VENTURE OIL & GAS, INC.

OIL AND GAS EXPLORATION, DEVELOPMENT & OPERATIONS

140 MAYFAIR ROAD, SUITE 900
HATTIESBURG, MS 39402

PHONE: 601-428-7725
Fax: 601-450-4448

February 16, 2021

Ms. Krystal Rudolph, P.E. Chief
Environmental Permits Division
Mississippi Department of Environmental Quality
PO Box 2261
Jackson, MS 39225-2261

Dear Ms. Rudolph:

Re: Request for Pre-permit Construction Approval
Venture Oil & Gas inc.
Bryant 33-3 No. 1 Facility
Jones County, MS

Venture Oil & Gas Inc. is herewith submitting the enclosed completed Notice of Intent for coverage under the Oil Production General Permit for the proposed Bryant 33-3 No. 1 facility in Jones County, MS. In accordance with 11 Miss. Admin. Code Pt. 2, R. 2.15.B(2), Venture is requesting approval for pre-permit construction of the proposed oil and gas production project.

Proof of publication of the required public notice, which is scheduled to be published in the Laurel Leader-Call on February 18, 2021, will be forwarded to you when it becomes available. Copies of the public notices for the project are enclosed..

As shown in the coverage NOI, the Bryant 33-3 No. 1 facility will not be a new major source under PSD, and is therefore eligible for pre-permit construction approval. The NOI also contains the equipment list, process description, and emissions calculations. The facility will flare all produced gas, including tank vapors, in order to avoid major source classification.

As shown by the site location map in the enclosed application, the proposed site is in rural Jones County, and meets all buffer zone requirements. There are no nearby recreational or residential areas.

I certify under penalty of law that I have personally examined and am familiar with the statements and information submitted in the enclosed documents, including all attachments. I certify on behalf of Venture Oil & Gas Inc. that if approved for the Pre-permit Construction, the company assumes the risk for construction and that a final permit/coverage is required prior to beginning operations. In addition, Venture Oil & Gas Inc. also certifies that it will not contest the final permit to construct or issuance of coverage under the Oil Production General Permit based on the fact that construction has already begun.

If you have any questions, please feel free to contact me at (601) 518-0622 or Mr. Toby Cook of FC&E Engineering, LLC at (601) 613-1915.

Sincerely,

Jarvis Hensley
Vice President-Operations

Public Notice
Mississippi Environmental Quality Permit Board
P. O. Box 2261
Jackson, Mississippi 39225
Telephone No. (601) 961-5171

Public Notice Start Date: 02/18/2021

Venture Oil & Gas Inc., for the Bryant 33-3 No. 1 facility, located approximately 5 miles southwest of Ovett in Jones County, MS, and approximately 200 feet south of Ovett Petal Road, in Section 33, TWP 6N, R 11W, telephone No. 601-969-1831, is requesting an Optional Pre-Permit Construction approval from the Mississippi Department of Environmental Quality (MDEQ) as allowed by 11 Miss. Admin. Code Pt. 2, R. 2.15.B(2). The facility is publishing this public notice to provide the public with the opportunity to comment to the MDEQ regarding the proposed project.

The proposed project consists of an oil and gas production site including well, separator, storage tanks, oil and water loading operations, and other associated equipment, including a flare for control of air emissions. This proposed project will result in a potential emissions increase of regulated air pollutants. However, the annual emissions of all regulated pollutants will be below the Prevention of Significant Deterioration applicability threshold levels for new sources as specified in the Mississippi Regulations for the Prevention of Significant Deterioration of Air Quality, 11 Miss. Admin. Code Pt. 2, Ch. 5., and more specifically in 40 CFR Part 52.21.

Persons wishing to comment upon or object to the proposed request are invited to submit comments in writing to **Chief, Environmental Permits Division** at the Permit Board's address shown above no later than 10-days from the date of publication of this notice. All comments received or postmarked by this date will be considered in the determination regarding the pre-permit construction approval. After receipt of public comments and thorough consideration of all comments, MDEQ will formulate its recommendations regarding pre-permit construction approval.

Additional details about the proposed project are available by writing or calling the **Chief, Environmental Permits Division** at the above Permit Board address and telephone number and on the MDEQ's website at: http://opc.deq.state.ms.us/publicnotice.aspx. This information is also available for review at the following location during normal business hours:

Mississippi Department of Environmental Quality
Office of Pollution Control
515 East Amite Street,
Jackson, MS 39201
(601) 961-5171

Please bring the foregoing to the attention of persons whom you know will be interested.

Oil Production General Permit Public Notice
Mississippi Environmental Quality Permit Board
P. O. Box 2261
Jackson, Mississippi 39225
Telephone No. (601) 961-5171

Public Notice Start Date: *2/18/2021*

Venture Oil & Gas Bryant 33-3 No. 1 facility located at latitude 31.444540, longitude -89.1080, in Jones County approximately 5.0 miles SW of Ovett, Mississippi, (601) 518-0622, has applied to the Mississippi Department of Environmental Quality (MDEQ) for coverage under MDEQ's Oil Production General Permit to construct and operate an oil production facility.

The Oil Production General Permit has been developed to ensure compliance with all State and Federal regulations. Facilities granted coverage under this permit and adhering to the conditions contained therein should operate within State and Federal environmental laws and standards concerning the operation of air emissions equipment.

The proposed project consists of construction and/or operation of an oil and gas production site including well, separators, oil and water storage tanks, engine for a well pump , and a flare to control gas emissions. Venture is requesting a federally enforceable permit requirement that the storage tank emissions be routed to the flare at all times the facility is in operation. The facility will operate control(s) such that criteria pollutant emissions will not exceed emission rates restricted in the Oil Production General Permit, nor will hazardous air pollutant (HAP) emissions exceed any HAP emission rates restricted in the Oil Production General Permit. This project will result in new sources of potential emissions of regulated air pollutants. However, emissions will be below the Prevention of Significant Deterioration significance levels as specified in the Mississippi Regulations for the Prevention of Significant Deterioration of Air Quality, 11 Miss. Admin. Code Pt. 2, Ch. 5., and in 40 CFR Part 52.21. Potential emissions will also be below the Air Title V Major Source thresholds as specified in 11 Miss. Admin. Code Pt. 2, Ch. 6. and in 40 CFR Part 70.

Persons wishing to comment upon or object to the proposed request are invited to submit comments in writing to the **Air 1 Branch Chief, Environmental Permits Division** at the Permit Board's address shown above no later than 30-days from the date of publication of this notice. All comments received or postmarked by this date will be considered in the determination regarding the coverage approval. After receipt of public comments and thorough consideration of all comments, MDEQ will formulate its recommendations regarding coverage approval.

Additional details about the proposed project are available by writing or calling the **Air 1 Branch Chief, Environmental Permits Division** at the above Permit Board address and telephone number and on the MDEQ's website at: https://www.mdeq.ms.gov/ensearch/recently-received-general-permit-noi/. This information is also available for review at the following locations during normal business hours:

Mississippi Department of Environmental Quality
Office of Pollution Control
515 East Amite Street,
Jackson, MS 39201
(601) 961-5171

Laurel-Jones County Library
530 Commerce Street
Laurel, MS 39440

Please bring the foregoing to the attention of persons whom you know will be interested.

TABLE OF CONTENTS

EXECUTIVE SUMMARY

Venture Oil & Gas Inc. (Venture) plans to drill a new well for the purposes of oil production. The well (Bryant 33-3 No. 1) will be located in Section 33, Township 6N, Range 11W, in Jones County, Mississippi. The proposed site will include a conventional tank battery, flare, and associated well pad activities. Based on engineering estimates, the maximum production rates are estimated to be up to 350 thousand cubic feet (MCF) of gas produced per day and 350 barrels (bbl) of oil produced per day, along with 10 bbl/day of produced water.

A pipeline outlet does not exist for the gas, therefore, Venture will flare all gas streams, including gas off of the separators, the storage tank emissions and the gas produced by the heater treater. Venture will collect produced water into a 400-bbl water tank prior to offsite transport to a disposal well. Oil will be collected into two (2) 400-bbl oil storage tanks before being trucked to market. Venture is requesting a federally enforceable requirement for flaring of tank emissions. Emissions associated with truck loading will be vented to the atmosphere. Venture may also operate various small chemical storage vessels, including totes and drums, which are typically associated with well pad activities. Venture intends to install and operate a natural gas fueled engine if/when a pumping unit is required for production from the well. The engine will be classified as "existing" under 40 CFR 63, Subpart ZZZZ.

Consequently, Venture is submitting the attached Notice of Intent (NOI) and associated information for issuance of coverage under the Oil Production General Permit. Based on the facility's potential to emit, the facility's uncontrolled potential emissions of Volatile Organic Compounds (VOC), n-hexane, and total HAPs exceed the threshold limits to be classified as a True Minor Source. Therefore, Venture proposes to restrict facility operations such that the flare is operated at all times during gas venting. Combustion of produced gas from the well, process gas from the heater treater, and gas off of the oil and water storage tanks will ensure VOC emissions from the facility do not exceed the Air Title V Major Source threshold of 100 tons per year and the General permit limit of 95 tons per year. Venture will monitor the volume of gas flared, except that the volume of gas from the tanks will be calculated using an approved methodology. Venture will calculate corresponding monthly VOC emissions due to flaring of gas from all sources. A flow meter will be used to measure monthly flow of produced gas to the flare. Monthly oil production records and E&P TANKS software will be utilized to calculate emissions from the storage tanks to the flare. Emissions calculations will be maintained on a monthly and rolling, consecutive 12-month basis to ensure compliance with permitted emissions thresholds.

Also included with the NOI are associated maps and figures. Detailed air emissions calculations are provided in Appendix A, and pertinent backup documentation is provided in Appendix B.

Venture is also requesting pre-permit construction approval so that construction of the facility may commence prior to issuance of permit coverage.

NOTICE OF INTENT (NOI) FORMS

December 2019

MDEQ NOTICE OF INTENT FOR COVERAGE UNDER THE OIL PRODUCTION GENERAL PERMIT TO CONSTRUCT/OPERATE AIR EMISSIONS EQUIPMENT AT A SYNTHETIC MINOR SOURCE

Facility (Agency Interest) Information | **Section OPGP - A**

1. Name, Address, and Location of Facility

A. Owner/Company Name: Venture Oil & Gas Inc.

B. Facility Name (*if different than A. above)* : Venture Bryant 33-3 No. 1 Facility

C. Facility Air Permit/Coverage No. *(if known)* :

D. Agency Interest No. *(if known)* :

E. Physical Address

1. Street Address: Field Road off of Ovett-Petal Road
2. City: Ovett
3. State: MS
4. County: Jones
5. Zip Code: 39464
6. Telephone No.: 601-518-0622
7. Fax No.:
8. Are facility records kept at this location? ☐ Yes ☑ No. Please complete Item 10.

F. Mailing Address

1. Street Address or P.O. Box: 207 South 13th Avenue
2. City: Laurel
3. State: MS
4. Zip Code: 39440

G. Latitude/Longitude Data

1. Collection Point (*check one*):
   ☐ Site Entrance ☑ Other: Well head
2. Method of Collection (*check one*):
   ☑ GPS Specify coordinate system (NAD 83, etc.) NAD 83
   ☑ Map Interpolation (Google Earth, etc.) ☐ Other:
3. Latitude (*degrees/minutes/seconds)* : 31/26/43.4N
4. Longitude (*degrees/minutes/seconds*): 89/6/30.6
5. Elevation (*feet*): 249

H. SIC Code: 1311

2. Name and Address of Facility Contact

A. Name: Jarvis Hensley Title: VP-Operations

B. Mailing Address

1. Street Address or P.O. Box: 140 Mayfair road, Suite 900
2. City: hattiesburg
3. State: MS
4. Zip Code: 39402
5. Fax No.: 601-450-4448
6. Telephone No.: 601-518-0622
7. Email: jarvish@venture-inc.com

MDEQ NOTICE OF INTENT FOR COVERAGE UNDER THE OIL PRODUCTION GENERAL PERMIT TO CONSTRUCT/OPERATE AIR EMISSIONS EQUIPMENT AT A SYNTHETIC MINOR SOURCE

Facility (Agency Interest) Information | **Section OPGP - A**

3. Name and Address of Air Contact (*if different from Facility Contact*)

A. Name: Bud Dial Title: HSE Manager

B. Mailing Address

1. Street Address or P.O. Box: 140 Mayfair road, Suite 900
2. City: hattiesburg 3. State: MS
4. Zip Code: 39402 5. Fax No.: 601-450-4448
6. Telephone No.: 601-428-2257
7. Email: bdial@venture-inc.com

4. Name and Address of Responsible Official for the Facility

The Form must be signed by a Responsible Official as defined in 11 Miss. Admin. Code Pt.2, R. 2.1.C(24).

A. Name: Jarvis Hensley Title: VP-operations

B. Mailing Address

1. Street Address or P.O. Box: 140 Mayfair road, Suite 900
2. City: Hattiesburg 3. State: MS
4. Zip Code: 39402 5. Fax No.: 601-450-4448
6. Telephone No.: 601-518-0622
7. Email: jarvish@venture-inc.com

C. Is the person above a duly authorized representative and not a corporate officer?

☐ Yes ☑ No

If yes, has written notification of such authorization been submitted to MDEQ?

☐ Yes ☐ No ☐ Request for authorization is attached

5. Type of Oil Production Notice of Intent (*Check all that apply*)

☑ Initial Coverage

☐ Re-Coverage for existing Coverage

☐ Modification with Public Notice

☐ Modification without Public Notice

☐ Update Compliance Plan

MDEQ NOTICE OF INTENT FOR COVERAGE UNDER THE OIL PRODUCTION GENERAL PERMIT TO CONSTRUCT/OPERATE AIR EMISSIONS EQUIPMENT AT A SYNTHETIC MINOR SOURCE

Facility (Agency Interest) Information | **Section OPGP - A**

6. Equipment List (*Check all that apply*)

Complete supporting emission calculations must be included for each potential emission unit selected below.

- ☑ Heater Treater. Include a completed Section OPGP-C Form for each unit.
- ☑ Condensation Storage Vessel. Include a completed Section OPGP-E Form for each unit.
- ☑ Water Storage Vessel. Include a completed Section OPGP-E Form for each unit.
- ☑ Internal Combustion Engine. Include a completed Section OPGP-D Form for each unit.
- ☑ Flare. Include a completed Section OPGP-F Form for each unit.
- ☑ Oil Truck Loading (Section OPGP-B Form)
- ☑ Component Fugitive Emissions (Section OPGP-B Form)
- ☐ Other: _____

7. Process/Product Details

Maximum Anticipated Well(s) Production for Faciltiy:

Produced Material	Throughput	Units
Gas	0.35	MMCF/day
Oil	350	barrels/day
Water	10	barrels/day
Other (Specify)		

Maximum Anticipated Throughput for Principal Product(s) (*as applicable*):

Produced Material	Throughput	Units
Flared Gas	0.35	MMCF/day
Oil	350	barrels/day
Water	10	barrels/day
Other (Specify)		MMCF/day

8. Zoning

A. Is the facility (either existing or proposed) located in accordance with any applicable city and/or county zoning ordinances? If no, please explain
Yes

B. Is the facility (either existing or proposed) required to obtain any zoning variance to locate/expand the facility at this site? If yes, please explain.
No

C. Is the required USGS quadrangle map or equivalent attached? ☑ Yes ☐ No

MDEQ NOTICE OF INTENT FOR COVERAGE UNDER THE OIL PRODUCTION GENERAL PERMIT TO CONSTRUCT/OPERATE AIR EMISSIONS EQUIPMENT AT A SYNTHETIC MINOR SOURCE

Facility (Agency Interest) Information | **Section OPGP - A**

9. MS Secretary of State Registration / Certificate of Good Standing

No permit will be issued to a company that is not authorized to conduct business in Mississippi. If the company applying for the permit is a corporation, limited liability company, a partnership or a business trust, the application package should include proof of registration with the Mississippi Secretary of State and/or a copy of the company's Certificate of Good Standing. The name listed on the permit will include the company name as it is registered with the Mississippi Secretary of State.

It should be noted that for an application submitted in accordance with 11 Miss. Admin. Code Pt. 2, R. 2.8.B. to renew a State Permit to Operate or in accordance with 11 Miss. Admin. Code Pt. 2, R. 6.2.A(1)(c). to renew a Title V Permit to be considered timely and complete, the applicant shall be registered and in good standing with the Mississippi Secretary of State to conduct business in Mississippi.

10. Address and Location of Facility Records

Physical Address

1. Street Address: 140 mayfair Road, Suite 900
2. City: Hattiesburg
3. State: MS
4. County: Forrest
5. Zip Code: 39402
6. Telephone No.: 601-518-0622
7. Fax No.: 601-450-4448

MDEQ NOTICE OF INTENT FOR COVERAGE UNDER THE OIL PRODUCTION GENERAL PERMIT TO CONSTRUCT/OPERATE AIR EMISSIONS EQUIPMENT AT A SYNTHETIC MINOR SOURCE

Facility (Agency Interest) Information	Section OPGP - A

11. Certification

The Form must be signed by a Responsible Official as defined in 11 Miss. Admin. Code Pt. 2, R. 2.1.C.(24).

I certify that to the best of my knowledge and belief formed after reasonable inquiry, the statements and information in this application are true, complete, and accurate, and that as a responsible official, my signature shall constitute an agreement that the applicant assumes the responsibility for any alteration, additions, or changes in operation that may be necessary to achieve and maintain compliance with all applicable Rules and Regulations. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

James Hensley

Signature of Responsible Official/DAR

2/16/21

Date

Jarvis Hensley

Printed Name

2/16/21

Date

Section B.1: Maximum Uncontrolled Emissions (under normal operating conditions)

Maximum Uncontrolled Emissions are the emissions at maximum capacity and prior to (in the absence of) pollution control, emission-reducing process equipment, or any other emission reduction. Calculate the hourly emissions using the worst case hourly emissions for each pollutant. For each pollutant, calculate the annual emissions as if the facility were operating at maximum plant capacity without pollution controls for 8760 hours per year, unless otherwise approved by the Department. List Hazardous Air Pollutants (HAP) in Section B.3 and GHGs in Section B.4. Emission Point numbering must be consistent throughout the application package and, for existing emission points, should match any MDEQ ID's in the current permit. Fill all cells in this table with the emission numbers or a "-" symbol. A "-" symbol indicates that emissions of this pollutant are not expected. Emissions > 0.01 TPY must be included. Please do not change the column widths on this table.

Emission Point ID	TSP[1] (PM)		PM-10[1]		PM-2.5[1]		SO_2		NOx		CO		VOC		TRS[2]		Lead		Total HAPs	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
AA-001	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	171.12	749.49	0.00	0.00	0.00	0.00	14.5800	63.8602
AA-001a	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0001	0.0004
AA-002	0.01	0.05	0.02	0.10	0.02	0.10	0.00	0.00	2.70	11.83	4.55	19.91	0.04	0.16	0.00	0.00	0.00	0.00	0.0396	0.1735
AA-003	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.21	0.00	0.00	0.00	0.00	0.0033	0.0143
AA-004	Routed to AA-001																			
AA-005	Routed to AA-001																			
AA-006	Routed to AA-001																			
AA-006a	0.00	0.00	0.00	0.02	0.00	0.02	0.00	0.00	0.05	0.21	0.04	0.18	0.00	0.01	0.00	0.00	0.00	0.00	0.0009	0.0041
AA-007	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.0043	0.0190
AA-008	Routed to AA-001																			
AA-009	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	117.72	13.96	0.00	0.00	0.00	0.00	5.2676	0.2536
AA-010	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.02	0.11	0.02	0.09	0.00	0.01	0.00	0.00	0.00	0.00	0.0005	0.0020
Totals	0.01	0.06	0.03	0.13	0.03	0.13	0.00	0.01	2.78	12.17	4.61	20.18	288.93	763.87	0.00	0.00	0.00	0.00	19.90	64.33

[1] **Condensables:** Include condensable particulate matter emissions in particulate matter calculations for PM-10 and PM-2.5, but not for TSP (PM).

[2] **TRS:** Total reduced sulfur (TRS) is the sum of the sulfur compounds hydrogen sulfide (H_2S), methyl mercaptan (CH_4S), dimethyl sulfide (C_2H_6S), and dimethyl disulfide ($C_2H_6S_2$).

Section B.2: Proposed Allowable Emissions

Proposed Allowable Emissions (Potential to Emit) are those emissions the facility is currently permitted to emit as limited by a specific permit requirement or federal/state standard (e.g., a MACT standard); or the emission rate at which the facility proposes to emit considering emissions control devices, restrictions to operating rates/hours, or other requested permit limits that reduce the maximum emission rates. Emission Point numbering must be consistent throughout the application package and, for existing emission points, should match any MDEQ ID's in the current permit. Fill all cells in this table with the emission numbers or a "-" symbol. A "-" symbol indicates that emissions of this pollutant are not expected. Additional columns may be added if there are regulated pollutants (other than HAPs and GHGs) emitted at the facility.

Emission Point ID	TSP[1]		PM10[1]		PM2.5[1]		SO_2		NOx		CO		VOC		TRS		Lead	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
AA-001	0.03	0.15	0.14	0.61	0.14	0.61	0.000	0.00	1.28	5.60	6.96	30.48	3.42	14.99	0.00	0.00	0.00	0.00
AA-001a	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.00	0.00	0.02	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00
AA-002	0.01	0.05	0.02	0.10	0.02	0.10	0.00	0.00	2.70	11.83	4.55	19.91	0.04	0.16	0.00	0.00	0.00	0.00
AA-003	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.35	0.00	0.00	0.00	0.00
AA-004	Routed to Gas Sales																	
AA-005	Routed to AA-001																	
AA-006	Routed to AA-001																	
AA-006a	0.00	0.00	0.00	0.02	0.00	0.02	0.00	0.00	0.05	0.21	0.04	0.18	0.00	0.01	0.00	0.00	0.00	0.00
AA-007	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00
AA-008	Routed to AA-001																	
AA-009	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00
AA-010	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.02	0.11	0.02	0.09	0.00	0.01	0.00	0.00	0.00	0.00
Totals	0.05	0.21	0.17	0.74	0.17	0.74	0.00	0.01	4.06	17.77	11.57	50.67	3.55	15.54	0.00	0.00	0.00	0.00

[1] **Condensables:** Include condensable particulate matter emissions in particulate matter calculations for PM-10 and PM-2.5, but not for TSP (PM).

[2] **TRS:** Total reduced sulfur (TRS) is the sum of the sulfur compounds hydrogen sulfide (H_2S), methyl mercaptan (CH_4S), dimethyl sulfide (C_2H_6S), and dimethyl disulfide ($C_2H_6S_2$).

Section B.3: Proposed Allowable Hazardous Air Pollutants (HAPs)

In the table below, report the Proposed Allowable Emissions (Potential to Emit) for each HAP from each regulated emission unit if the HAP > 0.0001 tpy. Each facility-wide Individual HAP total and the facility-wide Total HAPs shall be the sum of all HAP sources. Use the HAP nomenclature as it appears in the Instructions. Emission Point numbering must be consistent throughout the application package and, for existing emission points, should match any MDEQ ID's in the current permit. For each HAP listed, fill all cells in this table with the emission numbers or a "-" symbol. A "-" symbol indicates that emissions of this pollutant are not expected or the pollutant is emitted in a quantity less than the threshold amounts described above. Additional columns may be added as necessary to address each HAP.

Emission Point ID	Total HAPs		1,1,2,2 - tetrachloroethane		1,1,2-trichloroethane		1,3-butadiene		1,3-dichloropropene		acetaldehyde		acrolein		benzene		carbon tetrachloride	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
AA-001	0.3619	1.2772	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0344	0.1506	<0.0001	<0.0001
AA-001a	0.0001	0.0004	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
AA-002	0.0396	0.1735	<0.0001	0.0001	<0.0001	0.0001	0.0008	0.0035	<0.0001	0.0001	0.0034	0.0149	0.0032	0.0141	0.0019	0.0085	<0.0001	0.0001
AA-003	0.0036	0.0159	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0006	0.0027	<0.0001	<0.0001
AA-004	Routed to AA-001																	
AA-005	Routed to AA-001																	
AA-006	Routed to AA-001																	
AA-006a	0.0009	0.0041	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
AA-007	0.0043	0.0190	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
AA-008	Routed to AA-001																	
AA-009	5.2676	0.0020	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.5648	0.0670	<0.0001	<0.0001
AA-010	0.0005	0.0020	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Totals:	5.6786	1.4942	0.0000	0.0001	0.0000	0.0001	0.0008	0.0035	0.0000	0.0001	0.0034	0.0149	0.0032	0.0141	0.6018	0.2288	0.0000	0.0001

Section B.3: Proposed Allowable Hazardous Air Pollutants (HAPs)

In the table below, report the Proposed Allowable Emissions (Potential to Emit) for each HAP from each regulated emission unit if the HAP > 0.0001 tpy. Each facility-wide Individual HAP total and the facility-wide Total HAPs shall be the sum of all HAP sources. Use the HAP nomenclature as it appears in the Instructions. Emission Point numbering must be consistent throughout the application package and, for existing emission points, should match any MDEQ ID's in the current permit. For each HAP listed, fill all cells in this table with the emission numbers or a "-" symbol. A "-" symbol indicates that emissions of this pollutant are not expected or the pollutant is emitted in a quantity less than the threshold amounts described above. Additional columns may be added as necessary to address each HAP.

Emission Point ID	Total HAPs		chlorobenzene		chloroform		ethylbenzene		ethylene dibromide		formaldehyde		methanol		methylene chloride		naphthalene	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
AA-001			<0.0001	<0.0001	<0.0001	<0.0001	0.0014	0.0063	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
AA-001a			<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
AA-002			<0.0001	0.0001	<0.0001	0.0001	<0.0001	0.0001	<0.0001	0.0001	0.0250	0.1097	0.0037	0.0164	0.0001	0.0002	0.0001	0.0005
AA-003			<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
AA-004	Routed to AA-001																<0.0001	<0.0001
AA-005	Routed to AA-001																<0.0001	<0.0001
AA-006	Routed to AA-001																<0.0001	<0.0001
AA-006a			<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0000	0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
AA-007			<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
AA-008	Routed to AA-001																<0.0001	<0.0001
AA-009			<0.0001	<0.0001	<0.0001	<0.0001	0.0216	0.0026	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
AA-010			<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Totals:	0.0000	0.0000	0.0000	0.0001	0.0000	0.0001	0.0230	0.0091	0.0000	0.0001	0.0251	0.1099	0.0037	0.0164	0.0001	0.0002	0.0001	0.0005

Section B.3: Proposed Allowable Hazardous Air Pollutants (HAPs)

In the table below, report the Proposed Allowable Emissions (Potential to Emit) for each HAP from each regulated emission unit if the HAP > 0.0001 tpy. Each facility-wide Individual HAP total and the facility-wide Total HAPs shall be the sum of all HAP sources. Use the HAP nomenclature as it appears in the Instructions. Emission Point numbering must be consistent throughout the application package and, for existing emission points, should match any MDEQ ID's in the current permit. For each HAP listed, fill all cells in this table with the emission numbers or a "-" symbol. A "-" symbol indicates that emissions of this pollutant are not expected or the pollutant is emitted in a quantity less than the threshold amounts described above. Additional columns may be added as necessary to address each HAP.

Emission Point ID	Total HAPs		PAH		styrene		toluene		vinyl chloride		xylene		hexane		POM			
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
AA-001			<0.0001	<0.0001	<0.0001	<0.0001	0.0206	0.0901	<0.0001	<0.0001	0.0156	0.0685	0.2196	0.9617	<0.0001	<0.0001		
AA-001a			<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	0.0004	<0.0001	<0.0001		
AA-002			0.0002	0.0008	<0.0001	0.0001	0.0007	0.0030	<0.0001	<0.0001	0.0002	0.0010	<0.0001	<0.0001	<0.0001	<0.0001		
AA-003			<0.0001	<0.0001	<0.0001	<0.0001	0.0002	0.0010	<0.0001	<0.0001	0.0002	0.0009	0.0040	0.0175	<0.0001	<0.0001		
AA-004	Routed to AA-001																	
AA-005	Routed to AA-001																	
AA-006	Routed to AA-001																	
AA-006a			<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0009	0.0039	0.0000	0.0001		
AA-007			<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001		
AA-008	Routed to AA-001																	
AA-009			<0.0001	<0.0001	<0.0001	<0.0001	0.5593	0.0663	<0.0001	<0.0001	0.2946	0.0349	3.8273	0.4540	<0.0001	<0.0001		
AA-010			<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0004	0.0019	<0.0001	<0.0001		
Totals:	0.0000	0.0000	0.0002	0.0008	0.0000	0.0001	0.5808	0.1604	0.0000	0.0000	0.3107	0.1054	4.0523	1.4394	0.0000	0.0001		

Section B.4: Greenhouse Gas Emissions

Applicants must report potential emission rates in SHORT TONS per year, as opposed to metric tons required by Part 98. Emission Point numbering must be consistent throughout the application package and, for existing emission points, should match any MDEQ ID's in the current permit.

		CO_2 (non-biogenic) ton/yr	CO_2 (biogenic)[2] ton/yr	N_2O ton/yr	CH_4 ton/yr	SF_6 ton/yr	PFC/HFC[3] ton/yr					Total GHG Mass Basis ton/yr[5]	Total CO_2e ton/yr[6]
Emission Point ID	**GWPs [1]**	**1**	**1**	**298**	**25**	**22,800**	**footnote 4**						
AA-001	**mass GHG**	8807.71	0	0.02	39.35	0	0					8847.08	N/A
	CO2e	8807.71	0	4.71	983.85	0	0					N/A	9796.27
AA-001a	**mass GHG**	25.59	0	0.00	0.00	0	0					25.59	N/A
	CO2e	25.59	0	0.01	0.01	0	0					N/A	25.62
AA-002	**mass GHG**	624.23	0	0.00	0.01	0	0					624.24	N/A
	CO2e	624.23	0	0.35	0.29	0	0					N/A	624.88
AA-003	**mass GHG**	0.02	0	0.00	0.24	0	0					0.25	N/A
	CO2e	0.02	0	0.00	5.90	0	0					N/A	5.92
AA-004	**mass GHG**	0	0	0	0	0	0					0.00	N/A
	CO2e	0	0	0	0	0	0					N/A	0.00
AA-005	**mass GHG**	0	0	0	0	0	0					0.00	N/A
	CO2e	0	0	0	0	0	0					N/A	0.00
AA-006	**mass GHG**	0	0	0	0	0	0					0.00	N/A
	CO_2e	0	0	0	0	0	0					N/A	0.00
AA-006a	**mass GHG**	255.45	0	0.00	0.00	0	0					255.46	N/A
	CO_2e	255.45	0	0.14	0.12	0	0					N/A	255.71
AA-007	**mass GHG**	0	0	0	0	0	0					0.00	N/A
	CO_2e	0	0	0	0	0	0					N/A	0.00
AA-008	**mass GHG**	0	0	0	0	0	0					0.00	N/A
	CO_2e	0	0	0	0	0	0					N/A	0.00
AA-009	**mass GHG**	0.03	0	0	0.18	0	0					0.21	N/A
	CO_2e	0.03	0	0	4.50	0	0					N/A	4.53
AA-010	**mass GHG**	128	0	0	0	0	0						
	CO_2e	128	0	0	0	0	0						
FACILITY TOTAL	**mass GHG**	9840.76	0	0.02	39.79	0.00	0.00					9752.84	N/A
	CO_2e	9840.76	0	5.29	994.74	0.00	0.00					N/A	10840.79

[1] **GWP** (Global Warming Potential): Applicants must use the most current GWPs codified in Table A-1 of 40 CFR part 98. GWPs are subject to change, therefore, applicants need to check 40 CFR 98 to confirm GWP values.

[2] Biogenic CO2 is defined as carbon dioxide emissions resulting from the combustion or decomposition of non-fossilized and biodegradable organic material originating from plants, animals, or micro-organisms.

[3] For **HFCs** or **PFCs** describe the specific HFC or PFC compound and use a separate column for each individual compound.

[4] For each new compound, enter the appropriate GWP for each HFC or PFC compound from Table A-1 in 40 CFR 98.

[5] Greenhouse gas emissions on a **mass basis** is the ton per year greenhouse gas emission before adjustment with its GWP. Do not include biogenic CO_2 in this total.

[6] **CO_2e** means Carbon Dioxide Equivalent and is calculated by multiplying the TPY mass emissions of the greenhouse gas by its GWP. Do not include biogenic CO_2e in this total.

Section B.5: Stack Parameters and Exit Conditions

Emission Point numbering must be consistent throughout the application package and, for existing emission points, should match any MDEQ ID's in the current permit.

Emission Point ID	Orientation (H-Horizontal V=Vertical)	Rain Caps (Yes or No)	Height Above Ground (ft)	Base Elevation (ft)	Exit Temp. (^{o}F)	Inside Diameter or Dimensions (ft)	Velocity (ft/sec)	Moisture by Volume (%)	Geographic Position (degrees/minutes/seconds)	
									Latitude	Longitude
AA-001	H	No	40	415	1800	0.50	100	TBD	31/26/3.2	89/6/29.6
AA-002	H	Yes	7	415	TBD	TBD	TBD	TBD	31/26/3.2	89/6/29.6
AA-003	N/A-Fugitives	N/A	N/A	415	N/A	N/A	N/A	N/A	31/26/3.2	89/6/29.6
AA-004	N/A-Separator	N/A	N/A	415	N/A	N/A	N/A	N/A	31/26/3.2	89/6/29.6
AA-005	N/A-Separator	N/A	N/A	415	N/A	N/A	N/A	N/A	31/26/3.2	89/6/29.6
AA-006	N/A-Heater Treater	N/A	N/A	415	N/A	TBD	TBD	N/A	31/26/3.2	89/6/29.6
AA-006a	V	Yes	25	415	TBD	TBD	TBD	20	31/26/3.2	89/6/29.6
AA-007	N/A-Tanks	N/A	N/A	415	N/A	N/A	N/A	N/A	31/26/3.2	89/6/29.6
AA-008	N/A-Tanks	N/A	N/A	415	N/A	N/A	N/A	N/A	31/26/3.2	89/6/29.6
AA-009	N/A-Truck Loading	N/A	N/A	415	N/A	N/A	N/A	N/A	31/26/3.2	89/6/29.6
AA-010	V	Yes	8	416	TBD	TBD	TBD	20	31/26/3.2	89/6/29.6

[1] A WAAS-capable GPS receiver should be used and in the WGS84 or NAD83 coordinate system.

MDEQ NOTICE OF INTENT FOR COVERAGE UNDER THE OIL PRODUCTION GENERAL PERMIT TO CONSTRUCT/OPERATE AIR EMISSIONS EQUIPMENT AT A SYNTHETIC MINOR SOURCE

Fuel Burning Equipment – External Combustion Sources

Section OPGP-C

1. Emission Point Description

A. Emission Point Designation (Ref. No.): AA-006A

B. Equipment Description: One (1) Heater Treater, with a 0.5 MMBTUH burner.

C. Manufacturer: Custom D. Date of Manufacture and No.: 2019

E. Maximum Heat Input (higher heating value): 0.5 MMBtu/hr F. Nominal Heat Input Capacity: 0.5 MMBtu/hr

G. Use: ☐ Line Heater ☒ Heater Treater ☐ TEG Burner

☐ Space Heat ☐ Process Heat ☐ Other (describe): _____

H. Heat Mechanism: ☒ Direct ☐ Indirect

I. Burner Type (e.g., forced draft, natural draft, etc.): Forced Draft

J. Additional Design Controls (e.g., FGR, etc.): N/A

K. Status: ☐ Operating ☒ Proposed ☐ Under Construction

2. Fuel Type

Complete the following table, identifying each type of fuel and the amount used. Specify the units for heat content, hourly usage, and yearly usage.

FUEL TYPE	HEAT CONTENT	% SULFUR	% ASH	MAXIMUM HOURLY USAGE	MAXIMUM YEARLY USAGE
Field Gas	1,000 BTU/CF	< 0.001	< 0.001	490	4.3 MMCF

Please list any fuel components that are hazardous air pollutants and the percentage in the fuel:
No analyzed HAP's have been identified as components in the fuel; however, AP-42, Tables 1.4-2, 1.4-3, and 1.4-4 project certain HAP's to be potentially present in exhaust vapors.

MDEQ NOTICE OF INTENT FOR COVERAGE UNDER THE OIL PRODUCTION GENERAL PERMIT TO CONSTRUCT/OPERATE AIR EMISSIONS EQUIPMENT AT A SYNTHETIC MINOR SOURCE

Fuel Burning Equipment – External Combustion Sources

Section OPGP-C

1. Emission Point Description

A. Emission Point Designation (Ref. No.): AA-010

B. Equipment Description: Line heater

C. Manufacturer: custom D. Date of Manufacture and No.: 2020

E. Maximum Heat Input (higher heating value): 0.25 MMBtu/hr F. Nominal Heat Input Capacity: 0.25 MMBtu/hr

G. Use: ☒ Line Heater ☐ Heater Treater ☐ TEG Burner

☐ Space Heat ☐ Process Heat ☐ Other (describe): _____

H. Heat Mechanism: ☐ Direct ☒ Indirect

I. Burner Type (e.g., forced draft, natural draft, etc.): Natural draft

J. Additional Design Controls (e.g., FGR, etc.): none

K. Status: ☐ Operating ☒ Proposed ☐ Under Construction

2. Fuel Type

Complete the following table, identifying each type of fuel and the amount used. Specify the units for heat content, hourly usage, and yearly usage.

FUEL TYPE	HEAT CONTENT	% SULFUR	% ASH	MAXIMUM HOURLY USAGE	MAXIMUM YEARLY USAGE
Field gas	1000	<0.001	<0.001	245	2.15 MMCF

Please list any fuel components that are hazardous air pollutants and the percentage in the fuel:

MDEQ NOTICE OF INTENT FOR COVERAGE UNDER THE OIL PRODUCTION GENERAL PERMIT TO CONSTRUCT/OPERATE AIR EMISSIONS EQUIPMENT AT A SYNTHETIC MINOR SOURCE

Fuel Burning Equipment – Internal Combustion Engines

Section OPGP- D

1. Emission Point Description

A. Emission Point Designation (Ref. No.): AA-002

B. Equipment Description (including serial number): 165 HP RICE for power oil pump

C. Manufacturer: TBD

D. Date of Manufacture and Model No.: Pre- 2006

E. Maximum Heat Input (higher heating value): 1.22 MMBtu/hr

F. Rated Power: 165 hp 123 kW

G. Is the engine an EPA-certified engine? No Yes or No

H. Use: ☒ Non-emergency ☐ Emergency

I. Displacement per cylinder: ☒ < 10 Liters ☐ 10 to <30 Liters ☐ ≥ 30 Liters

J. Engine Ignition Type: ☒ Spark Ignition ☐ Compression Ignition

K. Engine Burn Type: ☒ 4-stroke ☐ 2-stroke ☒ Rich Burn ☐ Lean Burn
(check all that apply)

L. Status: ☐ Operating ☒ Proposed ☐ Under Construction

M. Date of construction, reconstruction, or most recent modification (for existing sources) or date of anticipated construction: Pre- 2006

2. Fuel Type

Complete the following table, identifying each type of fuel and the amount used. Specify units of measurement.

FUEL TYPE	HEAT CONTENT	% SULFUR	% ASH	MAXIMUM HOURLY USAGE	MAXIMUM YEARLY USAGE
Nat. Gas/propane	1020 BTU/Ft3	0.00004	0.0	1.20 MCF	10,478

MDEQ NOTICE OF INTENT FOR COVERAGE UNDER THE OIL PRODUCTION GENERAL PERMIT TO CONSTRUCT/OPERATE AIR EMISSIONS EQUIPMENT AT A SYNTHETIC MINOR SOURCE

Flare | Section OPGP-F

1. Equipment Description

A. Emission Point Designation (Ref. No.): AA-001

B. Equipment Description (include the process(es) that the flare controls emissions from): The flare is utilized to combust produced gas , and to combust emissions from the heater treater and oil and water storage tanks.

C. Manufacturer: Custom D. Model: Custom

E. Status: ☐ Operating ☒ Proposed ☐ Under Construction

F. ☒ Requesting a federally enforceable condition to route tank emissions to the flare.

2. System Data

A. Efficiency: 98 % Controlling the following pollutant(s): VOC
Efficiency: 98 % Controlling the following pollutant(s): HAP
Reason for different efficiency: _____

B. Flare Data (if applicable):

1. Flare type: ☒ Non-assisted ☐ Steam-assisted ☐ Air-assisted ☐ Other: _____
2. Net heating value of combusted gas: Est. 1,000 Btu/scf
3. Design exit velocity: N/A ft/sec
4. System: ☒ Auto-ignitor ☐ Continuous Flame
5. Is the presence of a flare pilot flame monitored? ☒ Yes ☐ No
   If yes, please describe the monitoring: thermocouple
6. Is the auto-ignitor system monitored? ☒ Yes ☐ No
   If yes, please describe the monitoring: Daily inspections

MDEQ NOTICE OF INTENT FOR COVERAGE UNDER THE OIL PRODUCTION GENERAL PERMIT TO CONSTRUCT/OPERATE AIR EMISSIONS EQUIPMENT AT A SYNTHETIC MINOR SOURCE

Tank Summary | Section OPGP-E

1. Emission Point Description

A. Emission Point Designation (Ref. No.): AA-008 (Oil Storage Tank No. 1)

B. Product(s) Stored: Oil

C. Status: ☐ Operating ☒ Proposed ☐ Under Construction

D. Date of construction, reconstruction, or most recent modification (for existing sources) or date of anticipated construction: 2021

2. Tank Data

A. Tank Specifications:

1.	Design capacity	16,800	gallons		
2.	True vapor pressure at storage temperature:	11.55	psia @	ambient	°F
3.	Maximum true vapor pressure (as defined in §60.111b)	11.55	psia @	ambient	°F
4.	Reid vapor pressure at storage temperature:	11.55	psia @	ambient	°F
5.	Density of product at storage temperature:	7.2	lb/gal		
6.	Molecular weight of product vapor at storage temp.	48	lb/lbmol		

B. Tank Orientation: ☒ Vertical ☐ Horizontal

C. Type of Tank:

☒ Fixed Roof ☐ External Floating Roof ☐ Internal Floating Roof

☐ Pressure ☐ Variable Vapor Space ☐ Other: _____

D. Is the tank equipped with a Vapor Recovery System and/or flare? ☐ Yes ☒ No

If yes, describe below and include the efficiency of each.

The tanks will be vented to the flare. If a VRU is necessary, it will be installed.

E. Closest City:

☒ Jackson, MS ☐ Meridian, MS ☐ Tupelo, MS ☐ Mobile, AL

☐ New Orleans, LA ☐ Memphis, TN ☐ Baton Rouge, LA

F. Is an E&P or similar report described in Condition 5.4(5) of the General Permit included for this tank in the Notice of Intent? ☒ Yes ☐ No

MDEQ NOTICE OF INTENT FOR COVERAGE UNDER THE OIL PRODUCTION GENERAL PERMIT TO CONSTRUCT/OPERATE AIR EMISSIONS EQUIPMENT AT A SYNTHETIC MINOR SOURCE

Tank Summary | Section OPGP-E

3. Horizontal Fixed Roof Tank

A. Shell Length: _____ feet
B. Shell Diameter: _____ feet
C. Working Volume: _____ gal
D. Maximum Throughput: _____ gal/yr
E. Is the tank heated? ☐ Yes ☐ No
F. Is the tank underground? ☐ Yes ☐ No
G. Shell Color/Shade:
☐ ☐ Aluminum/Specular ☐ Aluminum/Diffuse
☐ Gray/Light ☐ Gray/Medium ☐ Red/Primer

H. Shell Condition: ☐ Good ☐ Poor

4. Vertical Fixed Roof Tank

A. Dimensions:
1. Shell Height: 20 feet
2. Shell Diameter: 12 feet
3. Maximum Liquid Height: 19 feet
4. Average Liquid Height: ~10 feet
5. Working Volume: 16,800 gal
6. Turnovers per year: 91.25 (est. for each oil storage tank)
7. Maximum throughput: 3.066 MMgal/yr (for entire tank battery)
8. Is the tank heated? ☐ Yes ☒ No

B. Shell Characteristics:
1. Shell Color/Shade:
☐ White/White ☒ Aluminum/Specular ☐ Aluminum/Diffuse
☐ Gray/Light ☐ Gray/Medium ☐ Red/Primer

2. Shell Condition: ☒ Good ☐ Poor

C. Roof Characteristics:
1. Roof Color/Shade:
☐ White/White ☒ Aluminum/Specular ☐ Aluminum/Diffuse
☐ Gray/Light ☐ Gray/Medium ☐ Red/Primer

2. Roof Condition: ☒ Good ☐ Poor

3. Type: ☐ Cone ☒ Dome

4. Height: 1 feet

MDEQ NOTICE OF INTENT FOR COVERAGE UNDER THE OIL PRODUCTION GENERAL PERMIT TO CONSTRUCT/OPERATE AIR EMISSIONS EQUIPMENT AT A SYNTHETIC MINOR SOURCE

Tank Summary | Section OPGP-E

5. Internal Floating Roof Tank

A. Tank Characteristics:

1. Diameter: _____ feet
2. Tank Volume: _____ gal
3. Turnovers per year: _____
4. Maximum Throughput: _____ gal/yr
5. Number of Columns: _____
6. Self-Supporting Roof? ☐ Yes ☐ No
7. Effective Column Diameter:
   ☐ 9"x7" Built-up Column ☐ 8" Diameter Pipe ☐ Unknown
8. Internal Shell Condition:
   ☐ Light Rust ☐ Dense Rust ☐ Gunite Lining
9. External Shell Color/Shade:
   ☐ White/White ☐ Aluminum/Specular ☐ Aluminum/Diffuse
   ☐ Gray/Light ☐ Gray/Medium ☐ Red/Primer
10. External Shell Condition: ☐ Good ☐ Poor
11. Roof Color/Shade:
    ☐ White/White ☐ Aluminum/Specular ☐ Aluminum/Diffuse
    ☐ Gray/Light ☐ Gray/Medium ☐ Red/Primer
12. Roof Condition: ☐ Good ☐ Poor

B. Rim Seal System:

1. Primary Seal: ☐ Mechanical Shoe ☐ Liquid-mounted ☐ Vapor-mounted
2. Secondary Seal: ☐ Shoe-mounted ☐ Rim-mounted ☐ None

C. Deck Characteristics:

1. Deck Type: ☐ Bolted ☐ Welded
2. Deck Fitting Category: ☐ Typical ☐ Detail

6. External Floating Roof Tank

A. Tank Characteristics

1. Diameter: _____ feet
2. Tank Volume: _____ gal
3. Turnovers per year: _____
4. Maximum Throughput: _____ gal/yr
5. Internal Shell Condition:
   ☐ Light Rust ☐ Dense Rust ☐ Gunite Lining

MDEQ NOTICE OF INTENT FOR COVERAGE UNDER THE OIL PRODUCTION GENERAL PERMIT TO CONSTRUCT/OPERATE AIR EMISSIONS EQUIPMENT AT A SYNTHETIC MINOR SOURCE

Tank Summary | Section OPGP-E

6. External Floating Roof Tank (continued)

A. Tank Characteristics (continued):

6. Paint Color/Shade:

☐ White/White ☐ Aluminum/Specular ☐ Aluminum/Diffuse

☐ Gray/Light ☐ Gray/Medium ☐ Red/Primer

7. Paint Condition: ☐ Good ☐ Poor

B. Roof Characteristics

1. Roof Type: ☐ Pontoon ☐ Double Deck

2. Roof Fitting Category: ☐ Typical ☐ Detail

C. Tank Construction and Rim-Seal System:

1. Tank Construction: ☐ Welded ☐ Riveted

2. Primary Seal:

☐ Mechanical Shoe ☐ Liquid-mounted ☐ Vapor-mounted

3. Secondary Seal

☐ None ☐ Shoe-mounted ☐ Rim-mounted ☐ Weather shield

7. Pollutant Emissions

A. Fixed Roof Emissions:

Pollutant[1]	Working Loss (tons/yr)	Breathing Loss (tons/yr)	Total Emissions (tons/yr)
VOC / HAP	No emissions occur from the tanks since gasses are routed to the flare.		

B. Floating Roof Emissions:

Pollutant[1]	Rim Seal Loss (tons/yr)	Withdrawal Loss (tons/yr)	Deck Fitting Loss (tons/yr)	Deck Seam Loss (tons/yr)	Landing Loss[2] (tons/yr)	Total Emissions (tons/yr)

1. All regulated air pollutants including hazardous air pollutants emitted from this source should be listed in accordance with the OGP Application Instructions. A list of regulated air pollutants and a link to EPA's list of hazardous air pollutants is provided in the OGP Application Instructions.

2. Landing losses should be determined according to the procedures in *Organic Liquid Storage Tanks* chapter of EPA's AP-42 emission factors. If the roof is not landed at least once/yr, enter "NA".

MDEQ NOTICE OF INTENT FOR COVERAGE UNDER THE OIL PRODUCTION GENERAL PERMIT TO CONSTRUCT/OPERATE AIR EMISSIONS EQUIPMENT AT A SYNTHETIC MINOR SOURCE

Tank Summary | Section OPGP-E

1. Emission Point Description

A. Emission Point Designation (Ref. No.): AA-008 (Oil Storage Tank No. 2)

B. Product(s) Stored: Oil

C. Status: ☐ Operating ☒ Proposed ☐ Under Construction

D. Date of construction, reconstruction, or most recent modification (for existing sources) or date of anticipated construction: 2021

2. Tank Data

A. Tank Specifications:

1.	Design capacity	16,800	gallons		
2.	True vapor pressure at storage temperature:	11.55	psia @	ambient	°F
3.	Maximum true vapor pressure (as defined in §60.111b)	11.55	psia @	ambient	°F
4.	Reid vapor pressure at storage temperature:	11.55	psia @	ambient	°F
5.	Density of product at storage temperature:	7.2	lb/gal		
6.	Molecular weight of product vapor at storage temp.	48	lb/lbmol		

B. Tank Orientation: ☒ Vertical ☐ Horizontal

C. Type of Tank:

☒ Fixed Roof ☐ External Floating Roof ☐ Internal Floating Roof

☐ Pressure ☐ Variable Vapor Space ☐ Other: _____

D. Is the tank equipped with a Vapor Recovery System and/or flare? ☐ Yes ☒ No

If yes, describe below and include the efficiency of each.

The tanks will be vented to the flare. If a VRU is necessary, it will be installed.

E. Closest City:

☒ Jackson, MS ☐ Meridian, MS ☐ Tupelo, MS ☐ Mobile, AL

☐ New Orleans, LA ☐ Memphis, TN ☐ Baton Rouge, LA

F. Is an E&P or similar report described in Condition 5.4(5) of the General Permit included for this tank in the Notice of Intent? ☒ Yes ☐ No

MDEQ NOTICE OF INTENT FOR COVERAGE UNDER THE OIL PRODUCTION GENERAL PERMIT TO CONSTRUCT/OPERATE AIR EMISSIONS EQUIPMENT AT A SYNTHETIC MINOR SOURCE

Tank Summary | Section OPGP-E

3. Horizontal Fixed Roof Tank

A. Shell Length: _____ feet
B. Shell Diameter: _____ feet
C. Working Volume: _____ gal
D. Maximum Throughput: _____ gal/yr
E. Is the tank heated? ☐ Yes ☐ No
F. Is the tank underground? ☐ Yes ☐ No
G. Shell Color/Shade:
☐ ☐ Aluminum/Specular ☐ Aluminum/Diffuse
☐ Gray/Light ☐ Gray/Medium ☐ Red/Primer

H. Shell Condition: ☐ Good ☐ Poor

4. Vertical Fixed Roof Tank

A. Dimensions:
1. Shell Height: 20 feet
2. Shell Diameter: 12 feet
3. Maximum Liquid Height: 19 feet
4. Average Liquid Height: ~10 feet
5. Working Volume: 16,800 gal
6. Turnovers per year: 91.25 (est. for each oil storage tank)
7. Maximum throughput: 3.066 MMgal/yr (for entire tank battery)
8. Is the tank heated? ☐ Yes ☒ No

B. Shell Characteristics:
1. Shell Color/Shade:
☐ White/White ☒ Aluminum/Specular ☐ Aluminum/Diffuse
☐ Gray/Light ☐ Gray/Medium ☐ Red/Primer

2. Shell Condition: ☒ Good ☐ Poor

C. Roof Characteristics:
1. Roof Color/Shade:
☐ White/White ☒ Aluminum/Specular ☐ Aluminum/Diffuse
☐ Gray/Light ☐ Gray/Medium ☐ Red/Primer

2. Roof Condition: ☒ Good ☐ Poor

3. Type: ☐ Cone ☒ Dome

4. Height: 1 feet

MDEQ NOTICE OF INTENT FOR COVERAGE UNDER THE OIL PRODUCTION GENERAL PERMIT TO CONSTRUCT/OPERATE AIR EMISSIONS EQUIPMENT AT A SYNTHETIC MINOR SOURCE

Tank Summary | Section OPGP-E

5. Internal Floating Roof Tank

A. Tank Characteristics:

1. Diameter: _____ feet
2. Tank Volume: _____ gal
3. Turnovers per year: _____
4. Maximum Throughput: _____ gal/yr
5. Number of Columns: _____
6. Self-Supporting Roof? ☐ Yes ☐ No
7. Effective Column Diameter:
   ☐ 9"x7" Built-up Column ☐ 8" Diameter Pipe ☐ Unknown
8. Internal Shell Condition:
   ☐ Light Rust ☐ Dense Rust ☐ Gunite Lining
9. External Shell Color/Shade:
   ☐ White/White ☐ Aluminum/Specular ☐ Aluminum/Diffuse
   ☐ Gray/Light ☐ Gray/Medium ☐ Red/Primer
10. External Shell Condition: ☐ Good ☐ Poor
11. Roof Color/Shade:
    ☐ White/White ☐ Aluminum/Specular ☐ Aluminum/Diffuse
    ☐ Gray/Light ☐ Gray/Medium ☐ Red/Primer
12. Roof Condition: ☐ Good ☐ Poor

B. Rim Seal System:

1. Primary Seal: ☐ Mechanical Shoe ☐ Liquid-mounted ☐ Vapor-mounted
2. Secondary Seal: ☐ Shoe-mounted ☐ Rim-mounted ☐ None

C. Deck Characteristics:

1. Deck Type: ☐ Bolted ☐ Welded
2. Deck Fitting Category: ☐ Typical ☐ Detail

6. External Floating Roof Tank

A. Tank Characteristics

1. Diameter: _____ feet
2. Tank Volume: _____ gal
3. Turnovers per year: _____
4. Maximum Throughput: _____ gal/yr
5. Internal Shell Condition:
   ☐ Light Rust ☐ Dense Rust ☐ Gunite Lining

MDEQ NOTICE OF INTENT FOR COVERAGE UNDER THE OIL PRODUCTION GENERAL PERMIT TO CONSTRUCT/OPERATE AIR EMISSIONS EQUIPMENT AT A SYNTHETIC MINOR SOURCE

Tank Summary | Section OPGP-E

6. External Floating Roof Tank (continued)

A. Tank Characteristics (continued):

6. Paint Color/Shade:

☐ White/White ☐ Aluminum/Specular ☐ Aluminum/Diffuse

☐ Gray/Light ☐ Gray/Medium ☐ Red/Primer

7. Paint Condition: ☐ Good ☐ Poor

B. Roof Characteristics

1. Roof Type: ☐ Pontoon ☐ Double Deck

2. Roof Fitting Category: ☐ Typical ☐ Detail

C. Tank Construction and Rim-Seal System:

1. Tank Construction: ☐ Welded ☐ Riveted

2. Primary Seal:

☐ Mechanical Shoe ☐ Liquid-mounted ☐ Vapor-mounted

3. Secondary Seal

☐ None ☐ Shoe-mounted ☐ Rim-mounted ☐ Weather shield

7. Pollutant Emissions

A. Fixed Roof Emissions:

Pollutant[1]	Working Loss (tons/yr)	Breathing Loss (tons/yr)	Total Emissions (tons/yr)
VOC / HAP	No emissions occur from the tanks since gasses are routed to the flare.		

B. Floating Roof Emissions:

Pollutant[1]	Rim Seal Loss (tons/yr)	Withdrawal Loss (tons/yr)	Deck Fitting Loss (tons/yr)	Deck Seam Loss (tons/yr)	Landing Loss[2] (tons/yr)	Total Emissions (tons/yr)

1. All regulated air pollutants including hazardous air pollutants emitted from this source should be listed in accordance with the OGP Application Instructions. A list of regulated air pollutants and a link to EPA's list of hazardous air pollutants is provided in the OGP Application Instructions.

2. Landing losses should be determined according to the procedures in *Organic Liquid Storage Tanks* chapter of EPA's AP-42 emission factors. If the roof is not landed at least once/yr, enter "NA".

MDEQ NOTICE OF INTENT FOR COVERAGE UNDER THE OIL PRODUCTION GENERAL PERMIT TO CONSTRUCT/OPERATE AIR EMISSIONS EQUIPMENT AT A SYNTHETIC MINOR SOURCE

Tank Summary | Section OPGP-E

1. Emission Point Description

A. Emission Point Designation (Ref. No.): AA-008 (Water Storage Tank No. 1)

B. Product(s) Stored: Produced Water

C. Status: ☐ Operating ☒ Proposed ☐ Under Construction

D. Date of construction, reconstruction, or most recent modification (for existing sources) or date of anticipated construction: 2021

2. Tank Data

A. Tank Specifications:

1.	Design capacity	16,800	gallons		
2.	True vapor pressure at storage temperature:	1.15	psia @	ambient	°F
3.	Maximum true vapor pressure (as defined in §60.111b)	1.15	psia @	ambient	°F
4.	Reid vapor pressure at storage temperature:	1.15	psia @	ambient	°F
5.	Density of product at storage temperature:	7.2	lb/gal		
6.	Molecular weight of product vapor at storage temp.	48	lb/lbmol		

B. Tank Orientation: ☒ Vertical ☐ Horizontal

C. Type of Tank:

☒ Fixed Roof ☐ External Floating Roof ☐ Internal Floating Roof

☐ Pressure ☐ Variable Vapor Space ☐ Other: _____

D. Is the tank equipped with a Vapor Recovery System and/or flare? ☐ Yes ☒ No

If yes, describe below and include the efficiency of each.

The tanks will be vented to the flare. If a VRU is necessary, it will be installed.

E. Closest City:

☒ Jackson, MS ☐ Meridian, MS ☐ Tupelo, MS ☐ Mobile, AL

☐ New Orleans, LA ☐ Memphis, TN ☐ Baton Rouge, LA

F. Is an E&P or similar report described in Condition 5.4(5) of the General Permit included for this tank in the Notice of Intent? ☒ Yes ☐ No

MDEQ NOTICE OF INTENT FOR COVERAGE UNDER THE OIL PRODUCTION GENERAL PERMIT TO CONSTRUCT/OPERATE AIR EMISSIONS EQUIPMENT AT A SYNTHETIC MINOR SOURCE

Tank Summary | Section OPGP-E

3. Horizontal Fixed Roof Tank

A. Shell Length: _____ feet
B. Shell Diameter: _____ feet
C. Working Volume: _____ gal
D. Maximum Throughput: _____ gal/yr
E. Is the tank heated? ☐ Yes ☐ No
F. Is the tank underground? ☐ Yes ☐ No
G. Shell Color/Shade:
☐ ☐ Aluminum/Specular ☐ Aluminum/Diffuse
☐ Gray/Light ☐ Gray/Medium ☐ Red/Primer
H. Shell Condition: ☐ Good ☐ Poor

4. Vertical Fixed Roof Tank

A. Dimensions:
1. Shell Height: 20 feet
2. Shell Diameter: 12 feet
3. Maximum Liquid Height: 19 feet
4. Average Liquid Height: ~10 feet
5. Working Volume: 16,800 gal
6. Turnovers per year: 1
7. Maximum throughput: 15,330 gal/yr
8. Is the tank heated? ☐ Yes ☒ No

B. Shell Characteristics:
1. Shell Color/Shade:
☐ White/White ☒ Aluminum/Specular ☐ Aluminum/Diffuse
☐ Gray/Light ☐ Gray/Medium ☐ Red/Primer
2. Shell Condition: ☒ Good ☐ Poor

C. Roof Characteristics:
1. Roof Color/Shade:
☐ White/White ☒ Aluminum/Specular ☐ Aluminum/Diffuse
☐ Gray/Light ☐ Gray/Medium ☐ Red/Primer
2. Roof Condition: ☒ Good ☐ Poor
3. Type: ☐ Cone ☒ Dome
4. Height: 1 feet

MDEQ NOTICE OF INTENT FOR COVERAGE UNDER THE OIL PRODUCTION GENERAL PERMIT TO CONSTRUCT/OPERATE AIR EMISSIONS EQUIPMENT AT A SYNTHETIC MINOR SOURCE

Tank Summary | Section OPGP-E

5. Internal Floating Roof Tank

A. Tank Characteristics:

1. Diameter: _____ feet
2. Tank Volume: _____ gal
3. Turnovers per year: _____
4. Maximum Throughput: _____ gal/yr
5. Number of Columns: _____
6. Self-Supporting Roof? ☐ Yes ☐ No
7. Effective Column Diameter:
   ☐ 9"x7" Built-up Column ☐ 8" Diameter Pipe ☐ Unknown
8. Internal Shell Condition:
   ☐ Light Rust ☐ Dense Rust ☐ Gunite Lining
9. External Shell Color/Shade:
   ☐ White/White ☐ Aluminum/Specular ☐ Aluminum/Diffuse
   ☐ Gray/Light ☐ Gray/Medium ☐ Red/Primer
10. External Shell Condition: ☐ Good ☐ Poor
11. Roof Color/Shade:
    ☐ White/White ☐ Aluminum/Specular ☐ Aluminum/Diffuse
    ☐ Gray/Light ☐ Gray/Medium ☐ Red/Primer
12. Roof Condition: ☐ Good ☐ Poor

B. Rim Seal System:

1. Primary Seal: ☐ Mechanical Shoe ☐ Liquid-mounted ☐ Vapor-mounted
2. Secondary Seal: ☐ Shoe-mounted ☐ Rim-mounted ☐ None

C. Deck Characteristics:

1. Deck Type: ☐ Bolted ☐ Welded
2. Deck Fitting Category: ☐ Typical ☐ Detail

6. External Floating Roof Tank

A. Tank Characteristics

1. Diameter: _____ feet
2. Tank Volume: _____ gal
3. Turnovers per year: _____
4. Maximum Throughput: _____ gal/yr
5. Internal Shell Condition:
   ☐ Light Rust ☐ Dense Rust ☐ Gunite Lining

MDEQ NOTICE OF INTENT FOR COVERAGE UNDER THE OIL PRODUCTION GENERAL PERMIT TO CONSTRUCT/OPERATE AIR EMISSIONS EQUIPMENT AT A SYNTHETIC MINOR SOURCE

Tank Summary | Section OPGP-E

6. External Floating Roof Tank (continued)

A. Tank Characteristics (continued):

6. Paint Color/Shade:

☐ White/White ☐ Aluminum/Specular ☐ Aluminum/Diffuse

☐ Gray/Light ☐ Gray/Medium ☐ Red/Primer

7. Paint Condition: ☐ Good ☐ Poor

B. Roof Characteristics

1. Roof Type: ☐ Pontoon ☐ Double Deck

2. Roof Fitting Category: ☐ Typical ☐ Detail

C. Tank Construction and Rim-Seal System:

1. Tank Construction: ☐ Welded ☐ Riveted

2. Primary Seal:

☐ Mechanical Shoe ☐ Liquid-mounted ☐ Vapor-mounted

3. Secondary Seal

☐ None ☐ Shoe-mounted ☐ Rim-mounted ☐ Weather shield

7. Pollutant Emissions

A. Fixed Roof Emissions:

Pollutant[1]	Working Loss (tons/yr)	Breathing Loss (tons/yr)	Total Emissions (tons/yr)
VOC / HAP	No emissions occur from the tank since gasses are routed to the flare.		

B. Floating Roof Emissions:

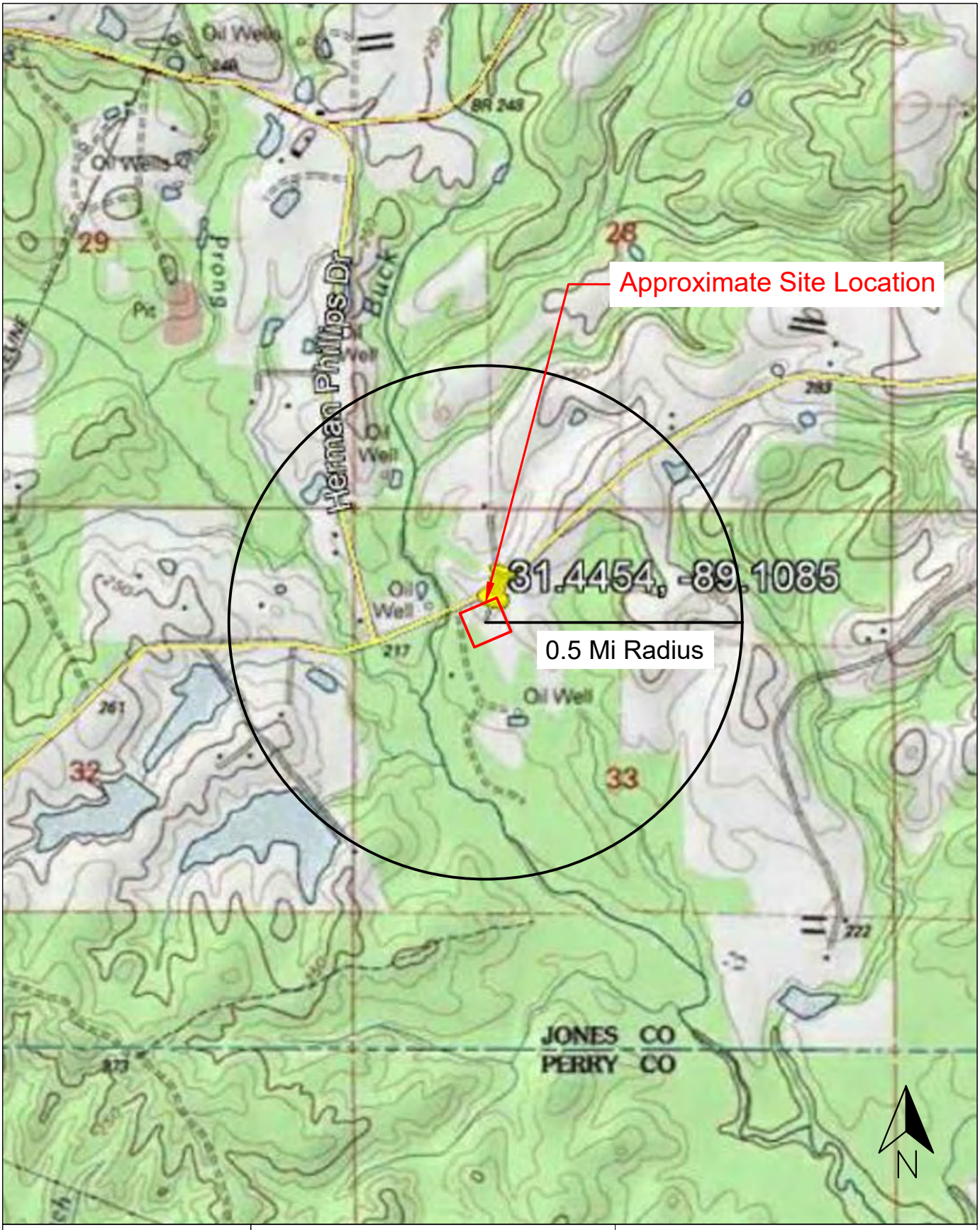
Pollutant[1]	Rim Seal Loss (tons/yr)	Withdrawal Loss (tons/yr)	Deck Fitting Loss (tons/yr)	Deck Seam Loss (tons/yr)	Landing Loss[2] (tons/yr)	Total Emissions (tons/yr)

1. All regulated air pollutants including hazardous air pollutants emitted from this source should be listed in accordance with the OGP Application Instructions. A list of regulated air pollutants and a link to EPA's list of hazardous air pollutants is provided in the OGP Application Instructions.

2. Landing losses should be determined according to the procedures in *Organic Liquid Storage Tanks* chapter of EPA's AP-42 emission factors. If the roof is not landed at least once/yr, enter "NA".

FIGURE 1:

SITE TOPOGRAPHICAL MAP



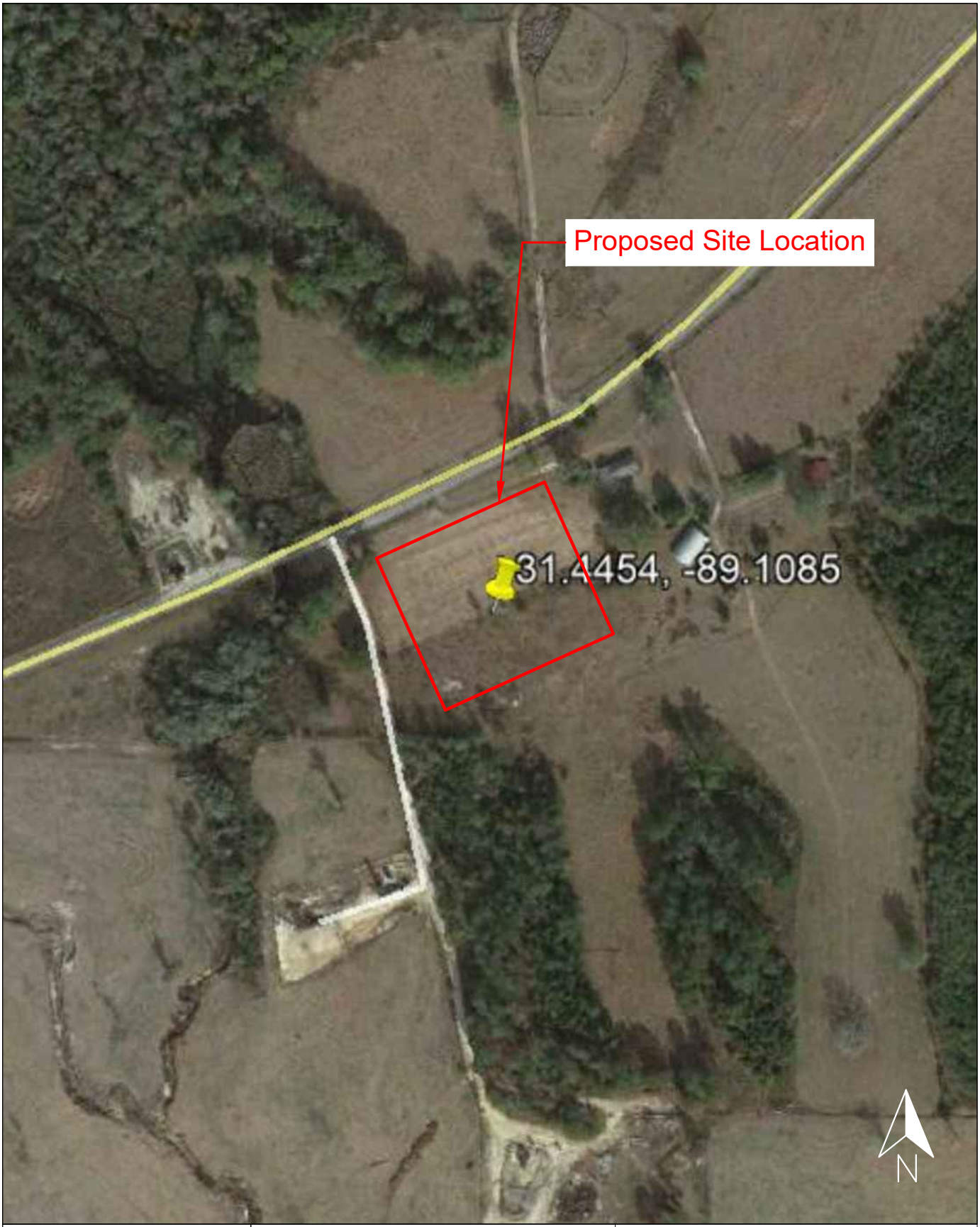
FC&E Engineering, LLC
Water ▪ Soils ▪ Air ▪ Compliance

Venture Oil & Gas, Inc.
Bryant 33-3 No. 1
31.4454, -89.1085
Jones County, MS, 39464

Figure Number: 1
Figure Name: Site Topographic Map
Project: Permit Coverage App
Drawn By: TF
Date Drawn: 2/12/21

FIGURE 2:

SITE AERIAL VIEW



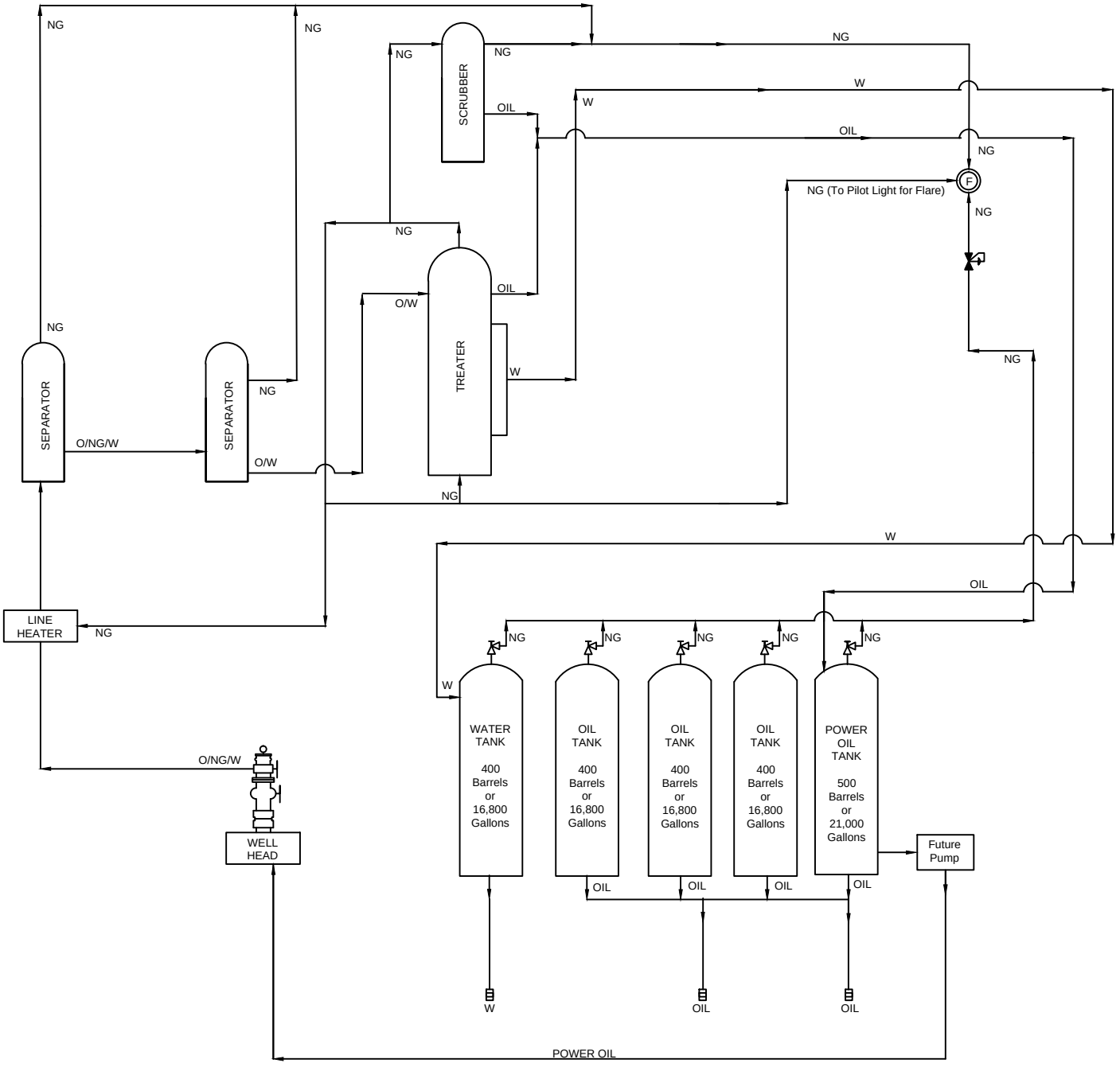
FC&E Engineering, LLC
Water ▪ Soils ▪ Air ▪ Compliance

Venture Oil & Gas, Inc.
Bryant 33-3 No. 1
31.4454, -89.1085
Jones County, MS, 39464

Figure Number: 2
Figure Name: Site Aerial Map
Project: Permit Coverage App
Drawn By: TF
Date Drawn: 2/12/21

FIGURE 3:

PROCESS FLOW DIAGRAM



LEGEND

O	OIL
W	WATER
NG	NATURAL GAS
LP	LIQUIFIED PETROLEUM (PROPANE)
	BACK PRESSURE REGULATOR
	RELIEF VALVE
	LOADING COUPLER
F	FLARE

VENTURE OIL & GAS, INC.

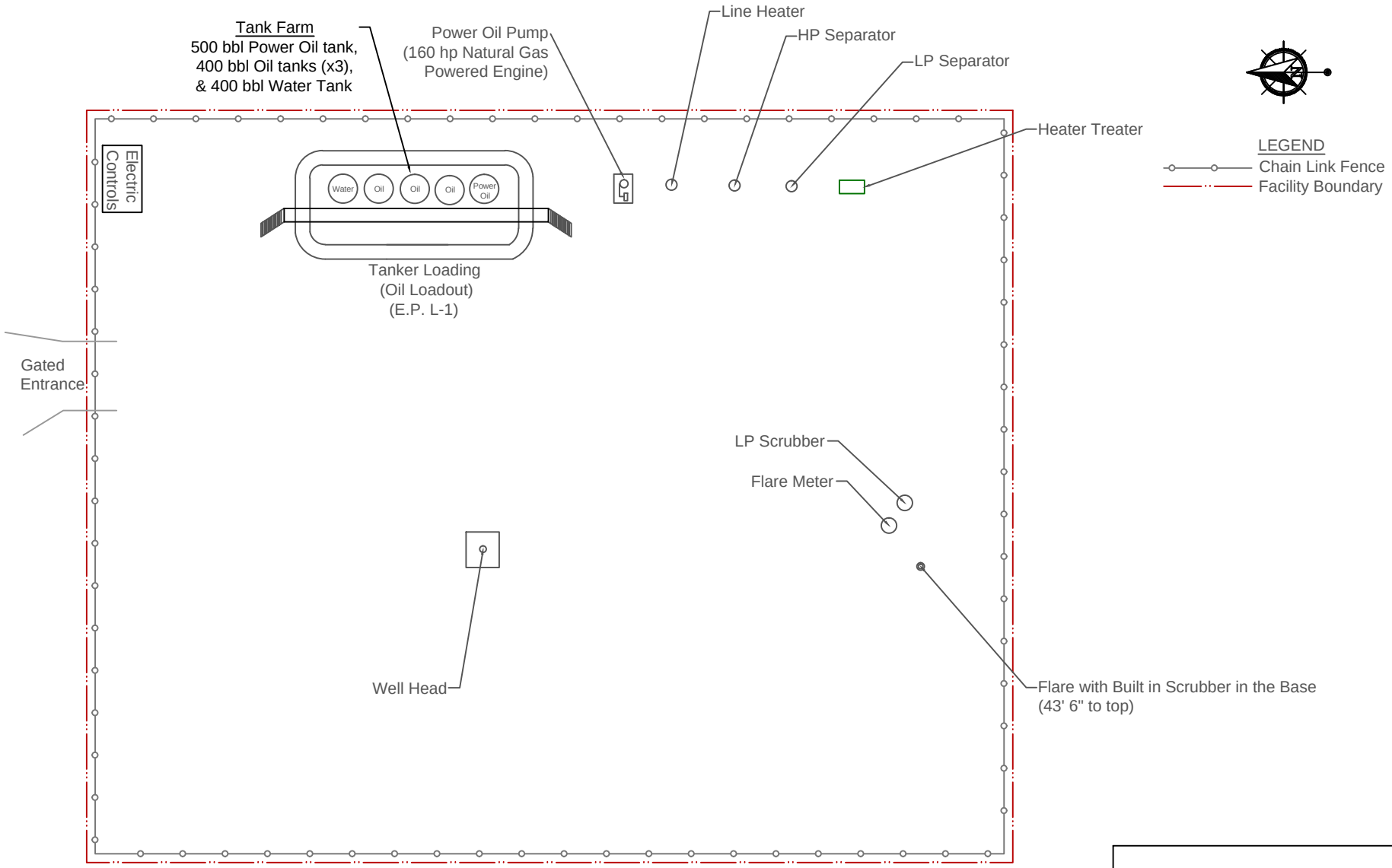
PROCESS FLOW DIAGRAM
Bryant 33-3 No1
Jones County, Mississippi

FC&E ENGINEERING, LLC
BRANDON, MISSISSIPPI
(601) 824-1860

Drawn By: CC - Reviewed By: TC - Date Drawn: 2/12/2021

FIGURE 4:

SITE LAYOUT DIAGRAM



VENTURE OIL & GAS, INC.

EQUIPMENT LAYOUT
Bryant 33-3 No1
Jones County, Mississippi

FC&E ENGINEERING, LLC
BRANDON, MISSISSIPPI
(601) 824-1860

Drawn By: CC - Reviewed By: TC - Date Drawn: 2/12/2021

APPENDIX A

Calculations for Venture Bryant 33-3 No. 1 Tank Battery

Site Information for Calculations

Site Name: Bryant 33-3 No. 1 Tank Battery			
Potential Crude Production	91,250	bbl/yr	
Potential Gas production	109,500	mcf/yr	
Potential Produced Water	3,650	bbl/yr	
Initial Crude Production	350	bbl/day	(expected maximum daily production)
Initial Gas Production	350	mcf/day	(expected maximum daily production)
Initial Water Production	10	bbl/day	(expected maximum daily production)
Crude Gravity	49		
Oil tank W&B Losses	1.31	SCF/stock tank bbl	(estimated using E&P Tanks)
Oil tank Flash Gas	73.74	SCF/stock tank bbl	(estimated using E&P Tanks)
Water tank W&B Losses	0.0131	SCF/stock tank bbl	(using 1% of oil tank emissions)
Water tankFlash Gas	0.7374	SCF/stock tank bbl	(using 1% of oil tank emissions)
VRU recovery efficiency	0.00%		
Flare destruction efficiency	98.00%		

Emission Point Summary

Emission Point Number	Emission Point Description	Design Capacity	Units	Operating Hours
AA-001	Flare	10.25	MMBtu/hr	8760
AA-001a	Flare Pilot	0.05	MMBtu/hr	8760
AA-002	Power Oil Pump Engine	165	hp	8760
AA-003	Fugitive emissions- equipment leaks	-	-	8760
AA-004	High Pressure Separator	-	-	8760
AA-005	Low Pressure Separator	-	-	8760
AA-006	Heater Treater	-	-	8760
AA-006a	Heater Treater (burner)	0.5	mmBtu/hr	8760
AA-007	Misc. Chemical Tanks	-	-	8760
AA-008	Oil and Water Storage Tanks	-	-	8760
AA-009	Truck Loading	16,000	gal/hr	As needed
AA-010	Line Heater	0	mmBtu/hr	8760

Note: Storage tanks, separators, and heater treater vent to the flare.

Proposed Annual Emissions, controlled

Emission Unit ID	Emission Unit	Annual Emissions, tpy								GHG Emissions, tpy			
		PM	PM10	PM2.5	VOC	NOx	CO	SO2	Total HAPs	CO2	CH4	N2O	CO2e
AA-001	Flare	0.15	0.15	0.15	14.99	5.60	30.48	0.00	1.2772	8807.71	39.35	0.02	9796.27
AA-001a	Flare Pilot	0.00	0.00	0.00	0.00	0.02	0.02	0.00	0.0004	25.59	0.00	0.00	25.62
AA-002	Power Oil Pump Engine	0.05	0.10	0.10	0.16	11.83	19.91	0.00	0.1735	624.23	0.01	0.00	624.88
AA-003	Fugitive emissions- equipment leaks	-	-	-	0.21	-	-	-	0.0143	0.02	0.24	0.00	5.92
AA-004	High Pressure Separator	Gas routed to Flare											
AA-005	Low Pressure Separator	Gas routed to Flare											
AA-006	Heater Treater	Gas routed to Flare											
AA-006a	Heater Treater (burner)	0.00	0.02	0.02	0.01	0.21	0.18	0.00	0.0041	255.45	0.00	0.00	255.71
AA-007	Misc. Chemical Tanks (4)	-	-	-	0.02	-	-	-	0.0190	-	-	-	-
AA-008	Oil and Water Tanks (4)	Gas routed to flare											
AA-009	Truck Loading				15.25				0.6249	0.033201	0.17993081	0	4.53
AA-010	Line Heater	0.00	0.01	0.01	0.01	0.11	0.09	0.00	0.0020	127.73	0.00	0.00	127.86
	Totals	**0.21**	**0.28**	**0.28**	**30.64**	**17.66**	**50.58**	**0.00**	**2.1134**	**9713.04**	**39.79**	**0.02**	**10712.93**

Notes:
Storage tanks emissions are included in flare emissions.

Venture King 8-7 No. 1 Tank Battery
Potential Annual Emissions, uncontrolled
December, 2020

Emission Unit ID	Emission Unit	Annual Emissions, tpy								GHG Emissions, tpy			
		PM	PM10	PM2.5	VOC	NOx	CO	SO2	Total HAPs	CO2	CH4	N2O	CO2e
AA-001	Facility gas emissions	-	-	-	749.49	-	-	-	63.86	191.80	2566.84	0.00	64362.83
AA-002	Power Oil Pump Engine	0.051	0.104	0.104	0.16	11.83	19.91	0.003	0.17	624.23	0.01	0.00	624.88
AA-003	Fugitive emissions- equipment leaks	-	-	-	0.21	-	-	-	0.01	0.02	0.24	0.00	5.92
AA-004	High Pressure Separator	Gas routed to AA-001											
AA-005	Low Pressure Separator	Gas routed to AA-001											
AA-006	Heater Treater	Gas routed to AA-001											
AA-006a	Heater Treater (burner)	0.00	0.02	0.02	0.01	0.21	0.18	0.00	0.0041	232.23	0.00	0.00	232.47
AA-007	Misc. Chemical Tanks	-	-	-	0.02	-	-	-	0.02	-	-	-	-
AA-008	Oil and Water Storage Tanks	Gas routed to AA-001											
AA-009	Truck Loading				13.96				0.2536	0.04	0.21	0	5.20
AA-010	Line Heater	0.00	0.01	0.01	0.01	0.11	0.09	0.00	0.0020	127.73	0.00	0.00	127.86
	Totals	**0.05**	**0.12**	**0.12**	**763.86**	**12.04**	**20.09**	**0.00**	**64.32**	**1048.32**	**2567.30**	**0.00**	**65231.30**

Notes:
Potential calculated using highest 30 day average crude production and highest 30 day average gas flared, 7,460 bbls. and 1,952 mcf, respectively, and actual gas analysis.

Speciated HAPs, tpy	
n-hexane	20.9193
benzene	3.3078
e-benzene	0.1558
toluene	2.9494
xylenes	1.9735

Facility Maximum Hourly Emissions, Controlled

Emission Unit ID	Emission Unit	Emissions, lb/hr								GHG Emissions, lb/hr			
		PM	PM10	PM2.5	VOC	NOx	CO	SO2	Total HAPs	CO2	CH4	N2O	CO2e
AA-001	Flare	0.03	0.03	0.03	3.42	1.28	6.96	0.00	0.36	2010.89	8.98	0.00	2236.59
AA-001a	Flare Pilot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.84	0.00	0.00	5.85
AA-002	Power Oil Pump Engine	0.01	0.02	0.02	0.04	2.70	4.55	0.00	0.04	142.52	0.00	0.00	142.67
AA-003	Fugitive emissions- equipment leaks	-	-	-	0.05	-	-	-	0.00	0.00	0.05	0.00	1.35
AA-004	High Pressure Separator	GAS ROUTED TO Flare											
AA-005	Low Pressure Separator	GAS ROUTED TO FLARE											
AA-006	Heater Treater	GAS ROUTED TO FLARE											
AA-006a	Heater Treater (burner)	0.00	0.00	0.00	0.00	0.05	0.04	0.00	0.00	58.32	0.00	0.00	58.38
AA-007	Misc. Chemical Tanks	-	-	-	0.00	-	-	-	0.00	-	-	-	0.00
AA-008	Oil and Water Storage Tanks	GAS ROUTED TO FLARE											
AA-009	Truck Loading	-	-	-	117.72	-	-	-	5.27	0.01	0.04	0	1.03
AA-010	Line Heater	0.00	0.00	0.00	0.00	0.02	0.02	0.00	0.00	29.16	0.00	0.00	29.19
	Totals	**0.05**	**0.06**	**0.06**	**121.23**	**4.03**	**11.55**	**0.001**	**5.68**	**2217.59**	**9.08**	**0.00**	**2445.87**

Notes:
Storage tanks emissions are included in flare emissions.
Truck loading hourly emissions are dictated by the capacity of the transfer pump

Flash Gas Analysis and Conversions

Component	VOC and/or HAP?	Mol %	Wt %
Total S	None	***	0.00000%
CO2	None	0.362%	0.160%
N2	None	0.000%	0.000%
Methane	None	11.546%	1.852%
Ethane	None	6.480%	1.949%
Propane	VOC	19.755%	8.712%
Isobutane	VOC	20.171%	11.724%
Butane	VOC	12.576%	7.309%
Isopentane	VOC	9.194%	6.633%
Pentane	VOC	5.953%	4.295%
Hexane	VOC	3.906%	3.366%
Heptanes	VOC	6.630%	6.644%
Benzene	VOC and HAP	0.390%	0.544%
Toluene	VOC and HAP	0.388%	0.639%
e-Benzene	VOC and HAP	0.015%	0.028%
Xylenes	VOC and HAP	0.211%	0.400%
n-hexane	VOC and HAP	2.422%	3.726%
Total VOC		79.190%	54.020%
Total HAP		3.426%	5.337%

Heat of combustion, Btu/ft^3	2465.9
Molecular weight	46.02

Gas analysis generated by E&P Tanks software.

Produced Gas Analysis and Conversions

Component	VOC and/or HAP?	Mol %	Wt %
Total S	None	0.000%	0.00000%
CO2	None	2.292%	5.061%
N2	None	0.757%	1.062%
Methane	None	84.375%	67.762%
Ethane	None	8.093%	12.185%
Propane	VOC	2.483%	5.483%
Isobutane	VOC	0.499%	1.452%
Butane	VOC	0.743%	2.162%
Isopentane	VOC	0.228%	0.824%
Pentane	VOC	0.210%	0.759%
Hexane	VOC	0.210%	0.906%
n-Hexane	VOC and HAP	0.115%	0.496%
Heptanes+	VOC	0.320%	1.605%
Benzene	VOC and HAP	0.036%	0.141%
Toluene	VOC and HAP	0.011%	0.051%
e-Benzene	VOC and HAP	0.001%	0.005%
Xylenes	VOC and HAP	0.009%	0.048%
Total VOC		4.483%	13.931%
Total HAP		0.172%	0.741%

Heat of combustion, Btu/ft^3	1353.0
Molecular weight	26.18

TANK W & B GAS COMPOSITION

Component	VOC and/or HAP?	Mol %	Wt %
Total S	None	0.000%	0.00000%
CO2	None	0.32%	0.25%
N2	None	0.00%	0.00%
Methane	None	4.76%	1.35%
Ethane	None	7.23%	3.86%
Propane	VOC	24.31%	19.03%
Isobutane	VOC	23.60%	24.34%
Butane	VOC	14.17%	14.62%
Isopentane	VOC	9.38%	12.01%
Pentane	VOC	5.77%	7.39%
Hexane	VOC	3.28%	5.02%
Heptanes+	VOC	4.52%	8.03%
Benzene	VOC and HAP	0.32%	0.44%
Toluene	VOC and HAP	0.27%	0.44%
e-Benzene	VOC and HAP	0.01%	0.02%
Xylenes	VOC and HAP	0.12%	0.23%
n-hexane		1.95%	2.98%
Total VOC		85.75%	91.56%
Total HAP		2.660%	1.66%

Heat of combustion, Btu/ft^3	2796.8
Molecular weight	51.43

Note: W&B vapors and truck loading vapors assumed to have same composition
Gas analysis generated by E&P Tanks software.

Tank Uncontrolled Emissions Summary

	Potential		Initial Production	
Total flash gas ,	6,731,467	SCF/yr	1,076	SCF/hr
Total flash gas ,	399.93	tpy	127.82	lb/hr
Total tank W&B loss	119,585	SCF/yr	19	SCF/hr
Total tank W &B losses	7.94	tpy	2.54	lb/hr
Total tank emissions	407.87	tpy	130.35	lb/hr
Tank emissions to flare	407.87	tpy	130.35	lb/hr
	2691.51			
	0.16	0.15	0.0004	

Notes:

1. Total flash gas calculated using gas/oil ratio from E&P tanks program and potential crude and water production
2. All tank emissions included with flare, Emission Point AA-001.

Calculation of Criteria and Hazardous Flare Emissions
Using Potential Average Production Values

Gas Flow to Flare:

		Potential	
Flow to flare of tank flash gas	=	399.93	tpy
Flow to flare of tank W&B emissions		7.94	tpy
flow to flare from truck loading	=	0.00	tpy
Total process gas to flare	=	407.87	tpy
Produced gas to flare	=	3776.96	tpy
	=	109500.00	mcf/yr

Produced gas combustion heat	=	148153.50	MMBtu/yr
process gas combustion heat	=	16587.74	MMBtu/yr
flare gas combustion heat, total	=	164741.24	MMBtu/yr

			Potential Emissions			Potential Emissions	
	Pollutant	Emission factor, lbs/MMBtu	lb/hr	tpy	Pollutant	lb/hr	tpy
	NOx	0.068	1.279	5.601	n-hexane	0.2196	0.9617
Calculation	CO	0.37	6.958	30.477	benzene	0.0344	0.1506
	PM	0.00186	0.004	0.153	e-benzene	0.0014	0.0063
	VOC	mass balance	3.422	14.990	toluene	0.0206	0.0901
	SO_2	mass balance	0.000	0.000	xylenes	0.0156	0.0685
	PM10/PM2.5	0.00745	0.140	0.614	Total HAPs	0.2916	1.2772

Notes:

1. Emission factors from AP-42, Table 13.5-1, are used to calculate NOx and CO emissions, and PM emission factor from AP-42, Table 1.4-2.
2. Mass balance calculations utilize flare input gas flow and a flare destruction efficiancy of 98% minimum.
3. Mass balance for sulfur assumes all sulfur converted to SO2 in flare.
4. HAP emissions calculated using mass balance and 98% destruction efficiency

Calculation of Maximum Hourly Criteria and Hazardous Flare Emissions
Using Initial Production Values

Gas Flow to Flare:

		Potential	
Flow to flare of tank flash gas	=	127.82	lbs/hr
Flow to flare of tank W&B emissions		2.54	lbs/hr
flow to flare from truck loading	=	0.00	lbs/hr
Total process gas to flare	=	130.35	lbs/hr
Produced gas to flare	=	1006.04	lbs/hr
	=	14.58	mcf/hr

Produced gas combustion heat	=	19.73	MMBtu/hr
process gas combustion heat	=	2.65	MMBtu/hr
flare gas combustion heat, total	=	22.38	MMBtu/hr

			Maximum Hourly Emissions		Potential Emissions
	Pollutant	Emission factor, lbs/MMBtu	lb/hr	Pollutant	lb/hr
	NOx	0.068	1.522	n-hexane	0.2709
Calculation	CO	0.37	8.281	benzene	0.0425
	PM	0.00745	0.167	e-benzene	0.0018
	VOC	mass balance	4.231	toluene	0.0268
	SO_2	mass balance	0.000	xylenes	0.0200
				Total HAPs	0.3619

Notes:

1. Emission factors from AP-42, Table 13.5-1, are used to calculate NOx and CO emissions, and PM emission factor from AP-42, Table 1.4-2.
2. Mass balance calculations utilize flare input process gas flow and a flare destruction efficiancy of 98% minimum.
3. Mass balance for sulfur assumes all sulfur converted to SO2 in flare.
4. HAP emissions calculated using mass balance and 98% destruction efficiency

Calculation of Uncontrolled Emissions of Produced Gas

		Potential
Flow to flare from tank flash gas	=	399.93 tpy
Flow to flare from tank W&B emissions	=	7.94
flow to flare from truck loading	=	0.00 tpy
Produced gas to flare from separators	=	3776.96 tpy

Calculation

Pollutant	Emission factor, lbs/MMBtu	Potential Emissions lb/hr	Potential Emissions tpy
VOC	mass balance	171.118	749.49
H2S	mass balance	0.000	0.00
n-hexane	mass balance	10.978	48.09
benzene	mass balance	1.719	7.53
e-benzene	mass balance	0.072	0.32
toluene	mass balance	1.029	4.50
xylenes	mass balance	0.782	3.42
total HAPs	mass balance	14.580	63.86
methane	mass balance	586.037	2566.84
CO2	mass balance	43.791	191.80

Note: For calculation of uncontrolled emissions, flare efficiency is 0%.

Calculation of Flare GHG Emissions

Process gas to flare, mmcf/yr	6.73
N2O emission factor, kg/mmBtu	0.0001
HHV, mmBtu/scf	0.001235
CO2 density, kg/ft3	0.052600
CH4 density, kg/ft3	0.019200
flare efficiency	98.00%

PROCESS GAS

carbon atoms	CO2 (from combustion)		CO2 input	CH4, uncombusted		N2O	CO2e
	cubic ft.	tpy	tpy	cubic ft.	tpy[1]	tpy[1]	tpy
			1.41E+00	1.55E+04	3.28E-01	9.14E-04	9.88E+00
1	7.61E+05	4.40E+01	*				4.40E+01
2	8.54E+05	4.94E+01					4.94E+01
3	3.91E+06	2.26E+02					2.26E+02
4	8.64E+06	5.00E+02					5.00E+02
5+	8.80E+06	5.09E+02					5.09E+02
Total	2.30E+07	1.33E+03	1.41E+00	1.55E+04	3.28E-01	9.14E-04	1.34E+03

PRODUCED GAS

produced gas to flare, mmcf/yr	109.50

carbon atoms	CO2 (from combustion)		CO2 input	CH4, uncombusted		N2O	CO2e
	cubic ft.	tpy	tpy	cubic ft.	tpy	tpy	tpy
			1.45E+02	1.85E+06	3.90E+01	1.49E-02	1.13E+03
1	9.05E+07	5.24E+03					5.24E+03
2	1.74E+07	1.00E+03					1.00E+03
3	7.99E+06	4.63E+02					4.63E+02
4	5.33E+06	3.08E+02					3.08E+02
5+	5.50E+06	3.18E+02					3.18E+02
Total	1.27E+08	7.33E+03	1.45E+02	1.85E+06	3.90E+01	1.49E-02	8.46E+03

Note: GHG emissions calculated using procedures from 40 CFR 98.233(n)(4)

Equipment Component Fugitive Emissions

Components	Counts	Emission Factor[1] scf/hr/component	Emissions lbs/hr	Wt. Fraction VOC	VOC Emissions		VOC% HAP[3]	HAP Emissions		GHG Emissions, ton/yr		
					lb/hr	tpy		lb/hr	tpy	CO2	CH4	CO2e
Valves:	**25**											
gas/vapor	12	0.027	0.022351304	0.14	0.003	0.01	0.74%	0.000	0.001	0.003765	0.050577	1.27
light oil[2]	13	0.05	0.04484058	0.54	0.024	0.11	5.34%	0.002	0.010	0.007554	0.092243	2.31
heavy oil	0	0.0005	0	0.14	0.000	0.00	0.74%	0.000	0.000	0	0	0.00
Pumps:			0	0.14			0.74%	0.000	0.000	0	0	0.00
Light oil	0	0.01	0	0.73	0.000	0.00	1.66%	0.000	0.000	0	0	0.00
heavy oil	0	0	0	0.14			0.74%	0.000	0.000	0	0	0.00
Flanges:	46		0	0.14			0.74%	0.000	0.000	0	0	0.00
gas/vapor		0	0	0.14	0.000	0.00	0.74%	0.000	0.000	0	0	0.00
light oil	46	0.003	0.00952	0.73	0.007	0.03	1.66%	0.000	0.001	0.001604	0.019584	0.49
heavy oil	0	0.0009	0	0.14	0.000	0.00	0.74%	0.000	0.000	0	0	0.00
Relief Valve:			0	0.14			0.74%	0.000	0.000	0	0	0.00
gas/vapor	0	0.04	0	0.14	0.000	0.00	0.74%	0.000	0.000	0	0	0.00
Connectors:	44		0	0.14			0.74%	0.000	0.000	0	0	0.00
gas/vapor	22	0.003	0.004553043	0.14	0.001	0.00	0.74%	0.000	0.000	0.000767	0.009366	0.23
light oil	22	0.007	0.010623768	0.73	0.008	0.03	1.66%	0.000	0.001	0.00179	0.021854	0.55
heavy oil	0	0.0003	0	0.14	0.000	0.01	0.74%	0.000	0.000	0	0	0.00
Other	1	0.3	0.020695652	0.14	0.003	0.01	1.66%	0.000	0.002	0.003486	0.042574	1.07
				Totals	**0.046**	**0.212**		**0.003**	**0.014**	**0.019**	**0.236**	**5.924**

Notes:

1. Emission factors and equipment counts taken from 40 CFR 98, subpart W.
2. Light oil is defined as having API gravity greater than or equal to 20 degrees API.
3. Vapors emitted from gas service equipment assumed to be same as produced gas, vapor from liquid service equipment assumed to be the same as flash gas.

	lb/hr	tpy
n-hexane	0.00400	0.01753
benzene	0.00062	0.00272
ethyl benzene	0.00002	0.00010
toluene	0.00022	0.00098
xylene	0.00021	0.00093

Equipment	Count	Valves	Flanges	Fittings	prv	Other	
wellhead	1	5	10	4	0	1	
heater treater	1	8	12	20	0	0	
header	0	0	0	0	0	0	
separator	2	12	24	20	0		
meters/piping	0	0	0	0	0	0	
compressor	0	0	0	0	4	0	
dehydrator	0	0	0	0	0	0	
total		25	46	44	4	1	

ENGINE POTENTIAL EMISSIONS CALCULATIONS

		Heat Input		Emissions, tpy							GHG Emissions, tons/yr		
Engine No.	HP	mmBtu/hr	NOx	VOC	CO	SO2	TSP	PM10	PM2.5	CO2	CH4	N2O	CO2e
AA-002	165	1.22	11.83	0.16	19.91	0.00	0.05	0.10	0.10	624.23	1.18E-02	0.001	624.88
		Total	11.83	0.16	19.91	0.00	0.05	0.10	0.10	624.23	0.01	0.00	624.88

Pollutant	**AP-42 Emission Factor lbs/MMBtu**
NOx	2.21
VOC	0.0296
CO	3.72
SO2	0.000588
PM10	0.00950
PM2.5	0.00950
PM cond	0.00991

Conversion Factor,g to lbs
0.0022046

	GHG Emission Factors kg/mmBtu
CO2	53.02
CH4	0.001
N2O	0.0001

ENGINE HAP EMISSIONS CALCULATIONS

HAP	Natural Gas Emission Factor, lbs/mmBtu	AA-002 HAP EMISSIONS lbs/hr	AA-002 HAP EMISSIONS tpy		
1,1,2,2-Tetrachloroethane	2.53E-05	3.09E-05	1.35E-04		
1,1,2-Trichloroethane	1.53E-05	1.87E-05	8.19E-05		
1,3-Butadiene	6.63E-04	8.10E-04	3.55E-03		
1,3-Dichloropropene	1.27E-05	1.55E-05	6.80E-05		
Acetaldehyde	2.79E-03	3.41E-03	1.49E-02		
Acrolein	2.63E-03	3.21E-03	1.41E-02		
Benzene	1.58E-03	1.93E-03	8.46E-03		
Carbon Tetrachloride	1.77E-05	2.16E-05	9.47E-05		
Chlorobenzene	1.29E-05	1.58E-05	6.90E-05		
Chloroform	1.37E-05	1.67E-05	7.33E-05		
Ethylbenzene	2.48E-05	3.03E-05	1.33E-04		
Ethylene Dibromide	2.13E-05	2.60E-05	1.14E-04		
Formaldehyde	2.05E-02	2.50E-02	1.10E-01		
Methanol	3.06E-03	3.74E-03	1.64E-02		
Methylene Chloride	4.12E-05	5.03E-05	2.20E-04		
Naphthalene	9.71E-05	1.19E-04	5.20E-04		
PAH	1.41E-04	1.72E-04	7.55E-04		
Styrene	1.19E-05	1.45E-05	6.37E-05		
Toluene	5.58E-04	6.82E-04	2.99E-03		
Vinyl Chloride	7.18E-06	8.77E-06	3.84E-05		
Xylene	1.95E-04	2.38E-04	1.04E-03		
Total		3.96E-02	1.73E-01		

AA-002 heat input= 1.22 mmBtu/hr

annual operating hours= 8760

Emission factors from AP-42, Table 3.2-3

Truck Loading Emissions Calculations

Basis: 30 day average production rates

L_L = 12.46 *(SPM)/T (from EPA AP-42 Section 5.2.2.1)

Where:

L_L = Loading loss, lbs per 1,000 gal of liquid loaded
S = Saturation factor
P = True vapor pressure of liquid, psia
M = Molecular weight of vapors, lb/lb-mole
T = Temperature of bulk liquid loaded, degrees R

CRUDE OIL

EPA "S" Factor	True VP of Liquid (psia)	Mol. Wt. Of Vapors (lb/lb-mole)	Temp. of Liquid (°R)	Sales Volume (10^3 gal/yr)	Loading Rate (gal/hr)	Uncontrolled Estimated Emissions, Total Hydrocarbons L_L	(lb/hr)	(tpy)
1.45	5	48.00	545	3,833	16,000	7.96	127.30	15.25

PRODUCED WATER

Calculation	EPA "S" Factor	True VP of Liquid (psia)	Mol. Wt. Of Vapors (lb/lb-mole)	Temp. of Liquid (°R)	Loaded Volume (10^3 gal/yr)	Loading Rate (gal/hr)	Uncontrolled Estimated Emissions, Total Hydrocarbons L_L	(lb/hr)	(tpy)
	1.45	0.05	48.00	545	153	16,000	0.08	1.27	0.01

HAPs	tons/yr
Benzene	0.067006
Toluene	0.066346
e-Benzene	0.002558
Xylenes	0.034945
n-hexane	0.454027
	0.624882

Truck Loading Emissions Calculations, Maximum lbs/hr

L_L = 12.46 *(SPM)/T (from EPA AP-42 Section 5.2.2.1)

Where:

L_L = Loading loss, lbs per 1,000 gal of liquid loaded
S = Saturation factor
P = True vapor pressure of liquid, psia
M = Molecular weight of vapors, lb/lb-mole
T = Temperature of bulk liquid loaded, degrees R

CRUDE OIL

EPA "S" Factor	True VP of Liquid (psia)	Mol. Wt. Of Vapors (lb/lb-mole)	Temp. of Liquid (°R)	Sales Volume (10^3 gal/hr)	Loading Rate (gal/hr)	Uncontrolled Estimated Emissions, Total Hydrocarbons L_L	(lb/hr)
1.45	5	48.00	545	16.0	16,000	7.96	127.30

PRODUCED WATER

Calculation	EPA "S" Factor	True VP of Liquid (psia)	Mol. Wt. Of Vapors (lb/lb-mole)	Temp. of Liquid (°R)	Loaded Volume (10^3 gal/hr)	Loading Rate (gal/hr)	Uncontrolled Estimated Emissions, Total Hydrocarbons L_L	(lb/hr)
	1.45	0.05	48.00	545	16.0	16,000	0.08	1.27

HAPs	lbs/hr
Benzene	0.564848
Toluene	0.559285
e-Benzene	0.021562
Xylenes	0.294576
n-hexane	3.82734
total	5.267611

Venture Bryant 33-3 No. 1 Tank Battery
Oil General Permit Coverage Application

External Combustion Equipment Emissions Calculations

Source	Capacity MMBtu/hr	Emissions, tons/yr								GHG Emissions, metric tons/yr			
		PM	PM10	Pm 2.5	NOx	CO	VOC	SO2	HAP	CO2	CH4	N2O	CO2e
Heater Tre	0.5	0.004	0.016	0.016	0.215	0.180	0.012	0.001	0.004	255.45	0.00	0.00	255.72
Line Heate	0.25	0.002	0.008	0.008	0.107	0.090	0.006	0.001	0.002	127.73	0.00	0.00	127.86
Totals		0.006	0.024	0.024	0.322	0.271	0.018	0.002	0.006	383.18	0.01	0.00	383.58

Ap-42 natural gas combustion Emission Factors, lbs/MMBtu	
Pm	0.001863
PM10	0.007451
PM2.5	0.007451
NOx	0.098039
CO	0.082353
VOC	0.005392
SO2	0.000588
HAPs	0.001851

40 CFR 98, subpart C Emission Factors, kg/MMBtu	
CO2	53.02
CH4	0.001
N2O	0.0001

Natural Gas Combustion HAP Calculations

HAP	Natural Gas Emission Factor, lbs/mmBtu	Heater Treater HAP EMISSIONS		Flare Pilot HAP EMISSIONS		Line Heater HAP EMISSIONS	
		lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy
Benzene	2.06E-06	1.03E-06	4.51E-06	1.03E-07	4.51E-07	5.15E-07	2.25E-06
Dichlorobenzene	1.18E-06	5.88E-07	2.58E-06	5.88E-08	2.58E-07	2.94E-07	1.29E-06
Formaldehyde	7.35E-05	3.68E-05	1.61E-04	3.68E-06	1.61E-05	1.84E-05	8.05E-05
Hexane	1.76E-03	8.82E-04	3.86E-03	8.82E-05	3.86E-04	4.41E-04	1.93E-03
Naphthalene	5.98E-07	2.99E-07	1.31E-06	2.99E-08	1.31E-07	1.50E-07	6.55E-07
Polycyclic Organic Matter	2.38E-05	1.19E-05	5.21E-05	1.19E-06	5.21E-06	5.95E-06	2.61E-05
Toluene	3.33E-06	1.67E-06	7.30E-06	1.67E-07	7.30E-07	8.33E-07	3.65E-06
Total		9.35E-04	4.09E-03	9.35E-05	4.09E-04	4.67E-04	2.05E-03

Burner Heat Input= 0.50 mmBtu/hr
Flare Pilot Heat Input= 0.05 mmBtu/hr
Line Heater Heat Input 0.25 mmBtu/hr
annual operating hours= 8760
Emission factors from AP-42, Table 1.4-3

Venture Bryant 33-3 No. 1 Tank Battery
Oil General Permit Coverage Application

FLARE PILOT CALCULATIONS

Emission Unit ID	Combustion Source	Capacity	Criteria Emissions, tons/yr							
		MMBTUH	PM	PM10	PM2.5	NOx	CO	VOC	SO2	HAP
AA-001a	Flare (Pilot)	0.05	0.000	0.002	0.002	0.021	0.018	0.001	0.000	0.000

Emission Unit ID	Combustion Source	Capacity	GHG Emissions, metric tons/yr				GHG Emissions, short tons/yr			
		MMBTUH	CO2	CH4	N2O	CO2e	CO2	CH4	N2O	CO2e
AA-001a	Flare (Pilot)	0.05	23.223	0.000	0.000	23.246	25.59	0.00	0.00	25.62

Gas combustion

AP-42 Emission Factors, lbs/MMBtu	
TSP	0.001863
PM10	0.007451
PM2.5	0.007451
NOx	0.098039
CO	0.082353
VOC	0.005392
SO2	0.000588
HAPs	0.001851

Emission Factors, kg/MMBtu	
CO2	53.02
CH4	0.001
N2O	0.0001

APPENDIX B:

BACKUP DOCUMENTATION

TANKS 4.0.9d
Emissions Report - Summary Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	Anti-Foam Tank
City:	Stringer
State:	Mississippi
Company:	Venture Oil
Type of Tank:	Horizontal Tank
Description:	250-Gallon Anti-Foam Tank

Tank Dimensions

Shell Length (ft):	5.00
Diameter (ft):	5.00
Volume (gallons):	250.00
Turnovers:	1.46
Net Throughput(gal/yr):	365.00
Is Tank Heated (y/n):	N
Is Tank Underground (y/n):	N

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good

Breather Vent Settings

Vacuum Settings (psig):	-0.03
Pressure Settings (psig)	0.03

Meterological Data used in Emissions Calculations: Jackson, Mississippi (Avg Atmospheric Pressure = 14.59 psia)

TANKS 4.0.9d
Emissions Report - Summary Format
Liquid Contents of Storage Tank

Anti-Foam Tank - Horizontal Tank
Stringer, Mississippi

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Toluene	All	66.19	60.06	72.32	64.24	0.3992	0.3307	0.4793	92.1300			92.13	Option 2: A=6.954, B=1344.8, C=219.48

TANKS 4.0.9d
Emissions Report - Summary Format
Individual Tank Emission Totals

Emissions Report for: Annual

Anti-Foam Tank - Horizontal Tank Stringer, Mississippi

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Toluene	0.32	7.47	7.79

TANKS 4.0.9d
Emissions Report - Summary Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	Corrosion Inhibitor Tank
City:	Stringer
State:	Mississippi
Company:	Venture Oil
Type of Tank:	Horizontal Tank
Description:	55-Gallon Corrosion Inhibitor Drum(s)

Tank Dimensions

Shell Length (ft):	5.00
Diameter (ft):	3.00
Volume (gallons):	55.00
Turnovers:	20.00
Net Throughput(gal/yr):	1,095.00
Is Tank Heated (y/n):	N
Is Tank Underground (y/n):	N

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good

Breather Vent Settings

Vacuum Settings (psig):	-0.03
Pressure Settings (psig)	0.03

Meterological Data used in Emissions Calculations: Jackson, Mississippi (Avg Atmospheric Pressure = 14.59 psia)

TANKS 4.0.9d
Emissions Report - Summary Format
Liquid Contents of Storage Tank

Corrosion Inhibitor Tank - Horizontal Tank
Stringer, Mississippi

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Toluene	All	66.19	60.06	72.32	64.24	0.3992	0.3307	0.4793	92.1300			92.13	Option 2: A=6.954, B=1344.8, C=219.48

TANKS 4.0.9d
Emissions Report - Summary Format
Individual Tank Emission Totals

Emissions Report for: Annual

Corrosion Inhibitor Tank - Horizontal Tank
Stringer, Mississippi

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Toluene	0.96	2.74	3.70

TANKS 4.0.9d
Emissions Report - Summary Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	Emulsion Breaker Tank
City:	Stringer
State:	Mississippi
Company:	Venture Oil
Type of Tank:	Horizontal Tank
Description:	250-Gallon Emulsion Breaker Tank

Tank Dimensions

Shell Length (ft):	5.00
Diameter (ft):	5.00
Volume (gallons):	250.00
Turnovers:	2.92
Net Throughput(gal/yr):	730.00
Is Tank Heated (y/n):	N
Is Tank Underground (y/n):	N

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good

Breather Vent Settings

Vacuum Settings (psig):	-0.03
Pressure Settings (psig)	0.03

Meterological Data used in Emissions Calculations: Jackson, Mississippi (Avg Atmospheric Pressure = 14.59 psia)

TANKS 4.0.9d
Emissions Report - Summary Format
Liquid Contents of Storage Tank

Emulsion Breaker Tank - Horizontal Tank
Stringer, Mississippi

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Toluene	All	66.19	60.06	72.32	64.24	0.3992	0.3307	0.4793	92.1300			92.13	Option 2: A=6.954, B=1344.8, C=219.48

TANKS 4.0.9d
Emissions Report - Summary Format
Individual Tank Emission Totals

Emissions Report for: Annual

Emulsion Breaker Tank - Horizontal Tank
Stringer, Mississippi

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Toluene	0.64	7.47	8.11

TANKS 4.0.9d
Emissions Report - Summary Format
Tank Indentification and Physical Characteristics

Identification

User Identification:	Methanol Tank
City:	Stringer
State:	Mississippi
Company:	Venture Oil
Type of Tank:	Horizontal Tank
Description:	330-Gallon Methanol Tank

Tank Dimensions

Shell Length (ft):	5.00
Diameter (ft):	5.00
Volume (gallons):	330.00
Turnovers:	2.21
Net Throughput(gal/yr):	730.00
Is Tank Heated (y/n):	N
Is Tank Underground (y/n):	N

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good

Breather Vent Settings

Vacuum Settings (psig):	-0.03
Pressure Settings (psig)	0.03

Meterological Data used in Emissions Calculations: Jackson, Mississippi (Avg Atmospheric Pressure = 14.59 psia)

TANKS 4.0.9d
Emissions Report - Summary Format
Liquid Contents of Storage Tank

Methanol Tank - Horizontal Tank
Stringer, Mississippi

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg.	Min.	Max.	Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Methyl alcohol	All	66.19	60.06	72.32	64.24	1.7478	1.4448	2.1035	32.0400			32.04	Option 2: A=7.897, B=1474.08, C=229.13

TANKS 4.0.9d
Emissions Report - Summary Format
Individual Tank Emission Totals

Emissions Report for: Annual

Methanol Tank - Horizontal Tank
Stringer, Mississippi

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Methyl alcohol	0.97	17.15	18.13

Project Setup Information *

Project File : Untitled.Ept
Flowsheet Selection : Oil Tank with Separator
Calculation Method : AP42
Control Efficiency : 100.0%
Known Separator Stream : Geographical Region
Geographical Region : All Regions in US
Entering Air Composition : No

Well ID : Venture Bryant 33-3 No. 1
Date : 2021.02.15

* Data Input *

Separator Pressure : 45.00[psig]
Separator Temperature : 140.00[F]
Ambient Pressure : 14.70[psia]
Ambient Temperature : 140.00[F]
C10+ SG : 0.8930
C10+ MW : 277.00

-- Low Pressure Oil --

No.	Component	mol %
1	H2S	0.0000
2	O2	0.0000
3	CO2	0.0400
4	N2	0.0000
5	C1	1.2100
6	C2	0.7600
7	C3	2.9200
8	i-C4	4.1500
9	n-C4	3.0600
10	i-C5	3.9300
11	n-C5	3.0900
12	C6	4.9100
13	C7	13.0800
14	C8	14.6200
15	C9	7.6300
16	C10+	31.1400
17	Benzene	0.6900
18	Toluene	1.9400
19	E-Benzene	0.1900
20	Xylenes	2.9800
21	n-C6	3.6600
22	224Trimethylp	0.0000

-- Sales Oil --
Production Rate : 218[bbl/day]
Days of Annual Operation : 365 [days/year]
API Gravity : 47.0
Reid Vapor Pressure : 6.00[psia]
Bulk Temperature : 80.00[F]

-- Tank and Shell Data --
Diameter : 21.00[ft]
Shell Height : 16.00[ft]
Cone Roof Slope : 0.06
Average Liquid Height : 8.00[ft]
Vent Pressure Range : 0.06[psi]
Solar Absorbance : 0.39

-- Meteorological Data --
City : Jackson, MS
Ambient Pressure : 14.70[psia]
Ambient Temperature : 140.00[F]
Min Ambient Temperature : 52.70[F]

Max Ambient Temperature : 76.30[F]
Total Solar Insolation : 1409.00[Btu/ft^2*day]

****
* Calculation Results *
****

-- Emission Summary ----------

Item	Uncontrolled [ton/yr]	Uncontrolled [lb/hr]
Total HAPs	23.460	5.356
Total HC	437.788	99.952
VOCs, C2+	423.339	96.653
VOCs, C3+	407.954	93.140

Uncontrolled Recovery Info.

Vapor	16.3600	[MSCFD]
HC Vapor	16.3100	[MSCFD]
GOR	75.05	[SCF/bbl]

-- Emission Composition ----------

No	Component	Uncontrolled [ton/yr]	Uncontrolled [lb/hr]
1	H2S	0.000	0.000
2	O2	0.000	0.000
3	CO2	1.257	0.287
4	N2	0.000	0.000
5	C1	14.448	3.299
6	C2	15.385	3.513
7	C3	68.917	15.734
8	i-C4	92.659	21.155
9	n-C4	57.728	13.180
10	i-C5	52.289	11.938
11	n-C5	33.828	7.723
12	C6	25.783	5.887
13	C7	33.003	7.535
14	C8	16.359	3.735
15	C9	3.924	0.896
16	C10+	0.002	0.000
17	Benzene	2.395	0.547
18	Toluene	2.803	0.640
19	E-Benzene	0.125	0.029
20	Xylenes	1.752	0.400
21	n-C6	16.388	3.742
22	224Trimethylp	0.000	0.000
	Total	439.045	100.239

-- Stream Data ----------

No.	Component	MW	LP Oil	Flash Oil	Sale Oil	Flash Gas	W&S Gas	Total Emissions
			mol %	mol %	mol %	mol %	mol %	mol %
1	H2S	34.80	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	O2	32.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	CO2	44.01	0.0400	0.0037	0.0021	0.3632	0.3184	0.3624
4	N2	28.01	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	C1	16.04	1.2100	0.0481	0.0134	11.5462	4.7561	11.4290
6	C2	30.07	0.7600	0.1170	0.0860	6.4800	7.2324	6.4930
7	C3	44.10	2.9200	1.0276	0.9354	19.7545	24.3085	19.8331
8	i-C4	58.12	4.1500	2.3490	2.2672	20.1714	23.6003	20.2306
9	n-C4	58.12	3.0600	1.9902	1.9437	12.5764	14.1699	12.6039
10	i-C5	72.15	3.9300	3.3383	3.3160	9.1937	9.3778	9.1969
11	n-C5	72.15	3.0900	2.7682	2.7574	5.9530	5.7777	5.9499
12	C6	86.16	4.9100	5.0229	5.0308	3.9060	3.2822	3.8952
Page 2----------						E&P TANK		
13	C7	100.20	13.0800	14.0626	14.1081	4.3385	3.1381	4.3178
14	C8	114.23	14.6200	16.0518	16.1129	1.8828	1.1624	1.8703
15	C9	128.28	7.6300	8.4418	8.4755	0.4082	0.2166	0.4049
16	C10+	166.00	31.1400	34.6405	34.7819	0.0001	0.0000	0.0001
17	Benzene	78.11	0.6900	0.7237	0.7254	0.3904	0.3169	0.3891
18	Toluene	92.13	1.9400	2.1144	2.1221	0.3882	0.2660	0.3861

19	E-Benzene	106.17	0.1900	0.2097	0.2105	0.0150	0.0089	0.0149
20	Xylenes	106.17	2.9800	3.2913	3.3042	0.2110	0.1216	0.2094
21	n-C6	86.18	3.6600	3.7992	3.8073	2.4215	1.9462	2.4133
22	224Trimethylp	114.24	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
	MW		148.51	158.95	159.17	55.71	56.35	55.72
	Stream Mole Ratio		1.0000	0.8989	0.8972	0.1011	0.0018	0.1028
	Heating Value	[BTU/SCF]				3108.39	3147.61	3109.06
	Gas Gravity	[Gas/Air]				1.92	1.95	1.92
	Bubble Pt. @ 100F	[psia]	59.52	10.16	8.49			
	RVP @ 100F	[psia]	129.92	49.63	46.58			
	Spec. Gravity @ 100F		0.743	0.751	0.751			

DELBERT HOSEMANN
Secretary of State

This is not an official certificate of good standing.

Name History

Name	Name Type
VENTURE OIL & GAS INC.	Legal

Business Information

Business Type:	Profit Corporation
Business ID:	558492
Status:	Good Standing
Effective Date:	11/07/1988
State of Incorporation:	Mississippi
Principal Office Address:	

Registered Agent

Name

JAY DONALD FENTON
207 South 13th Avenue
Laurel, MS 39440

Officers & Directors

Name	Title
Jay Donald Fenton 332 Luther Hill Road, A Ellisville, MS 39437	Incorporator
William Edward Carpenter 112 Westminister Drive Hattiesburg, MS 39401	Incorporator
Jay Donald Fenton 332 Luther Hill Rd Ellisville, MS 39437	Director, President
Neil Scrimpshire 9 Heritage Trail Laurel, MS 39440	Director, Secretary, Vice President