	55.0	0.524	2.868	0.0099	0.458
	100.000	34.906	1.205		1,851.1	2,019.1	19.109	60.160	0.9891	19.958

Gas Density (STP) = 0.097

Ideal Gross (HHV)	2,019.1
Ideal Gross (sat'd)	1,984.6
GPM	-
Real Gross (HHV)	2,041.3
Real Net (LHV)	1,871.5

GAS DATA INFORMATION

Specific Graivity 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:

0 grains H2S/100 scf	=	0.00000 mole % H2S
		0.0 ppmv H2S
0 mole % H2S	=	0 grains H2S/100 scf
		0.0 ppmv H2S
0 ppmv H2S	=	0.000 grains H2S/100 scf
		0.00000 mole % H2S

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	N2	28.013	0.9672	0.0738	13.552	0	0	0	0	0	0.9997
Carbon Dioxide	CO2	44.010	1.5196	0.1159	8.626	0	0	0	0	0	0.9964
Hydrogen Sulfide	H2S	34.076	1.1766	0.0898	11.141	587	637	6,545	7,100	7.15	0.9846
Water	H20	18.000	0.6215	0.0474	21.091	0	0	0	0	0	1.0006
Oxygen	O2	31.999	1.1048	0.0843	11.864	0	0	0	0	0	0.9992
Methane	CH4	16.043	0.5539	0.0423	23.664	909.4	1,010.0	21,520	23,879	9.53	0.9980
Ethane	C2H6	30.070	1.0382	0.0792	12.625	1,618.7	1,769.6	20,432	22,320	16.68	0.9919
Propane	C3H8	44.097	1.5226	0.1162	8.609	2,314.9	2,516.1	19,944	21,661	23.82	0.9825
Iso-Butane	C4H10	58.124	2.0069	0.1531	6.532	3,000.4	3,251.9	19,629	21,257	30.97	0.9711
Normal Butane	C4H10	58.124	2.0069	0.1531	6.532	3,010.8	3,262.3	19,680	21,308	30.97	0.9667
Iso Pentane	C5H12	72.151	2.4912	0.1901	5.262	3,699.0	4,000.9	19,478	21,052	38.11	1.0000
Normal Pentane	C5H12	72.151	2.4912	0.1901	5.262	3,706.9	4,008.9	19,517	21,091	38.11	1.0000
Hexane	C6H14	86.178	2.9755	0.2270	4.405	4,403.8	4,755.9	19,403	20,940	45.26	0.9879
Heptane	C7H16	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	N2	28.013	0.9672	0.0738	13.552	0	0	0	0	0	4.1513	
Carbon Dioxide	CO2	44.010	1.5196	0.1159	8.626	0	0	0	0	0	6.4532	
Hydrogen Sulfide	H2S	34.076	1.1766	0.0898	11.141	621	672	6,545	7,100	7.15	5.1005	
Water	H2O	18.000	0.6215	0.0474	21.091						3.8376	
Oxygen	O2	31.999	1.1048	0.0843	11.864	0	0	0	0	0	3.3605	
Methane	CH4	16.043	0.5539	0.0423	23.664	911	1,012	21,520	23,879	9.53	6.4172	
Ethane	C2H6	30.070	1.0382	0.0792	12.625	1,631	1,783	20,432	22,320	16.68	10.126	
Propane	C3H8	44.097	1.5226	0.1162	8.609	2,353	3,354	19,944	21,661	23.82	10.433	
Iso-Butane	C4H10	58.124	2.0069	0.1531	6.532	3,101	3,369	19,629	21,257	30.97	12.386	
Normal Butane	C4H10	58.124	2.0069	0.1531	6.532	3,094	3,370	19,680	21,308	30.97	11.937	
Iso Pentane	C5H12	72.151	2.4912	0.1901	5.262	3,709	4,001	19,478	21,052	38.11	13.86	
Normal Pentane	C5H12	72.151	2.4912	0.1901	5.262	3,698	4,009	19,517	21,091	38.11	13.713	
Hexane	C6H14	86.178	2.9755	0.2270	4.405	4,404	4,756	19,403	20,940	45.26	15.566	16.3227
Heptane	C7H16	100.205	3.4598	0.2639	3.789	5,101	5,503	22,000	23,000	52.41	17.468	17.468

GRI-GLYCalc VERSION 4.0 - AGGREGATE CALCULATIONS REPORT

Case Name: Jay-Bee - Big Moses
File Name: C:\Rogers_Files\Misc\Jay-Bee Oil & Gas\Big Moses\Class I Update April 2016\60 MMSCFD Controlled Restricted Hours.ddf
Date: April 13, 2016

DESCRIPTION:

Description: 60 MMSCFD
Still Vent Controlled 98%
No Flash Tank
TEG REcirc Rate of 3.0 gal/lb H2O

Annual Hours of Operation: 1750.0 hours/yr

EMISSIONS REPORTS:

CONTROLLED REGENERATOR EMISSIONS

Component	lbs/hr	lbs/day	tons/yr
Methane	2.7279	65.469	2.3869
Ethane	1.1654	27.969	1.0197
Propane	0.6294	15.106	0.5508
Isobutane	0.1168	2.802	0.1022
n-Butane	0.2333	5.600	0.2042
Isopentane	0.0690	1.656	0.0604
n-Pentane	0.0730	1.751	0.0638
n-Hexane	0.0378	0.908	0.0331
Cyclohexane	0.0116	0.279	0.0102
Other Hexanes	0.0570	1.368	0.0499
Heptanes	0.0550	1.320	0.0481
Benzene	0.0155	0.372	0.0135
Toluene	0.0465	1.116	0.0407
Xylenes	0.0877	2.104	0.0767
C8+ Heavies	0.2810	6.745	0.2459
Total Emissions	5.6069	134.565	4.9060
Total Hydrocarbon Emissions	5.6069	134.565	4.9060
Total VOC Emissions	1.7136	41.127	1.4994
Total HAP Emissions	0.1875	4.499	0.1640
Total BTEX Emissions	0.1496	3.592	0.1309

UNCONTROLLED REGENERATOR EMISSIONS

Component	lbs/hr	lbs/day	tons/yr
Methane	136.3932	3273.436	119.3440
Ethane	58.2677	1398.425	50.9843
Propane	31.4718	755.324	27.5378
Isobutane	5.8375	140.101	5.1078
n-Butane	11.6675	280.019	10.2090
Isopentane	3.4497	82.792	3.0185
n-Pentane	3.6480	87.552	3.1920
n-Hexane	1.8910	45.384	1.6546
Cyclohexane	0.5815	13.955	0.5088
Other Hexanes	2.8506	68.413	2.4942
Heptanes	2.7502	66.004	2.4064

Benzene	0.7740	18.576	0.6772
Toluene	2.3249	55.797	2.0343
Xylenes	4.3835	105.204	3.8355
C8+ Heavies	14.0521	337.250	12.2956
Total Emissions	280.3430	6728.233	245.3002
Total Hydrocarbon Emissions	280.3430	6728.233	245.3002
Total VOC Emissions	85.6821	2056.371	74.9719
Total HAP Emissions	9.3733	224.960	8.2017
Total BTEX Emissions	7.4823	179.576	6.5471

EQUIPMENT REPORTS:

COMBUSTION DEVICE

Ambient Temperature:	60.00 deg. F
Excess Oxygen:	2.00 %
Combustion Efficiency:	98.00 %
Supplemental Fuel Requirement:	1.32e+000 MM BTU/hr

Component	Emitted	Destroyed
Methane	2.00%	98.00%
Ethane	2.00%	98.00%
Propane	2.00%	98.00%
Isobutane	2.00%	98.00%
n-Butane	2.00%	98.00%
Isopentane	2.00%	98.00%
n-Pentane	2.00%	98.00%
n-Hexane	2.00%	98.00%
Cyclohexane	2.00%	98.00%
Other Hexanes	2.00%	98.00%
Heptanes	2.00%	98.00%
Benzene	2.00%	98.00%
Toluene	2.00%	98.00%
Xylenes	2.00%	98.00%
C8+ Heavies	2.00%	98.00%

ABSORBER

Calculated Absorber Stages:	1.26
Specified Dry Gas Dew Point:	7.00 lbs. H2O/MMSCF
Temperature:	115.0 deg. F
Pressure:	950.0 psig
Dry Gas Flow Rate:	60.0000 MMSCF/day
Glycol Losses with Dry Gas:	2.3869 lb/hr
Wet Gas Water Content:	Saturated
Calculated Wet Gas Water Content:	92.37 lbs. H2O/MMSCF
Specified Lean Glycol Recirc. Ratio:	3.00 gal/lb H2O

Component	Remaining in Dry Gas	Absorbed in Glycol
Water	7.56%	92.44%
Carbon Dioxide	99.79%	0.21%
Nitrogen	99.98%	0.02%
Methane	99.98%	0.02%
Ethane	99.95%	0.05%

Propane	99.92%	0.08%
Isobutane	99.91%	0.09%
n-Butane	99.88%	0.12%
Isopentane	99.89%	0.11%
n-Pentane	99.86%	0.14%
n-Hexane	99.80%	0.20%
Cyclohexane	99.10%	0.90%
Other Hexanes	99.84%	0.16%
Heptanes	99.67%	0.33%
Benzene	92.63%	7.37%
Toluene	90.58%	9.42%
Xylenes	84.48%	15.52%
C8+ Heavies	99.01%	0.99%

REGENERATOR

No Stripping Gas used in regenerator.

Component	Remaining in Glycol	Distilled Overhead
Water	29.60%	70.40%
Carbon Dioxide	0.00%	100.00%
Nitrogen	0.00%	100.00%
Methane	0.00%	100.00%
Ethane	0.00%	100.00%
Propane	0.00%	100.00%
Isobutane	0.00%	100.00%
n-Butane	0.00%	100.00%
Isopentane	0.21%	99.79%
n-Pentane	0.24%	99.76%
n-Hexane	0.29%	99.71%
Cyclohexane	2.76%	97.24%
Other Hexanes	0.52%	99.48%
Heptanes	0.35%	99.65%
Benzene	4.91%	95.09%
Toluene	7.79%	92.21%
Xylenes	12.83%	87.17%
C8+ Heavies	10.63%	89.37%

STREAM REPORTS:

WET GAS STREAM

Temperature: 115.00 deg. F
Pressure: 964.70 psia
Flow Rate: 2.51e+006 scfh

Component	Conc. (vol%)	Loading (lb/hr)
Water	1.95e-001	2.31e+002
Carbon Dioxide	1.38e-001	4.00e+002
Nitrogen	3.81e-001	7.05e+002
Methane	7.70e+001	8.16e+004
Ethane	1.47e+001	2.92e+004

Propane	4.82e+000	1.40e+004
Isobutane	6.26e-001	2.40e+003
n-Butane	1.13e+000	4.33e+003
Isopentane	2.78e-001	1.33e+003
n-Pentane	2.65e-001	1.26e+003
n-Hexane	9.48e-002	5.40e+002
Cyclohexane	9.98e-003	5.55e+001
Other Hexanes	1.63e-001	9.26e+002
Heptanes	8.68e-002	5.75e+002
Benzene	2.00e-003	1.03e+001
Toluene	3.99e-003	2.43e+001
Xylenes	3.99e-003	2.80e+001
C8+ Heavies	1.10e-001	1.23e+003
Total Components	100.00	1.39e+005

DRY GAS STREAM

Temperature: 115.00 deg. F
Pressure: 964.70 psia
Flow Rate: 2.50e+006 scfh

Component	Conc. (vol%)	Loading (lb/hr)
Water	1.47e-002	1.75e+001
Carbon Dioxide	1.38e-001	3.99e+002
Nitrogen	3.82e-001	7.05e+002
Methane	7.72e+001	8.15e+004
Ethane	1.47e+001	2.91e+004
Propane	4.83e+000	1.40e+004
Isobutane	6.26e-001	2.40e+003
n-Butane	1.13e+000	4.33e+003
Isopentane	2.79e-001	1.33e+003
n-Pentane	2.66e-001	1.26e+003
n-Hexane	9.48e-002	5.38e+002
Cyclohexane	9.91e-003	5.50e+001
Other Hexanes	1.63e-001	9.24e+002
Heptanes	8.67e-002	5.73e+002
Benzene	1.85e-003	9.54e+000
Toluene	3.62e-003	2.20e+001
Xylenes	3.38e-003	2.36e+001
C8+ Heavies	1.09e-001	1.22e+003
Total Components	100.00	1.39e+005

LEAN GLYCOL STREAM

Temperature: 115.00 deg. F
Flow Rate: 1.07e+001 gpm

Component	Conc. (wt%)	Loading (lb/hr)
TEG	9.85e+001	5.91e+003
Water	1.50e+000	9.01e+001
Carbon Dioxide	1.43e-012	8.60e-011
Nitrogen	2.49e-013	1.50e-011
Methane	8.46e-018	5.08e-016
Ethane	1.17e-007	7.04e-006

Propane	7.18e-009	4.31e-007
Isobutane	1.13e-009	6.80e-008
n-Butane	2.16e-009	1.30e-007
Isopentane	1.24e-004	7.42e-003
n-Pentane	1.48e-004	8.88e-003
n-Hexane	9.11e-005	5.47e-003
Cyclohexane	2.75e-004	1.65e-002
Other Hexanes	2.48e-004	1.49e-002
Heptanes	1.59e-004	9.53e-003
Benzene	6.65e-004	3.99e-002
Toluene	3.27e-003	1.96e-001
Xylenes	1.07e-002	6.45e-001
C8+ Heavies	2.78e-002	1.67e+000
Total Components	100.00	6.01e+003

RICH GLYCOL AND PUMP GAS STREAM

Temperature: 115.00 deg. F
Pressure: 964.70 psia
Flow Rate: 1.17e+001 gpm
NOTE: Stream has more than one phase.

Component	Conc. (wt%)	Loading (lb/hr)
TEG	9.09e+001	5.91e+003
Water	4.68e+000	3.04e+002
Carbon Dioxide	2.24e-002	1.46e+000
Nitrogen	1.84e-002	1.20e+000
Methane	2.10e+000	1.36e+002
Ethane	8.96e-001	5.83e+001
Propane	4.84e-001	3.15e+001
Isobutane	8.98e-002	5.84e+000
n-Butane	1.80e-001	1.17e+001
Isopentane	5.32e-002	3.46e+000
n-Pentane	5.63e-002	3.66e+000
n-Hexane	2.92e-002	1.90e+000
Cyclohexane	9.20e-003	5.98e-001
Other Hexanes	4.41e-002	2.87e+000
Heptanes	4.25e-002	2.76e+000
Benzene	1.25e-002	8.14e-001
Toluene	3.88e-002	2.52e+000
Xylenes	7.74e-002	5.03e+000
C8+ Heavies	2.42e-001	1.57e+001
Total Components	100.00	6.50e+003

REGENERATOR OVERHEADS STREAM

Temperature: 212.00 deg. F
Pressure: 14.70 psia
Flow Rate: 9.02e+003 scfh

Component	Conc. (vol%)	Loading (lb/hr)
Water	5.00e+001	2.14e+002
Carbon Dioxide	1.39e-001	1.46e+000
Nitrogen	1.80e-001	1.20e+000
Methane	3.58e+001	1.36e+002
Ethane	8.15e+000	5.83e+001

Propane	3.00e+000	3.15e+001
Isobutane	4.22e-001	5.84e+000
n-Butane	8.44e-001	1.17e+001
Isopentane	2.01e-001	3.45e+000
n-Pentane	2.13e-001	3.65e+000
n-Hexane	9.23e-002	1.89e+000
Cyclohexane	2.91e-002	5.81e-001
Other Hexanes	1.39e-001	2.85e+000
Heptanes	1.15e-001	2.75e+000
Benzene	4.17e-002	7.74e-001
Toluene	1.06e-001	2.32e+000
Xylenes	1.74e-001	4.38e+000
C8+ Heavies	3.47e-001	1.41e+001
Total Components	100.00	4.97e+002

COMBUSTION DEVICE OFF GAS STREAM

Temperature: 1000.00 deg. F
Pressure: 14.70 psia
Flow Rate: 8.96e+001 scfh

Component	Conc. (vol%)	Loading (lb/hr)
Methane	7.20e+001	2.73e+000
Ethane	1.64e+001	1.17e+000
Propane	6.05e+000	6.29e-001
Isobutane	8.51e-001	1.17e-001
n-Butane	1.70e+000	2.33e-001
Isopentane	4.05e-001	6.90e-002
n-Pentane	4.28e-001	7.30e-002
n-Hexane	1.86e-001	3.78e-002
Cyclohexane	5.85e-002	1.16e-002
Other Hexanes	2.80e-001	5.70e-002
Heptanes	2.33e-001	5.50e-002
Benzene	8.40e-002	1.55e-002
Toluene	2.14e-001	4.65e-002
Xylenes	3.50e-001	8.77e-002
C8+ Heavies	6.99e-001	2.81e-001
Total Components	100.00	5.61e+000

Attachment O
Monitoring, Recordkeeping, Reporting and Testing Plan

ATTACHMENT O

JAY-BEE OIL & GAS, Inc.

Big Moses Site

Monitoring, Recordkeeping, Reporting and Testing Plan

I. Monitoring

The planned removal of a compressor and associated driver engine from the permit and placement of a restriction on the run hours on a second driver engine and one of the three dehydration units will not impact monitoring requirements for any other equipment.

II. Recordkeeping

The planned removal of a compressor and associated driver engine from the permit and placement of a restriction on the run hours on a second driver engine and one of the three dehydration units will not impact recordkeeping requirements for any other equipment.

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

The planned removal of a compressor and associated driver engine from the permit will not impact testing requirements for any other equipment

IV. Reporting

The planned removal of a compressor and associated driver engine from the permit will not impact reporting requirements for any other equipment.

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