APPLICATION FOR NSR (45CSR13)
CONSTRUCTION PERMIT

Icon Midstream Pipeline, LLC

Doc Dehydration Facility

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.dep.wv.gov/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):***
55-073-8862

3. Name of facility *(if different from above):*
Doc Well Pad Production Facility

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

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

5B. Facility's present physical address:
Off Indian Creek Road
Middlebourne in Tyler County

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 associated equipment.**
- 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 Production Facility**

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

11A. DAQ Plant ID No. (for existing facilities only):
095 – 00059

11B. List all current 45CSR13 and 45CSR30 (Title V) permit numbers associated with this process (for existing facilities only):
G70-B148A

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 Middlebourne, proceed southeast on State Route 18 (Main Street) out of town. Proceed approximately 5.8 miles to the junction with CR 1/3 (Indian Creek Road) on the left. From WV 18 and Indian Creek (CR13) intersection, take Indian Creek Rd east for 4.4 miles. Turn left onto lease road, follow north for 0.2 miles to well pad entrance.

12.B. New site address (if applicable):	12C. Nearest city or town: Middlebourne	12D. County: Tyler
12.E. UTM Northing (KM): 4,366.6	12F. UTM Easting (KM): 519.9	12G. UTM Zone: 17

13. Briefly describe the proposed change(s) at the facility:
Natural gas production and separation of liquids. There are no proposed changes to the existing facility. Jay-Bee is requesting approval of converting the Facility's existing G-70B permit into a 45CSR13 – Modification permit. No other changes are being requested at this time.

14A. Provide the date of anticipated installation or change: n/a – 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: N/A

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	☐ Indirect Heat Exchanger	

☒ General Emission Unit, specify: **Leak Source, Natural Gas Fired Boiler, and Natural Gas Engine Data Sheets**

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 Enclosed Combustion Device (Vapor Combustion Unit)

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 _____ DATE: _____

(Please use blue ink) *(Please use blue ink)*

35B. Printed name of signee: Shane Dowell		35C. Title: Office Manager
35D. E-mail: sdowell@jaybeeoil.com	36E. Phone: 304/628-3111	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:

☒ **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 Certificate

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.

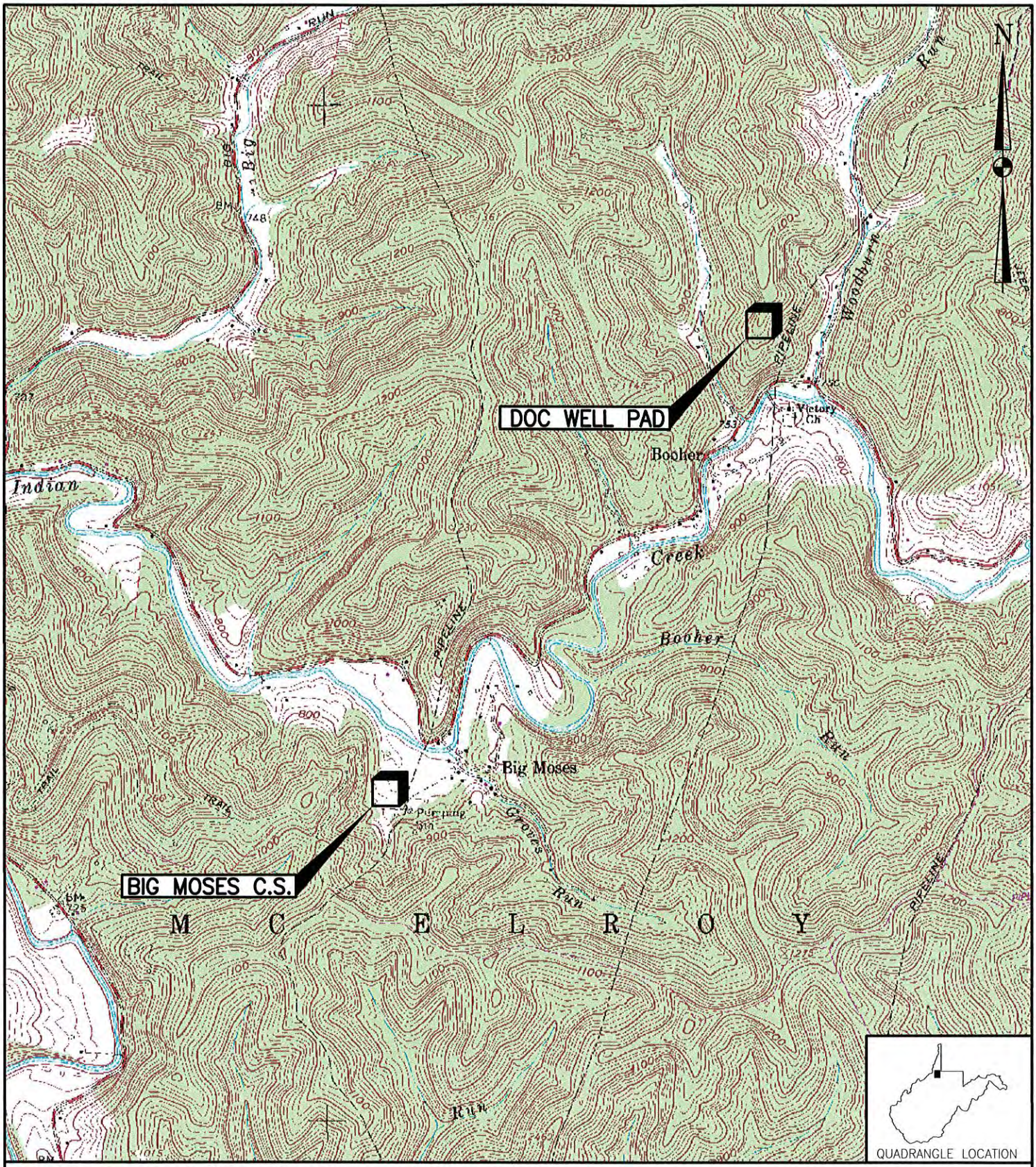
atl.006 v.1
L1388190464

SCANNED

JUN 24 2010

ATTACHMENT B

Area Map



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

DRAWN BY	DJF
DATE	1/21/15
CHECKED BY	RAD
SET JOB NO.	214054
SET DWG FILE	DOCm01.dwg
DRAWING SCALE	1"=2000'

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

JAY-BEE OIL & GAS, INC.

DOC WELL PAD PRODUCTION FACILITY
TYLER COUNTY, WEST VIRGINIA
SITE LOCATION MAP

DRAWING NO.	REV.
FIGURE 1	0

Plot: env045 01/21/2015 14:48 G:\JAY-BEE OIL&GAS\214054\DOCm01.dwg

DRAWN BY	DJF
DATE	12/23/15
CHECKED BY	LM
SET JOB NO.	214054
SET DWG FILE	DOC300 FT RADm01.dwg
DRAWING SCALE	1"=300'

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

JAY BEE OIL AND GAS

DOC WELL PAD PRODUCTION FACILITY
TYLER COUNTY, WEST VIRGINIA
300 FT. RADIUS

DRAWING NAME	REV.
FIGURE	0

Plot: env045 12/23/2015 12:03 G:\JAY-BEE OIL&GAS\214054\DOC\DOC 300 FT RADm01.dwg

ATTACHMENT C

Installation and Start-Up Schedule

Jay-Bee Oil & Gas, Inc.
Doc Well Pad Production Facility
Attachment C – Installation and Start-Up Schedule

The Facility is currently operating under a registration to the G-70B General Permit. As this modification is only for conversion to an individual R-13 permit, there will be no equipment installation or removal. Thus, there is no construction schedule.

ATTACHMENT D

Regulatory Discussion

Doc Well Pad Production Facility
Attachment D
Regulatory Analysis

Both State and Federal environmental regulations governing air emissions apply to the Doc Well Pad Production Facility. 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 is a minor source with respect to Prevention of Significant Deterioration (PSD) regulations as it does not have the potential to emit more than the annual emission thresholds of any PSD regulated pollutant with the voluntary restrictions (e.g., catalytic converter on the engine).

The Facility is within an area designated as attainment for all criteria pollutants. Consequently, the Facility is not subject to the New Source Review (NSR) regulations. 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 remains a minor source. Additionally, the NSPS regulating this facility does not trigger a Title V permit. Hence, a Title V permit does not be required for the Doc Well Pad Production Facility.

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 conversion from a General Permit Registration to an R-13 Individual Permit does not impact the current aggregation status. This conversion is being done to allow the contiguous Icon Midstream Doc Dehydration Facility and the Jay-Bee Doc Well Pad Production Facility to operate under separate permits even though they are aggregated.

1.4 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 Doc Well Pad Production Facility are as follows:

- 40 CFR 60, Subpart Dc—Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units
- 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

1.4.1 Subpart Dc

This subpart limits SO2 and PM emissions from boilers and heaters fired by various fuels. While the primary thrust of this set of regulations it to control SOx and PM emissions from coal and oil-fired boilers and heaters, natural gas fired units are also covered under this rule. The Gas Processing Units have heat inputs that are well below the threshold of coverage for this rule (10 MMBTU/Hr). Thus, this rule does not apply.

1.4.2 Subpart JJJJ

This subpart governs emissions from new stationary spark ignition internal combustion engines (SI ICE) manufactured after July 1, 2007. The driver for the Vapor Recovery Unit are SI ICE units manufactured after this date. Accordingly, this rule applies to this engine. More specifically, 60.4233(d) stipulates that non-emergency natural gas-fired rich burn engines 25-100 HP must comply with the emission standards of 40 CFR 1048.101(c). According to this rule, there are only NOx and CO limitations for engines of this size and fueled by natural gas. Thus, NOx must be less than 3.8 g/kW-hr and CO must be less than 6.5 g/kW-hr. Given that 1 kW equals 1.341 HP, this is equivalent to 2.8 g/bhp-hr for NOx and 4.8 g/bhp-hr for CO. The controlled engine emissions will continue to meet this standard.

1.4.3 Subpart OOOO

This subpart governs emissions from a broad spectrum of operations in the oil and natural gas industries, including operations at natural gas well pads. The potentially applicable sections of this rule sets restrictions, recordkeeping and reporting requirements on emissions from storage vessels with potential VOC emissions greater than 6 tpy, fugitive emissions, reciprocating compressors and pneumatic controllers. This rule applies to the Doc Well Pad Production Facility.

One of the key components to this rule [40 CFR 60.5390(b)] applicable to the Doc Well Pad Production Facility is the requirement that all pneumatic controllers located between the well head and a processing plant must have a bleed rate of less than 6 scfh. All pneumatic controllers installed at Doc Well Pad Production Facility meet these criteria.

This rule also stipulates that storage vessels with VOC emissions equal to or greater than 6 tpy must control those emissions by 95% by October 15, 2013. The condensate tanks at Doc have an estimated *uncontrolled* VOC emission rate well in excess of this threshold. Thus, emissions from these tanks must be controlled by at least 95%. Jay-Bee Oil & Gas has met this requirement through installation of a system that captured vapors released from the tank and route them to a vapor recovery unit. This unit controls VOC emissions to at least 95%, fulfilling this regulatory requirement.

1.5 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 standards are potentially applicable to the planned Doc Well Pad Production Facility:

- 40 CFR 63, Subpart ZZZZ – NESHAP from Stationary Reciprocating Internal Combustion Engines
- 40 CFR 63, Subpart JJJJJJ – NESHAP for Industrial, Commercial and Institutional Boilers and Process Heaters

1.5.1 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 is not a major source of HAPs, but is considered an area source of HAPs. Hence, this rule is potentially applicable to the Facility. In accordance with 40 CFR 63.6590(a)(2)(iii), the single engine at the Doc Well Pad

Production Facility is not considered an Existing Stationary RICE. Rather, it is considered a "new" engine. Thus, the engine meets the requirements of this rule by meeting the requirements of NSPS, Subpart JJJJ.

1.5.2 Subpart JJJJJJJ

This Subpart applies to industrial, commercial, or institutional boilers located at an area source of HAPs. This Facility contains natural gas-fired line heaters; therefore it is not subject to this Subpart per 40 CFR 63.11195(e).

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 Doc Well Pad Production Facility potentially stores 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

1.7.1 45 CSR 2

The purpose of 45CSR2 is to control smoke and particulate matter emissions from fuel burning units. The Facility is subject to the opacity requirement of 45 CSR 2. Emissions from the Facility cannot exceed 10% over any six minute period.

1.7.2 45 CSR 4

This regulation prohibits the emission of objectionable odors. Jay-Bee Oil & Gas is obligated to run the station in a manner that does not produce objectionable odors.

1.7.3 45 CSR 6

This rule establishes emission standards for particulate matter and other requirements for incineration of refuse not subject to or specifically exempted from federal regulation. The Vapor Recovery Unit (VRU) falls under Section 4.1 of this rule. PM emissions from the VRU must remain below the allowable limit calculated under this rule.

The VRU must also meet the visible emissions requirements of this rule limiting visible emissions to 20% opacity.

1.7.4 45 CSR 10

This regulation limits emissions of sulfur oxides. As the sulfur content of the Inlet Gas contains no measurable sulfur, emissions of sulfur oxides is negligible. Thus, while parts of this rule are applicable to the Facility, no actions are required on the part of Jay-Bee Oil & Gas to attain compliance. The various non-engine combustion units have a design heat input less than 10 MMBTU/Hr and are therefore exempt from the requirements of this rule.

1.7.5 45 CSR 13

The state regulations applicable to the permitting of the proposed construction are in Title 45 Series 13 of the Code of State Regulations. The proposed Doc Well Pad Production Facility has the potential to emit several regulated pollutants in excess of the thresholds that define a Stationary Source.

When taking into consideration the voluntary limit to operate the engines equipped with catalysts only when the catalytic converters are properly functioning, the Facility's potential to emit is less than the thresholds that would classify the Facility as a major source under 45 CSR 14.

1.7.6 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 Doc Well Pad Production Facility is subject to the emission limitations, monitoring, testing and recordkeeping of Subpart JJJJ. The Facility is also subject to Subpart OOOO.

1.7.7 45 CSR 30

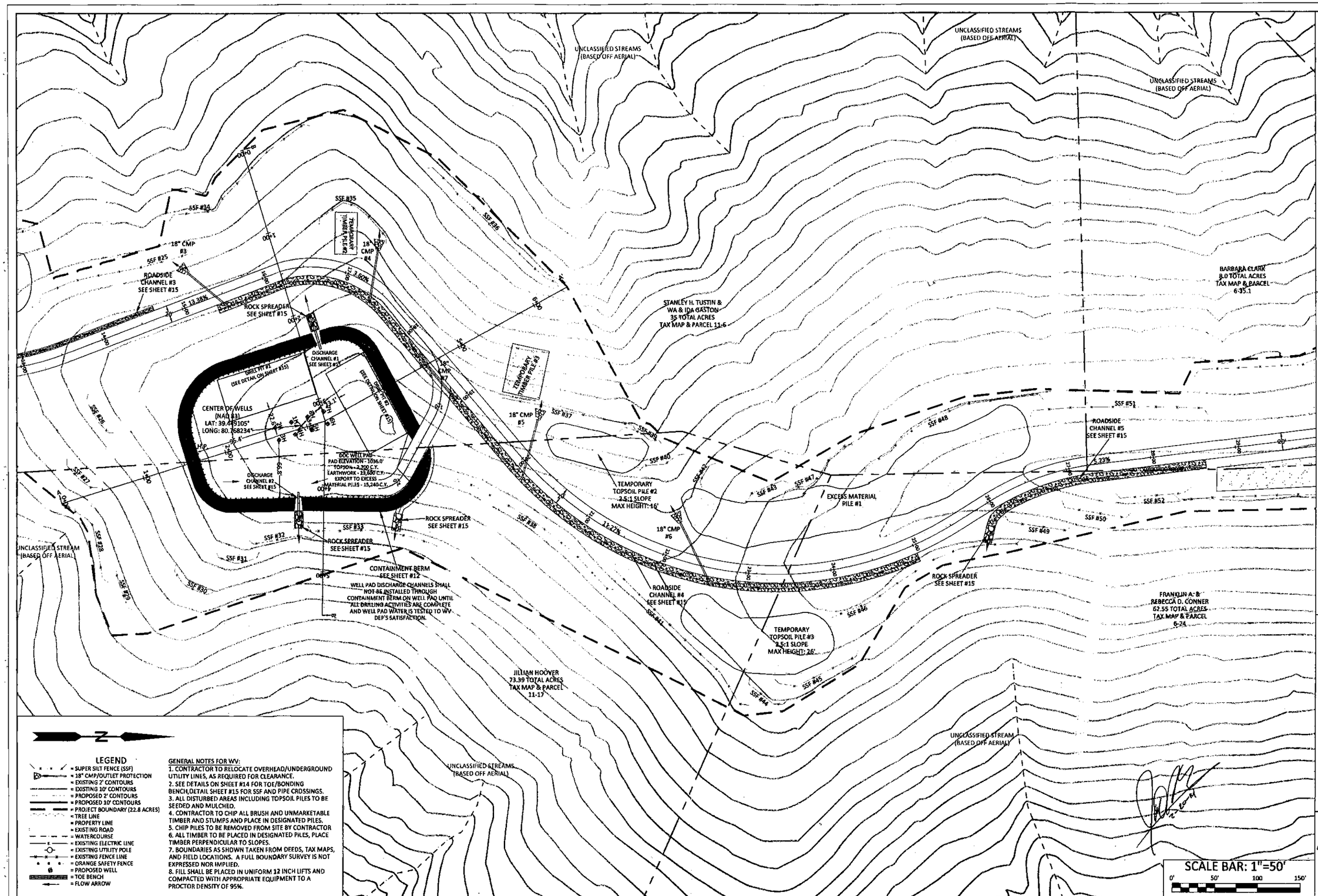
The state regulations applicable to Title V operating permits are in Title 45 Series 30. The Doc Well Pad Production Facility, as noted above, does not have the potential to emit any regulated pollutant above the threshold that would define it as a major source. Additionally, although the Facility is subject to certain New Source Performance Standards, the NSPS applicable to this facility do not trigger the need to submit a Title V application and obtain a Title V permit. Hence this rule is not applicable.

1.7.8 Other Applicable Requirements

Through Series 34, WVDEP has adopted the National Emission Standards for Hazardous Air Pollutants for Source Categories. Both of these topics have been addressed above.

ATTACHMENT E

Plot Plan



LEGEND

- = SUPER SILT FENCE (SSF)
- = 18" CMP/OUTLET PROTECTION
- = EXISTING 2' CONTOURS
- = EXISTING 10' CONTOURS
- = PROPOSED 2' CONTOURS
- = PROPOSED 10' CONTOURS
- = PROJECT BOUNDARY (22.8 ACRES)
- = TREE LINE
- = PROPERTY LINE
- = EXISTING ROAD
- = WATERCOURSE
- = EXISTING ELECTRIC LINE
- = EXISTING UTILITY POLE
- = EXISTING FENCE LINE
- = ORANGE SAFETY FENCE
- = PROPOSED WELL
- = TOE BENCH
- = FLOW ARROW

GENERAL NOTES FOR WV:

1. CONTRACTOR TO RELOCATE OVERHEAD/UNDERGROUND UTILITY LINES, AS REQUIRED FOR CLEARANCE.
2. SEE DETAILS ON SHEET #14 FOR TOE/BONDING BENCH,DETAIL SHEET #15 FOR SSF AND PIPE CROSSINGS.
3. ALL DISTURBED AREAS INCLUDING TOPSOIL PILES TO BE SEEDED AND MULCHED.
4. CONTRACTOR TO CHIP ALL BRUSH AND UNMARKETABLE TIMBER AND STUMPS AND PLACE IN DESIGNATED PILES.
5. CHIP PILES TO BE REMOVED FROM SITE BY CONTRACTOR
6. ALL TIMBER TO BE PLACED IN DESIGNATED PILES, PLACE TIMBER PERPENDICULAR TO SLOPES.
7. BOUNDARIES AS SHOWN TAKEN FROM DEEDS, TAX MAPS, AND FIELD LOCATIONS. A FULL BOUNDARY SURVEY IS NOT EXPRESSED NOR IMPLIED.
8. FILL SHALL BE PLACED IN UNIFORM 12 INCH LIFTS AND COMPACTED WITH APPROPRIATE EQUIPMENT TO A PROCTOR DENSITY OF 95%.

BOORD, BENCHEK and ASSOC., INC.
Engineering, Surveying, Construction, and Mining Services
Southpointe, PA 15317 Phone: 724-746-1055

E&S CONTROL LAYOUT

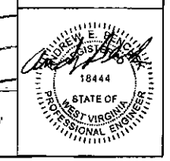
THIS DOCUMENT WAS PREPARED BY:
BOORD, BENCHEK AND ASSOC., INC.
FOR: JAY BEE OIL & GAS, LLC.

SHEET #6

DATE:
FEBRUARY 2014

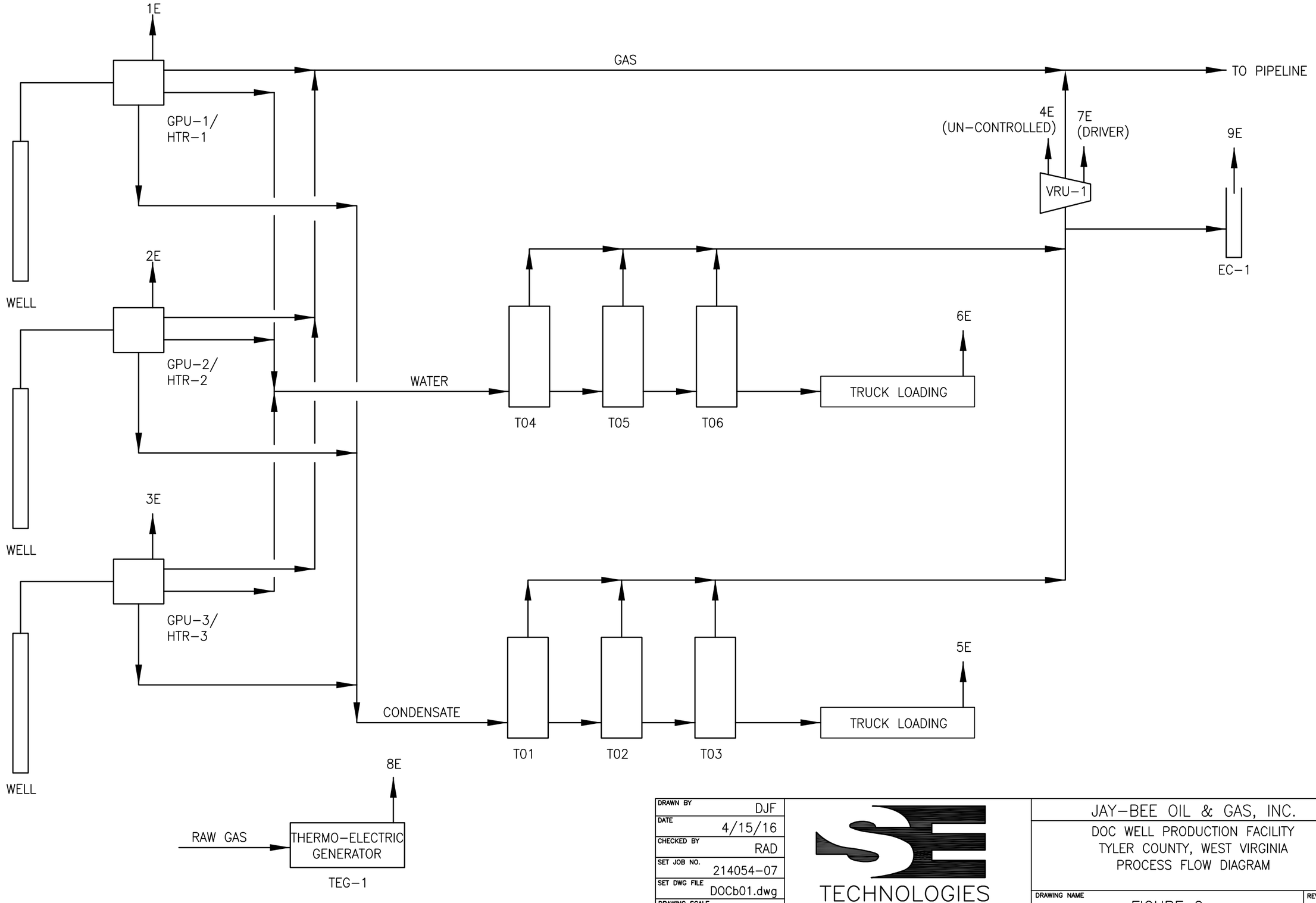
DOC WELL PAD

McELROY DISTRICT,
TYLER COUNTY, WV



ATTACHMENT F

Process Flow Diagram



DRAWN BY	DJF
DATE	4/15/16
CHECKED BY	RAD
SET JOB NO.	214054-07
SET DWG FILE	DOCb01.dwg
DRAWING SCALE	N.T.S.

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

JAY-BEE OIL & GAS, INC.

DOC WELL PRODUCTION FACILITY
TYLER COUNTY, WEST VIRGINIA
PROCESS FLOW DIAGRAM

DRAWING NAME	REV.
FIGURE 2	1

ATTACHMENT G

Process Description

Jay-Bee Oil & Gas, Incorporated
Doc Well Pad Production Facility
Attachment G
Process Description

Jay-Bee currently operates its Doc Well Pad Production Facility under General Permit Registration number G70-B148A. The following describes current operations of the Facility. This modification is solely for conversion to an R-13 permit so that the contiguous and aggregated Icon Midstream Doc Dehydration Facility can operate under a separate permit.

Natural gas and Produced Fluids (condensate and water) are received from two wells at this location at approximately 2500 psi and pass through Gas Processing Units (one per well) to avoid ice formation during subsequent pressure drops. These materials then pass through a three-way separator where gas, condensate and water are separated. The gas will be routed to the adjacent Icon Midstream Doc Dehydration Facility and then to a pipeline owned and operated by others.

Both the condensate and Produced Water are accumulated in six 210 BBL tanks (three for Condensate and three for Produced Water), pending truck transportation by others. The Condensate is transported to a regional processing facility and the Produced Water to a regional disposal facility. Flash, working and breathing losses from these tanks is routed to a Vapor Recovery Unit (VRU) with the captured vapors routed back to the raw gas discharge line. In addition, Jay-Bee has installed an enclosed combustor as a back-up for the VRU to capture and destroy tank emissions for those times when the VRU is not available (e.g. engine and compressor maintenance).

There are no equipment additions, modifications or removals being requested at this time.

ATTACHMENT I

Emission Units 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]
HTR-1	1E	Gas Processing Unit	2015	1.5 MMBTU/Hr	Existing	None
HTR-2	2E	Gas Processing Unit	2015	1.5 MMBTU/Hr	Existing	None
HTR-3	3E	Gas Processing Unit	2015	1.5 MMBTU/Hr	Existing	None
T01	4E	Condensate Tank	2015	210 BBL	Existing	VRU-1/EC-1
T02	4E	Condensate Tank	2015	210 BBL	Existing	VRU-1/EC-1
T03	4E	Condensate Tank	2015	210 BBL	Existing	VRU-1/EC-1
T04	4E	Produce Water Tank	2015	210 BBL	Existing	VRU-1/EC-1
T05	4E	Produced Water Tank	2015	210 BBL	Existing	VRU-1/EC-1
T06	4E	Produced Water Tank	2015	210 BBL	Existing	VRU-1/EC-1
TL-1	5E	Condensate Truck Loading	2015	30,000 BBL/yr	Existing	None
TL-2	6E	Produced Water Truck Loading	2015	63,600 BBL/yr	Existing	None
CE-1	7E	VRU Driver	2015	84 Hp	Existing	1C
TEG-1	8E	Thermoelectric Generator	2015	4.4 KW/Hr	Existing	None
EC-1	9E	Enclosed Combustor	2016		Existing	N/A

[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
New Equipment Only

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			
1E	Upward Vertical Stack	HTR-1	Gas Processing Unit		None	C	8760	NO_x	0.15	0.66	0.15	0.66	Gas	EE	
								CO	0.13	0.55	0.13	0.55	Gas	EE	
								VOC	0.01	0.04	0.01	0.04	Gas	EE	
								SO_2	<0.01	<0.01	<0.01	<0.01	Gas	EE	
								PM/PM10	0.011	0.05	0.011	0.05	Solid	EE	
								Formaldehyde	<0.01	<0.01	<0.01	<0.01	Gas	EE	
								CO2e	181.2	794	181.2	794	Gas	EE	
2E	Upward Vertical Stack	HTR-2	Gas Processing Unit		None	C	8760	NO_x	0.15	0.66	0.15	0.66	Gas	EE	
								CO	0.13	0.55	0.13	0.55	Gas	EE	
								VOC	0.01	0.04	0.01	0.04	Gas	EE	
								SO_2	<0.01	<0.01	<0.01	<0.01	Gas	EE	
								PM/PM10	0.011	0.05	0.011	0.05	Solid	EE	
								Formaldehyde	<0.01	<0.01	<0.01	<0.01	Gas	EE	
								CO2e	181.2	794	181.2	794	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			
3E	Upward Vertical Vent	HTR-3	Gas Processing Unit		None	C	8760	NO_x	0.15	0.66	0.15	0.66	Gas	EE	
								CO	0.13	0.55	0.13	0.55	Gas	EE	
								VOC	0.01	0.04	0.01	0.04	Gas	EE	
								SO_2	<0.01	<0.01	<0.01	<0.01	Gas	EE	
								PM/PM10	0.011	0.05	0.011	0.05	Solid	EE	
								Formaldehyde	<0.01	<0.01	<0.01	<0.01	Gas	EE	
								CO2e	181.2	794	181.2	794	Gas	EE	
4E	Upward Vertical Vent	T01 T02 T03 T04 T05 T06	Cond. Tanks + Water Tank Un-captured emissions	VRU-1/ EC-1	Vapor Recovery Unit / Enclosed Combustor	C	8760	NO_x					Gas	EE	
								CO					Gas	EE	
								VOC	6.64	29.06			Gas	EE	
								SO_2					Gas	EE	
								PM/PM10					Solid	EE	
								Formaldehyde					Gas	EE	
								CO2e	23.9	104			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			
5E + 6E	Upward Vertical Vent	TL-1 TL-2	Cond. Tanks + Water Tank Truck Loading		None	S	1360 (4 hr per day, 340 days per year)	NO_x					Gas	EE	
								CO					Gas	EE	
								VOC	27.90	2.14	27.90	2.14	Gas	EE	
								SO_2					Gas	EE	
								PM/PM10					Solid	EE	
								Formaldehyde					Gas	EE	
								CO2e					Gas	EE	
7E	Upward Vertical Vent	CE-1		1C	NSCR	C	8760	NO_x	2.11	9	0.19	0.81	Gas	EE	
								CO	2.64	11.57	0.37	1.62	Gas	EE	
								VOC	0.05	0.21	0.05	0.21	Gas	EE	
								SO_2	<0.01	<0.01	<0.01	<0.01	Gas	EE	
								PM/PM10	0.013	0.06	0.013	0.06	Solid	EE	
								Formaldehyde	0.017	0.07	0.017	0.07	Gas	EE	
								CO2e	89.4	391	89.4	391	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			
8E	Upward Vertical Vent	TEG-1			None	C	8760	NO_x					Gas	EE	
								CO					Gas	EE	
								VOC					Gas	EE	
								SO_2					Gas	EE	
								PM/PM10					Solid	EE	
								Formaldehyde					Gas	EE	
								CO2e	1.6	7	1.6	7	Gas	EE	
9E	Upward Vertical Vent	EC-1	Produced Water Truck Loading		N/A	C	8760	NO_x			0.28	0.64	Gas	EE	
								CO			1.47	3.34	Gas	EE	
								VOC			2.65	11.61	Gas	EE	
								SO_2			<0.01	<0.01	Gas	EE	
								PM/PM10			0.014	0.03	Solid	EE	
								Formaldehyde			<0.01	<0.01	Gas	EE	
								CO2e			474.5	1091	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			
n/a								NO_x					Gas	EE	
								CO					Gas	EE	
								VOC					Gas	EE	
								SO_2					Gas	EE	
								PM/PM10					Solid	EE	
								Formaldehyde					Gas	EE	
								CO2e					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, H_2S, Inorganics, Lead, Organics, O_3, NO, NO_2, SO_2, SO_3, etc. **DO NOT LIST** CO_2, H_2, H_2O, N_2, O_2, 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
New Equipment

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
1E	0.5	1050	Est 200	Est 10	750	8		
2E	0.5	1050	Est 200	Est 10	750	8		
3E	0.25	1050	Est 200	Est 10	750	8		
4E								
5E	0.33	Ambient	Est 300	Est 10	750	12		
6E	0.33	Ambient	Est. 300	Est 10	750	12		
7E	0.5	1050	Est. 300	Est 15	750	12		
8E	0.2	800	Est. 10	Est 5	750	6		
9E	0.5	1100	Est. 400	Est 20	750	10		

[1] Give at operating conditions. Include inerts.
[2] Release height of emissions above ground level.

ATTACHMENT N

Supporting Emissions Calculations

Jay-Bee Oil & Gas, Inc.

Doc Well Pad Production Facility
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	VRU Compressor [4]	0.19	0.37	89.4	0.05	0.000	0.013	0.000	0.001	0.017	0.024
HTR-1	GPU #1	0.15	0.13	181.2	0.01	0.001	0.011	0.003	0.000	0.000	0.003
HTR-2	GPU #2	0.15	0.13	181.2	0.01	0.001	0.011	0.003	0.000	0.000	0.003
HTR-3	GPU #3	0.15	0.13	181.2	0.01	0.001	0.011	0.003	0.000	0.000	0.003
TEG-1	Thermoelectric Generator	0.00	0.00	1.6	0.00	0.000	0.000	0.000	0.000	0.000	0.000
---	Blowdowns [1]			N/A	N/A						
T01-T06	Condensate Tanks + Water Tanks [2]			23.9	6.64			0.20			0.20
EC-1	Condensate Tanks + Water Tanks [5]	0.28	1.47	474.5	2.65	0.000	0.014	0.11	0.000	0.000	0.11
TL-1 + TL-2	Truck Loading [3]				27.90						1.37
---	Truck Traffic Fugitive Dust						16.53				
---	Fittings Fugitive Emissions			5.3	0.17						
Total		0.91	2.22	1,138	37.44	0.00	16.59	0.32	0.00	0.02	1.71

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	VRU Compressor [4]	0.81	1.62	391	0.21	0.002	0.06	0.00	0.005	0.07	0.11
HTR-1	GPU #1	0.66	0.55	794	0.04	0.004	0.05	0.01	0.000	0.0005	0.01
HTR-2	GPU #2	0.66	0.55	794	0.04	0.004	0.05	0.01	0.000	0.0005	0.01
HTR-3	GPU #3	0.66	0.55	794	0.04	0.004	0.05	0.01	0.000	0.0005	0.01
TEG-1	Thermoelectric Generator	0.01	0.00	7	0.00	0.000	0.00	0.00	0.000	0.0000	0.00
---	Blowdowns [1]										
T01-T06	Condensate Tanks + Water Tanks [2]			104	29.06			0.88			0.96
EC-1	Condensate Tanks + Water Tanks [5]	0.64	3.34	1091	11.61	0.00	0.03	0.48	0.000	0.000	0.74
TL-1 + TL-2	Truck Loading [3]				2.14						0.10
---	Truck Traffic Fugitive Dust						1.33				
---	Fittings Fugitive Emissions			23	0.76						
Total		3.43	6.62	3,997	43.89	0.01	1.57	1.40	0.005	0.08	1.94

Contiguous Icon Midstream, LLC Doc Dehydration Facility Emissions (tpy)	0.13	0.11	416	17.19	0.00	0.01	0.66	0.36	0.00	2.83
Aggregated Emissons (tpy)	3.56	6.73	4,413	61.08	0.01	1.58	2.06	0.36	0.08	4.77

[1] Blowdown Calculations in original application.

[2] Condensate and water tank emissions are currently controlled by a VRU at 95% . This entry represents the un-controlled 5%.

[3] Truck loading is un-controlled.

[4] Emission presented herein for VOCs and Formaldehyde represent un-controlled Mfg. specs. + 15%. The Catalyst Warranty had 0% reduction for these parameters

[5] Condensate and water tank emissions are alternately controlled by an Enclosed Combustor at 98%. The entries for VOC, n-hexane, HAPs and CO2e represents emissions of organics based on a 98% capture and control efficiency.

Jay-Bee Oil &Gas ,LLC
ENGINE EMISSIONS

Doc Well Pad Production Facility
Tyler County, WV

Controlled Emission Rates

Source CE-1
Flash Gas Compressor

Engine Data:

Engine Manufacturer	Cummins	
Engine Model	G5.9	
Type (Rich-burn or Low Emission)	Rich Burn	
Aspiration (Natural or Turbocharged)	Natural	
Manufacturer Rating	84	hp
Speed at Above Rating	1,800	rpm
Configeration (In-line or Vee)	In-line	
Number of Cylinders	6	
Engine Bore	4.020	inches
Engine Stroke	4.720	inches
Engine Displacement	359	cu. in.
Engine BMEP	103	psi
Fuel Consumption (HHV)	7,914	Btu/bhp-hr

Emission Rates:	g/bhp-hr	lb/hr	tons/year	g/hr	lb/day	AP-42 4strokerich lb/mmbtu	Comment
Oxides of Nitrogen, NOx	1.000	0.19	0.81	84	4.44		
Carbon Monoxide CO	2.000	0.37	1.62	168	8.89		453.59 grams = 1 pound
VOC (NMNEHC)	0.253	0.05	0.21	21	1.12		2,000 pounds = 1 ton
CO2	449	83	364	37,716	1,996		
CO2e		89	391				
Total Annual Hours of Operation	**8,760**						
SO2		0.0004	0.0017			0.0006	
PM2.5		0.0063	0.0277			0.0095	
PM (Condensable)		0.0066	0.0289			0.00991	
CH_4		0.1262	0.5529			0.0022	Factor From 40 CFR 98, Table C-2
N_2O		0.0115	0.0503			0.0002	Factor From 40 CFR 98, Table C-2
acrolein		0.0017	0.0077			0.00263	
acetaldehyde		0.0019	0.0081			0.00279	
formaldehyde	0.092	0.0170	0.0746				Per Mfg.
benzene		0.0011	0.0046			0.00158	
toluene		0.0004	0.0016			0.000558	
ethylbenzene		2E-05	0.0001			2.48E-05	
xylene s		0.0001	0.0006			0.000195	
methanol		0.002	0.0089			0.00306	
total HAPs		0.0242	0.1062				

Exhaust Parameters:

Exhaust Gas Temperature	1,078	deg. F
Exhaust Gas Mass Flow Rate		lb/hr
Exhaust Gas Mass Flow Rate	430	acfm
Exhaust Stack Height	96	inches
	8.00	feet
Exhaust Stack Inside Diameter	4	inches
	0.333	feet
Exhaust Stack Velocity	82.1	ft/sec
	4,927.4	ft/min

Jay-Bee Oil &Gas ,LLC

Doc Well Pad Production Facility
Tyler County, WV

Potential Emission Rates

Source HTR-1

Burner Duty Rating	1500.0	Mbtu/hr
Burner Efficiency	98.0	%
Gas Heat Content (HHV)	1263.0	Btu/scf
Total Gas Consumption	29086.0	scfd
H2S Concentration	0.000	Mole %
Hours of Operation	8760	

NOx	0.1501	lbs/hr	0.657	TPY
CO	0.1261	lbs/hr	0.552	TPY
CO2	180.1	lbs/hr	788.7	TPY
CO2e	181	lbs/hr	794	tpy
VOC	0.0083	lbs/hr	0.036	TPY
SO2	0.0009	lbs/hr	0.004	TPY
H2S	0.0000	lbs/hr	0.000	TPY
PM10	0.0114	lbs/hr	0.050	TPY
CHOH	0.0001	lbs/hr	0.000	TPY
Benzene	0.0000	lbs/hr	0.000	TPY
N-Hexane	0.0027	lbs/hr	0.012	TPY
Toluene	0.0000	lbs/hr	0.000	TPY
Total HAPs	0.0028	lbs/hr	0.012	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 =298
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

Doc Well Pad Production Facility
Tyler County, WV

Potential Emission Rates

Source HTR-2

Burner Duty Rating	1500.0	Mbtu/hr
Burner Efficiency	98.0	%
Gas Heat Content (HHV)	1263.0	Btu/scf
Total Gas Consumption	29086.0	scfd
H2S Concentration	0.000	Mole %
Hours of Operation	8760	

NOx	0.1501	lbs/hr	0.657	TPY
CO	0.1261	lbs/hr	0.552	TPY
CO2	180.1	lbs/hr	788.7	TPY
CO2e	181	lbs/hr	794	tpy
VOC	0.0083	lbs/hr	0.036	TPY
SO2	0.0009	lbs/hr	0.004	TPY
H2S	0.0000	lbs/hr	0.000	TPY
PM10	0.0114	lbs/hr	0.050	TPY
CHOH	0.0001	lbs/hr	0.000	TPY
Benzene	0.0000	lbs/hr	0.000	TPY
N-Hexane	0.0027	lbs/hr	0.012	TPY
Toluene	0.0000	lbs/hr	0.000	TPY
Total HAPs	0.0028	lbs/hr	0.012	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 =298
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

Doc Well Pad Production Facility
Tyler County, WV

Potential Emission Rates

Source HTR-3

Burner Duty Rating	1500.0	Mbtu/hr
Burner Efficiency	98.0	%
Gas Heat Content (HHV)	1263.0	Btu/scf
Total Gas Consumption	29086.0	scfd
H2S Concentration	0.000	Mole %
Hours of Operation	8760	

NOx	0.1501	lbs/hr	0.657	TPY
CO	0.1261	lbs/hr	0.552	TPY
CO2	180.1	lbs/hr	788.7	TPY
CO2e	181	lbs/hr	794	tpy
VOC	0.0083	lbs/hr	0.036	TPY
SO2	0.0009	lbs/hr	0.004	TPY
H2S	0.0000	lbs/hr	0.000	TPY
PM10	0.0114	lbs/hr	0.050	TPY
CHOH	0.0001	lbs/hr	0.000	TPY
Benzene	0.0000	lbs/hr	0.000	TPY
N-Hexane	0.0027	lbs/hr	0.012	TPY
Toluene	0.0000	lbs/hr	0.000	TPY
Total HAPs	0.0028	lbs/hr	0.012	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 =298
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

Doc Well Pad Production Facility
Tyler County, WV

Potential Emission Rates

Source TEG-1

Burner Duty Rating	13.0	Mbtu/hr
Burner Efficiency	98.0	%
Gas Heat Content (HHV)	1263.0	Btu/scf
Total Gas Consumption	252.1	scfd
H2S Concentration	0.000	Mole %
Hours of Operation	8760	

NOx	0.0013	lbs/hr	0.006	TPY
CO	0.0011	lbs/hr	0.005	TPY
CO2	1.6	lbs/hr	6.8	TPY
CO2e	2	lbs/hr	7	tpy
VOC	0.0001	lbs/hr	0.000	TPY
SO2	0.0000	lbs/hr	0.000	TPY
H2S	0.0000	lbs/hr	0.000	TPY
PM10	0.0001	lbs/hr	0.000	TPY
CHOH	0.0000	lbs/hr	0.000	TPY
Benzene	0.0000	lbs/hr	0.000	TPY
N-Hexane	0.0000	lbs/hr	0.000	TPY
Toluene	0.0000	lbs/hr	0.000	TPY
Total HAPs	0.0000	lbs/hr	0.000	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 =298
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

Doc Well Pad Production Facility
Tyler County, WV

otential Emission Rate

Enclosed Combustor Pilot

Burner Duty Rating	80.0	Mbtu/hr
Burner Efficiency	99.0	%
Gas Heat Content (HHV)	1263.0	Btu/scf
Total Gas Consumption	1535.6	scfd
H2S Concentration	0.000	Mole %
Hours of Operation	8760	

NOx	0.0079	lbs/hr	0.035	TPY
CO	0.0067	lbs/hr	0.029	TPY
CO2	9.5	lbs/hr	41.6	TPY
CO2e	10	lbs/hr	42	TPY
VOC	0.0004	lbs/hr	0.002	TPY
SO2	0.0000	lbs/hr	0.000	TPY
H2S	0.0000	lbs/hr	0.000	TPY
PM10	0.0006	lbs/hr	0.003	TPY
CHOH	0.0000	lbs/hr	0.000	TPY
Benzene	0.0000	lbs/hr	0.000	TPY
N-Hezane	0.0001	lbs/hr	0.001	TPY
Toluene	0.0000	lbs/hr	0.000	TPY
Total HAPs	0.0001	lbs/hr	0.001	TPY

AP-42 Factors Used (Tables 1.4.1-1.4.3)

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 =298
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

Doc Well Pad Production Facility
Tyler County, WV

Potential Emission Rates

Source EC-1

Enclosed Vapor Combustor - Control of Tank Emissions

Destruction Efficiency	98.0	%		
Gas Heat Content (HHV)	2313.1	Btu/scf		
Max Flow to T-E	0.041	MMSCFD	7.730	MMCF/Yr
Max BTUs to Flare	3.962	MMBTU/Hr	17,880	MMBTU/Yr

NOx	0.27	lbs/hr	0.61	tpy
CO	1.47	lbs/hr	3.31	tpy
CO2	463.13	lbs/hr	1,045.0	tpy
CO2e	464.90	lb/hr	1,048.9	tpy
VOC	2.65	lb/hr	11.61	tpy
CH4	0.03	lbs/hr	0.1300	tpy
N2O	0.0009	lbs/hr	0.0020	tpy
PM	0.0130	lb/hr	0.0294	tpy
Benzene	0.0000	lb/hr	0.0000	tpy
CHOH	0.0001	lb/hr	0.0003	tpy
n-Hexane	0.1100	lb/hr	0.4800	tpy
Toluene	0.0000	lb/hr	0.0000	tpy
Total HAP	0.1102	lb/hr	0.7400	tpy

Notes: VOC, Total HAP, N-Hexane and CH4 emissions are taken from the Condensate and Produced Water Tank Emissions sheet in the Calculations Section.

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**

Jay-Bee Oil & Gas, Inc.
GAS ANALYSIS INFORMATION

Doc Well Pad Production Facility
Tyler County, WV

Condensate Tank Flash Vapor 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	0.032	0.009	0.000	0.022			-		0.0003	
Carbon Dioxide, CO2	0.093	0.041	0.001	0.103			-		0.0009	
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	21.006	3.370	0.116	8.458	191.0	212.2	2.002		0.2096	
Ethane, C2H6	26.977	8.112	0.280	20.358	436.7	477.4	4.500		0.2676	7.176
Propane	25.650	11.311	0.391	28.386	593.8	645.4	6.110	28.386	0.2520	7.030
Iso-Butane	5.272	3.064	0.106	7.690	158.2	171.4	1.633	7.690	0.0512	1.715
Normal Butane	11.899	6.916	0.239	17.357	358.3	388.2	3.685	17.357	0.1150	3.731
Iso Pentane	3.281	2.367	0.082	5.941	121.4	131.3	1.250	5.941	0.0328	1.195
Normal Pentane	3.198	2.307	0.080	5.791	118.5	128.2	1.219	5.791	0.0320	1.152
Hexane	1.776	1.531	0.053	3.841	78.2	84.5	0.804	3.841	0.0175	0.726
Heptane	0.816	0.818	0.028	2.052	41.6	44.9	0.428	2.052	0.0081	0.374
	100.000	39.846	1.376		2,097.7	2,283.4	21.630	71.059	0.9872	23.100

Gas Density (STP) = 0.111

Ideal Gross (HHV)	2,283.4
Ideal Gross (sat'd)	2,244.3
GPM	-
Real Gross (HHV)	2,313.1
Real Net (LHV)	2,124.9

Jay-Bee Oil & Gas, Inc.
GAS ANALYSIS INFORMATION

Doc Well Pad Production Facility
Tyler County, WV

Water Tank Flash Vapor 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	0.575	0.161	0.006	0.652			-		0.0057	
Carbon Dioxide, CO2	1.602	0.705	0.024	2.855			-		0.0160	
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	74.187	11.902	0.411	48.188	674.7	749.3	7.070		0.7404	
Ethane, C2H6	9.798	2.946	0.102	11.929	158.6	173.4	1.634		0.0972	2.606
Propane	4.384	1.933	0.067	7.827	101.5	110.3	1.044	7.827	0.0431	1.202
Iso-Butane	1.841	1.070	0.037	4.332	55.2	59.9	0.570	4.332	0.0179	0.599
Normal Butane	2.043	1.187	0.041	4.808	61.5	66.6	0.633	4.808	0.0197	0.641
Iso Pentane	1.305	0.942	0.033	3.812	48.3	52.2	0.497	3.812	0.0131	0.475
Normal Pentane	0.928	0.670	0.023	2.711	34.4	37.2	0.354	2.711	0.0093	0.334
Hexane	1.149	0.990	0.034	4.009	50.6	54.6	0.520	4.009	0.0114	0.470
Heptane	2.188	2.192	0.076	8.877	111.6	120.4	1.147	8.877	0.0218	1.004
	100.000	24.699	0.853		1,296.4	1,424.0	13.469	36.376	0.9954	7.331

Gas Density (STP) = 0.069

Ideal Gross (HHV)	1,424.0
Ideal Gross (sat'd)	1,399.9
GPM	-
Real Gross (HHV)	1,430.5
Real Net (LHV)	1,302.3

Jay-Bee Oil & Gas, Inc.
GAS ANALYSIS INFORMATION

Doc Well Pad Production Facility
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	0.394	0.110	0.004	0.530			-		0.0039	
Carbon Dioxide, CO2	0.151	0.066	0.002	0.319			-		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	77.080	12.366	0.427	59.350	701.0	778.5	7.346		0.7693	
Ethane, C2H6	14.832	4.460	0.154	21.406	240.1	262.5	2.474		0.1471	3.945
Propane	4.967	2.190	0.076	10.512	115.0	125.0	1.183	10.512	0.0488	1.361
Iso-Butane	0.616	0.358	0.012	1.718	18.5	20.0	0.191	1.718	0.0060	0.200
Normal Butane	1.210	0.703	0.024	3.375	36.4	39.5	0.375	3.375	0.0117	0.379
Iso Pentane	0.266	0.192	0.007	0.921	9.8	10.6	0.101	0.921	0.0027	0.097
Normal Pentane	0.262	0.189	0.007	0.907	9.7	10.5	0.100	0.907	0.0026	0.094
Hexane	0.158	0.136	0.005	0.654	7.0	7.5	0.072	0.654	0.0016	0.065
Heptane	0.064	0.064	0.002	0.308	3.3	3.5	0.034	0.308	0.0006	0.029
	100.000	20.836	0.719		1,140.7	1,257.6	11.875	18.396	0.9958	6.172

Gas Density (STP) = 0.058

Ideal Gross (HHV)	1,257.6
Ideal Gross (sat'd)	1,236.5
GPM	-
Real Gross (HHV)	1,263.0
Real Net (LHV)	1,145.6

Jay-Bee Oil & Gas, Inc.
FUGITIVE EMISSIONS

Doc Well Pad Production Facility
Tyler County, WV

Fugitive VOC Emissions

Volatile Organic Compounds, NMNEHC from gas analysis:	18.40	weight percent
Methane from gas analysis:	59.35	weight percent
Carbon Dioxide from gas analysis:	0.32	weight percent
Gas Density	0.0580	lb/scf

Emission Source:	Number	Oil & Gas Production*	VOC %	VOC, lb/hr	VOC TPY	CO2 lb/Hr	CO2 TPY	CH4 lb/hr	CH4 TPY	CO2e
Valves:										
Gas/Vapor:	16	0.02700 scf/hr	18.4	0.005	0.020	0.000	0.000	0.015	0.0651	1.628
Light Liquid:	36	0.05000 scf/hr	100.0	0.104	0.457					0.000
Heavy Liquid (Oil):	-	0.00050 scf/hr	100.0	0.000	0.000					0.000
Low Bleed Pneumatic	3	1.39000 scf/hr	18.4	0.044	0.195	0.144	0.629	0.144	0.6285	16.342
Relief Valves:	18	0.04000 scf/hr	18.4	0.008	0.034	0.000	0.001	0.025	0.1085	2.714
Open-ended Lines, gas:	3	0.06100 sfc/hr	18.4	0.002	0.009					0.000
Open-ended Lines, liquid:	-	0.05000 lb/hr	100.0	0.000	0.000					0.000
Pump Seals:										
Gas:	-	0.00529 lb/hr	18.4	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:	1	0.01940 lb/hr	18.4	0.004	0.016	0.000	0.000	0.001	0.0029	0.073
Connectors:										
Gas:	16	0.00300 scf/hr	18.4	0.001	0.002	0.000	0.000	0.002	0.0072	0.181
Light Liquid:	6	0.00700 scf/hr	100.0	0.042	0.184					0.000
Heavy Liquid (Oil):	-	0.00030 scf/hr	100.0	0.000	0.000					0.000
Flanges:										
Gas:	38	0.00086 lb/hr	18.4	0.006	0.026	0.000	0.000	0.019	0.0850	2.124
Light Liquid:	18	0.00300 scf/hr	100.0	0.003	0.014					0.000
Heavy Liquid:		0.0009 scf/hr	100.0	0.000	0.000					0.000

Fugitive Calculations:

	lb/hr	t/y
VOC	**0.174**	**0.761**
CH4	**0.061**	**0.269**
CO2	**0.000**	**0.002**
CO2e	**5.265**	**23.06**

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

Jay-Bee Oil & Gas, Inc.
GAS DATA INFORMATION

Specific Graivity of Air, @ 29.92 in. Hg and 60 -F, 28.963
One mole of gas occupies, @ 14.696 psia & 32 -I 359.2 cu ft. per lb-mole
One mole of gas occupies, @ 14.696 psia & 60 -I 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
Heptane	C7H16	100.205	3.4598	0.2639	3.789	5,101	5,503	22,000	23,000	52.41	17.468

ATTACHMENT O

Monitoring, Recordkeeping, Reporting and Testing Plan

ATTACHMENT O
Jay-Bee Oil & Gas, Inc.
Doc Well Pad Production Facility
Monitoring, Recordkeeping, Reporting and Testing Plan

This modification is solely for conversion from the current G-70B General Permit registration to an R-13 permit. This is being requested so that the contiguous and aggregated Icon Midstream Doc Dehydration Facility can operate under a separate permit.

Since there are no equipment additions, modifications or removals being requested at this time, there are no new monitoring, recordkeeping, reporting and testing requirements for the Facility.

ATTACHMENT P

Public Notice

Affidavit Notice Will Be Submitted Upon Receipt

AIR QUALITY PERMIT NOTICE
Notice of Application

Notice is given that Jay-Bee Oil & Gas, Inc. has applied to the West Virginia Department of Environmental Protection, Division of Air Quality, for a modification of its G70-B General Permit Registration and conversion to a Construction Permit for its Doc Well Pad Production Facility located off of Indian Creek Road east of Middlebourne, WV in Tyler County, West Virginia (Lat.39.449105, Long. -80.768234).

The applicant estimates no changes to the potential to discharge regulated air pollutants.

The Facility is already operating under its existing permit and there are no physical changes to the permitted facility. 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 1227, during normal business hours.

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

By: Mr. Shane Dowell
Office Manager
Jay-Bee Oil & Gas, Inc.