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

March 9, 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: Venture Oil & Gas Inc. Mitzi Shows 8-11 No. 1 Tank Battery
Oil Production General Permit NOI

Venture Oil & Gas Inc. is submitting the enclosed NOI for coverage under the Oil Production General Permit for the proposed Mitzi Shows 8-11 No. 1 facility in Simpson County, MS. Also enclosed is a copy of the public notice which will be published March 11, 2021.

If you have any questions, please feel free to contact me at (601) 613-1915.

Sincerely,

Toby M. Cook, P.E.
Environmental Engineer

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: 3*/11/2021*

Venture Oil & Gas Mitzi Shows 8-11 No. 1 facility located at Lat.32.02535, Long-89.9130, Simpson county, MS, approximately 2.5 miles north of D'Lo, Mississippi, in Section 8, T2N, R4E, (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

Mendenhall public Library
1630 Simpson Highway 149
Mendenhall, MS 39114

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

OIL PRODUCTION GENERAL PERMIT NOTICE OF INTENT

VENTURE OIL & GAS, INC
Mitzi Shows 8-11 No.1 Facility
Simpson County, Mississippi

Submittal Date: March, 2021

PREPARED BY:

FC&E ENGINEERING, LLC
917 MARQUETTE ROAD
BRANDON, MISSISSIPPI 39042
(601) 824-1860

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

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EXECUTIVE SUMMARY

Venture Oil & Gas Inc. (Venture) plans to drill a new well for the purposes of oil production. The well (Mitzi Shows 8-11 No. 1) will be located in Section 8, Township 2N, Range 4E, in Simpson 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 250 thousand cubic feet (MCF) of gas produced per day and 200 barrels (bbl) of oil produced per day, along with 10 bbl/day of produced water.

A pipeline outlet may not exist for the gas initially, 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 sell gas if/when pipeline facilities become available. Venture will collect produced water into a 400-bbl water tank prior to offsite transport to a disposal well. Oil will be collected into three (3) 400-bbl oil storage tanks and one(1) 500 bbl oil storage tank 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.

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 Mitzi Shows 8-11 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 St. John Road
2. City: Braxto
3. State: MS
4. County: Simpson
5. Zip Code: 39044
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.)
   ☑ Map Interpolation (Google Earth, etc.) ☐ Other:
3. Latitude (*degrees/minutes/seconds)* : 32/01/31.26N
4. Longitude (*degrees/minutes/seconds*): 89/54/46.8W
5. Elevation (*feet*): 358

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	0.25	MMCF/day
Oil	200	barrels/day
Water	10	barrels/day
Other (Specify)		

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

Produced Material	Throughput	Units
Flared Gas	0.25	MMCF/day
Oil	350	barrels/day
Water	10	barrels/day
Other (Specify)		

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.

Jarvis Hensley

Signature of Responsible Official/DAR

3/8/21

Date

Jarvis Hensley

Printed Name

3/8/21

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	172.64	756.16	0.00	0.00	0.00	0.00	8.6046	37.6882
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	0.19	0.00	0.00	0.00	0.00	0.0480	0.2103
AA-002a	0.01	0.05	0.02	0.09	0.02	0.09	0.00	0.00	2.45	10.75	4.13	18.10	0.03	0.14	0.00	0.00	0.00	0.00	0.0360	0.1577
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	0.06	0.28	0.00	0.00	0.00	0.00	0.0036	0.0159
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	11.17	0.00	0.00	0.00	0.00	5.2700	0.2029
AA-010	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.01	0.11	0.01	0.09	0.00	0.01	0.00	0.00	0.00	0.00	0.0002	0.0020
Totals	0.02	0.10	0.05	0.22	0.05	0.22	0.00	0.01	5.22	22.92	8.73	38.28	290.51	767.99	0.00	0.00	0.00	0.00	13.97	38.30

[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	0.13	0.12	0.51	0.12	0.51	0.000	0.00	1.06	4.65	5.78	25.30	3.45	15.12	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	0.104	0.02	0.104	0.001	0.004	2.70	11.83	4.55	19.91	0.04	0.19	0.00	0.00	0.00	0.00
AA-002a	0.01	0.05	0.02	0.094	0.02	0.094	0.001	0.003	2.45	10.75	4.13	18.10	0.03	0.14	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	0.06	0.28	0.00	0.00	0.00	0.00
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
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	117.72	11.17	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	0.23	0.17	0.73	0.17	0.73	0.00	0.01	6.29	27.57	14.52	63.59	121.32	26.95	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	0.1721	0.7538	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0154	0.0675	<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-002a	0.0360	0.1577	<0.0001	0.0001	<0.0001	0.0001	0.0007	0.0032	<0.0001	0.0001	0.0031	0.0136	0.0029	0.0128	0.0018	0.0077	<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	0.0003	0.0012	<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	0.2029	<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	0.0536	<0.0001	<0.0001
AA-010	0.00047	0.00205	<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:	5.5248	1.3294	0.0000	0.0003	0.0000	0.0002	0.0015	0.0068	0.0000	0.0001	0.0065	0.0285	0.0061	0.0269	0.5842	0.1385	0.0000	0.0002

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	0.1414	0.7538	<0.0001	<0.0001	<0.0001	<0.0001	0.0010	0.0044	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
AA-001a	0.0001	0.0004	<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	<0.0001	0.0001	<0.0001	0.0001	0.0250	0.1097	0.0037	0.0164	0.0001	0.0002	0.0001	0.0005
AA-002a	0.0227	0.1577	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	0.0001	0.0228	0.0997	0.0034	0.0149	<0.0001	0.0002	0.0001	0.0005
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	<0.0001	<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	0.0009	0.0041	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0002	<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																<0.0001	<0.0001
AA-009	<0.0001	0.2029	<0.0001	<0.0001	<0.0001	<0.0001	0.0216	0.0020	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<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:	0.2132	1.3294	0.0000	0.0001	0.0000	0.0001	0.0226	0.0068	0.0000	0.0002	0.0478	0.2097	0.0071	0.0313	0.0001	0.0004	0.0002	0.0010

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	0.1414	0.7538	<0.0001	<0.0001	<0.0001	<0.0001	0.0151	0.0660	<0.0001	<0.0001	0.0088	0.0385	0.1318	0.5775	<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	0.0004	<0.0001	<0.0001		
AA-002	0.0396	0.1735	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-002a	0.0227	0.1577	0.0002	0.0007	<0.0001	<0.0001	0.0006	0.0027	<0.0001	<0.0001	0.0002	0.0009	<0.0001	<0.0001	<0.0001	<0.0001		
AA-003	0.0036	0.0159	<0.0001	<0.0001	<0.0001	<0.0001	0.0002	0.0009	<0.0001	<0.0001	0.0001	0.0005	0.0030	0.0133	<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	0.0009	0.0039	<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		
AA-008	Routed to AA-001																	
AA-009	<0.0001	0.2029	<0.0001	<0.0001	<0.0001	<0.0001	0.5593	0.0531	<0.0001	<0.0001	0.2946	0.0280	3.8273	0.3633	<0.0001	<0.0001		
AA-010	0.00047	0.00205	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00044	0.00193	<0.0001	<0.0001		
Totals:	0.2132	1.3294	0.0003	0.0014	0.0000	0.0001	0.5759	0.1257	0.0000	0.0000	0.3039	0.0689	3.9636	0.9602	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**	8136.67	0	0.01	31.52	0	0					8168.21	N/A
	CO2e	8136.67	0	3.91	788.08	0	0					N/A	8928.66
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-002a	**mass GHG**	567.48	0	0.00	0.01	0	0					567.49	N/A
	CO2e	567.48	0	0.32	0.27	0	0					N/A	568.07
AA-003	**mass GHG**	0.03	0	0.00	0.33	0	0					0.35	N/A
	CO2e	0.03	0	0.00	8.18	0	0					N/A	8.21
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**	127.73	0	0.00	0.00	0	0					127.73	N/A
	CO_2e	127.73	0	0.07	0.06	0	0					N/A	127.86
FACILITY TOTAL	**mass GHG**	9609.48	0	0.33	32.32	0.00	0.00					9642.13	N/A
	CO_2e	9609.48	0	99.47	807.88	0.00	0.00	0.5				N/A	10516.83

[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	32/01/31.26N	89/54/46.8W
AA-002	H	Yes	7	415	TBD	TBD	TBD	TBD	32/01/31.26N	89/54/46.8W
AA-002a	H	yes	7	415	TBD	TBD	TBD	TBD	32/01/31.26N	89/54/46.8W
AA-003	N/A-Fugitives	N/A	N/A	415	N/A	N/A	N/A	N/A	32/01/31.26N	89/54/46.8W
AA-004	N/A-Separator	N/A	N/A	415	N/A	N/A	N/A	N/A	32/01/31.26N	89/54/46.8W
AA-005	N/A-Separator	N/A	N/A	415	N/A	N/A	N/A	N/A	32/01/31.26N	89/54/46.8W
AA-006	N/A-Heater Treater	N/A	N/A	415	N/A	N/A	N/A	N/A	32/01/31.26N	89/54/46.8W
AA-006a	TBD	TBD	TBD	415	TBD	TBD	TBD	TBD	32/01/31.26N	89/54/46.8W
AA-007	N/A-Tanks	N/A	N/A	415	N/A	N/A	N/A	N/A	32/01/31.26N	89/54/46.8W
AA-008	N/A-Tanks	N/A	N/A	415	N/A	N/A	N/A	N/A	32/01/31.26N	89/54/46.8W
AA-009	N/A-Truck Loading	N/A	N/A	415	N/A	N/A	N/A	N/A	32/01/31.26N	89/54/46.8W
AA-010	TBD	TBD	TBD	415	N/A	TBD	TBD	TBD	32/01/31.26N	89/54/46.8W

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

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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:

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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.

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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

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Fuel Burning Equipment – Internal Combustion Engines

Section OPGP- D

1. Emission Point Description

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

B. Equipment Description (including serial number): 150 HP RICE for sales gas compressor

C. Manufacturer: TBD

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

E. Maximum Heat Input (higher heating value): 1.11 MMBtu/hr

F. Rated Power: 150 hp 112 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	1.09 MCF	9,533 MCF

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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

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Compliance Plan — Section OPGP-G

Part 1. Equipment List

List all equipment and the corresponding federal and/or state regulation that is applicable. Clearly identify federal regulations from state requirements. Provide the expected or actual construction date, startup date and removal date if the equipment is no longer on site.

EMISSION UNIT (Ref No.)	FEDERAL or STATE REGULATION Ex. 40 CFR Part _____, Subpart _____ Ex. 11 Miss. Admin. Code Pt. 2, R. 1.4.B(2).	CONSTRUCTION DATE	STARTUP DATE	REMOVAL DATE
Example: Engines	40 CFR 63, Subpart ZZZZ	10/01/2002	11/15/2019	N/A
Example: Fugitive Emissions	40 CFR 60, Subpart OOOOa	10/01/2019	11/15/2019	N/A
Example: Flare	11 Miss. Admin. Code Pt. 2, R.1.4.B(2).	12/01/2019	12/02/2019	N/A
This list of examples is not intended to be conclusive for each type of emission source. This list only provides examples of how the table should be completed.				
AA-001 Flare and facility wide	11 Miss. Admin. Code Pt. 2, R.1.4.B(2).	4/01/2021 (est.)	05/01/2021 (est.)	N/A
AA-002, AA-002a, Engines	40 CFR 63, Subpart ZZZZ	4/01/2021 (est.)	05/01/2021 (est.)	N/A
AA-002, AA-002a, Engines AA-006a, AA-010	11 Miss. Admin. Code Pt. 2, R.1.3.B.	4/01/2021 (est.)	05/01/2021 (est.)	N/A
AA-002, AA-002a, Engines,AA-006a, AA-010	11 Miss. Admin. Code Pt. 2, R.1.3.D(1)(a).	4/01/2021 (est.)	05/01/2021 (est.)	N/A
AA-003 Fugitive Emissions	40 CFR 60, Subpart OOOOa	4/01/2021 (est.)	05/01/2021 (est.)	N/A

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

Compliance Plan — Section OPGP-G

Part 1. Equipment List

List all equipment and the corresponding federal and/or state regulation that is applicable. Clearly identify federal regulations from state requirements. Provide the expected or actual construction date, startup date and removal date if the equipment is no longer on site.

EMISSION UNIT (Ref No.)	FEDERAL or STATE REGULATION Ex. 40 CFR Part _____, Subpart _____ Ex. 11 Miss. Admin. Code Pt. 2, R. 1.4.B(2).	CONSTRUCTION DATE	STARTUP DATE	REMOVAL DATE
AA-000 Well affected facility	40 CFR 60, Subpart OOOOa	4/01/2021 (est.)	05/01/2021 (est.)	

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

Compliance Plan — Section OPGP-G

Part 2. Applicable Requirements

List all applicable state and federal requirements, including emission limits, operating restrictions, etc., and the applicable test methods or monitoring used to demonstrate compliance with each applicable requirement. Clearly identify federal regulations from state requirements. Provide the compliance status as of the day the application is signed.

EMISSION UNIT (Ref No.)	APPLICABLE REQUIREMENT (Specific Regulatory citation)	POLLUTANT	LIMITS/ REQUIREMENTS	TEST METHOD/ COMPLIANCE MONITORING
Example: Compressor	Item 8 of Table 2d of 40 CFR 63, Subpart ZZZZ	HAPs	Change oil and filter every 2,160 hours of operation or annually, whichever comes first; Inspect spark plugs every 2,160 hours of operation or annually, whichever comes first, and replace as necessary; and Inspect all hoses and belts every 2,160 hours of operation or annually, whichever comes first, and replace as necessary.	Monitoring of compressor hours of operation
Example: Tanks	40 CFR 60.5395(a)(2)	VOC and Methane	Must reduce VOC emissions by 95.0 percent within 60 days after startup of production.	Tank emissions are routed to the flare for destruction at all times of operations.
Example: Flare	11 Miss. Admin. Code Pt. 2, R.1.4.B(2).	H_2S	1 grain H_2S per 100 standard cubic feet (1 gr/100 scf)	Recordkeeping of H2S composition of gas by gas analysis; Maintenance of continuous flame for gas combustion.
This list of examples is not intended to be conclusive for each type of emission source. This list only provides examples of how the table should be completed.				
AA-001, Flare & facility wide	1 Miss. Admin. Code Pt. 2, R.1.4.B(2).	H_2S	Any gas stream containing as much as 1 grain H_2S per 100 standard cubic feet (1 gr/100 scf) must be incinerated prior to discharge to the atmosphere	Recordkeeping of H2S composition of gas by gas analysis; Maintenance of continuous flame for gas combustion.
AA-002, AA-002a, Engines,	40 CFR 63, subpart ZZZZ, (§63.6590(a))	HAP	Applicability	Applicability Only
AA-002, AA-002a, Engines,	40 CFR 63, subpart ZZZZ, (§63.6603 & Table 2(d))	HAP	Change oil and filter every 1,440 hours of operation or annually, whichever comes first; b. Inspect spark plugs every	Monitoring engine hours of operation

Part 2. Applicable Requirements

List all applicable state and federal requirements, including emission limits, operating restrictions, etc., and the applicable test methods or monitoring used to demonstrate compliance with each applicable requirement. Clearly identify federal regulations from state requirements. Provide the compliance status as of the day the application is signed.

EMISSION UNIT (Ref No.)	APPLICABLE REQUIREMENT (Specific Regulatory citation)	POLLUTANT	LIMITS/ REQUIREMENTS	TEST METHOD/ COMPLIANCE MONITORING
			1,440 hours of operation or annually, whichever comes first, and replace as necessary c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	
AA-002, AA-002a, Engines,	40 CFR 63, subpart ZZZZ, (§63.6605)	HAP	Contiuous compliance and General Duty to operate and maintain in a manner consistent with safety and good air pollution control practies to minimize emissions	Process Knowledge
AA-002, AA-002a, Engines,	40 CFR 63, subpart ZZZZ, (§63.6640 (a) and Table 6)	HAP	i. Operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions; or ii. Develop and follow your own maintenance plan	Process Knowledge
AA-002, AA-002a, Engines,	40 CFR 63, subpart ZZZZ, (§63.6655 (a),(d) and (e))	HAP	Recordkeeping Requiremnts	Recordkeeping
AA-002, AA-002a, Engines,	40 CFR 63, subpart ZZZZ, (§63.6660 (a),(b) and (c))	HAP	General recordkeeping requirements	Recordkeeping
AA-002, AA-002a, Engines,	40 CFR 63, subpart ZZZZ, (§63.6640 (b)	HAP	Report any failure to perform a required work practice as scheduled	Reporting
AA-002, AA-002a, Engines,	40 CFR 63, subpart ZZZZ, (§63.6665 (a) and Table 8)	HAP	Applicable requirements under 40 CFR 63 subpart A	Applicability

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

Compliance Plan — Section OPGP-G

Part 2. Applicable Requirements

List all applicable state and federal requirements, including emission limits, operating restrictions, etc., and the applicable test methods or monitoring used to demonstrate compliance with each applicable requirement. Clearly identify federal regulations from state requirements. Provide the compliance status as of the day the application is signed.

EMISSION UNIT (Ref No.)	APPLICABLE REQUIREMENT (Specific Regulatory citation)	POLLUTANT	LIMITS/ REQUIREMENTS	TEST METHOD/ COMPLIANCE MONITORING
AA-003 Fugitive Emissions	40 CFR 60.5365a(i)	VOC and Methane	Applicability	Applicability only
AA-003 Fugitive Emissions	40 CFR 60.5397a(a-g)	VOC and Methane	Develop a fugitive emission monitoring plan	Upon Startup
AA-003 Fugitive Emissions	40 CFR 60.5397a(h)	VOC and Methane	Fugitive emission source repair or replacement requirements	Written Plan development
AA-003 Fugitive Emissions	40 CFR 60.5425a and Table 3	VOC and Methane	Applicability of General Provisions of 40 CFR 60, Subpart A	Applicability only
AA-003 Fugitive Emissions	40 CFR 60.5410a(j)	VOC and Methane	Demonstration of initial compliance	Monitoring
AA-003 Fugitive Emissions	40 CFR 60.415a(h)	VOC and Methane	Demonstration of continuous compliance	Monitoring
AA-003 Fugitive Emissions	40 CFR 60.5420a(c)	VOC and Methane	Recordkeeping requirements	Monitoring and Recordkeeping
AA-003 Fugitive Emissions	40 CFR 60.5420a(b)	VOC and Methane	Reporting requirements	Reporting
AA-008 Storage Tanks	40 CFR 60.5365a(e)	VOC and Methane	Applicability determination may take into account legally and practically enforceable limit on tank emissions	Applicability Only. Federally enforceable limit requested for avoidance.

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

Compliance Plan — Section OPGP-G

Part 2. Applicable Requirements

List all applicable state and federal requirements, including emission limits, operating restrictions, etc., and the applicable test methods or monitoring used to demonstrate compliance with each applicable requirement. Clearly identify federal regulations from state requirements. Provide the compliance status as of the day the application is signed.

EMISSION UNIT (Ref No.)	APPLICABLE REQUIREMENT (Specific Regulatory citation)	POLLUTANT	LIMITS/ REQUIREMENTS	TEST METHOD/ COMPLIANCE MONITORING
AA-000 Well affected facility	40 CFR 60.5365a(a)	VOC	Applicability	Process Knowledge
AA-000 Well affected facility	40 CFR 60.5375a(a)	VOC	Completion standards/procedures for VOC control	Process Knowledge
AA-000 Well affected facility	40 CFR 60.5410a(a) 40 CFR 60.5415a(a)	VOC	Submit notification, annual report, maintain log of records, as applicable	Recordkeeping and Reporting
AA-000 Well affected facility	40 CFR 60.5420a	VOC	Specific notification, recordkeeping and reporting requirements.	Recordkeeping and Reporting

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 (Power Oil 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	21,000	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

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Tank Summary — Section H

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: 25 feet
2. Shell Diameter: 12 feet
3. Maximum Liquid Height: 24.8 feet
4. Average Liquid Height: 18 feet
5. Working Volume: 21,000 gal
6. Turnovers per year: 159.1
7. Maximum throughput: 3,340,554 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: 0.1 feet

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Tank Summary — Section H

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

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Tank Summary — Section H

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		Total W&B 0.91	30.96
Hexane		0.1439	2.8191
Benzene		0.0355	0.6979
Ethylbenzene		0.0005	0.0102
Toluene		0.0201	0.3890
Xylene		0.0118	0.2248

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)

* Total emissions in Table 7A are the sum of flash emissions and working and breathing emissions

1. All regulated air pollutants including hazardous air pollutants emitted from this source should be listed in accordance with the Permit Application Instructions. A list of regulated air pollutants and hazardous air pollutants is provided in the 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".

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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

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".

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Tank Summary | Section OPGP-E

1. Emission Point Description

A. Emission Point Designation (Ref. No.): AA-008 (Oil Storage Tank No. 3)

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

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. 4)

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

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)

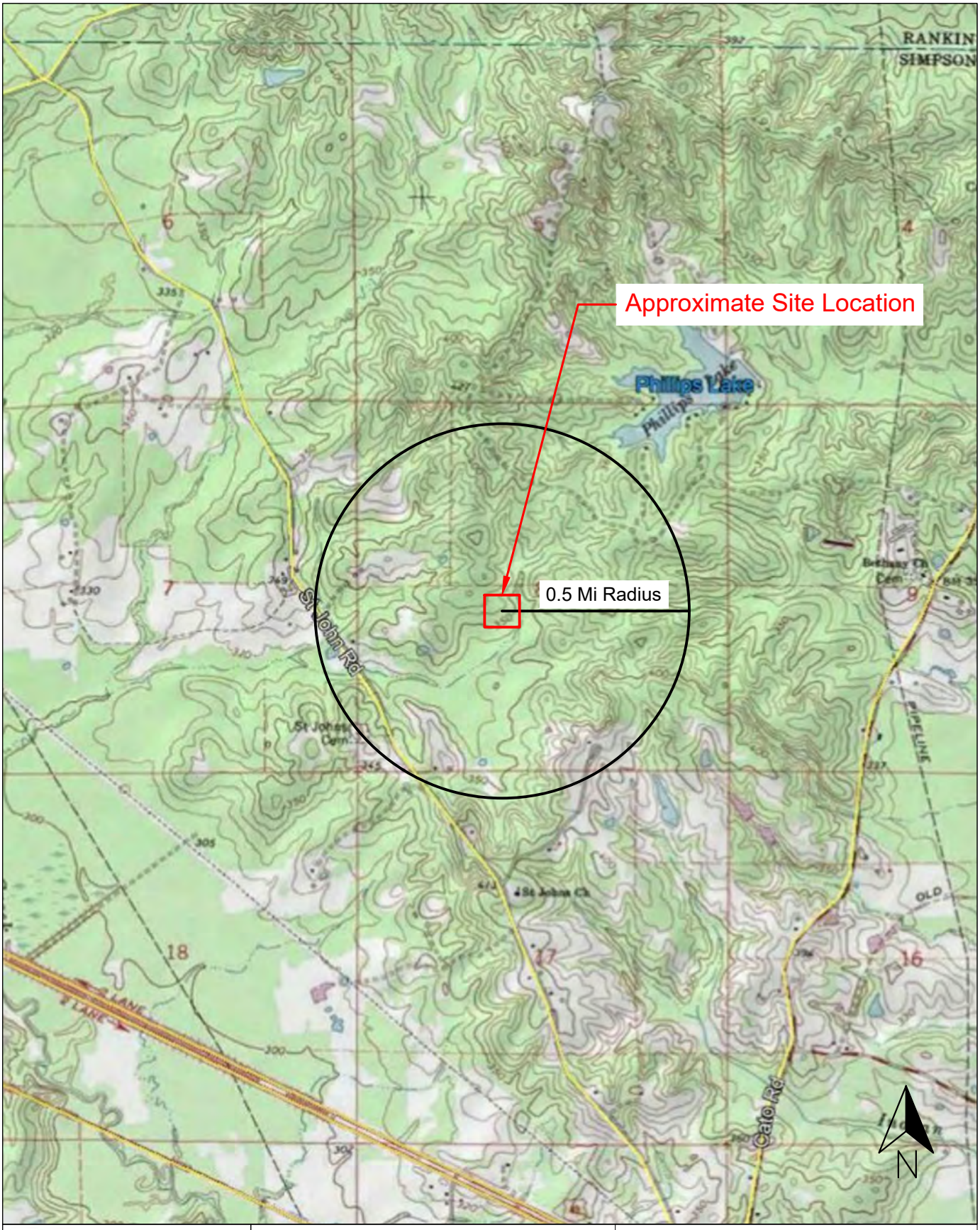
1. All regulated air pollutants including hazardous air pollutants emitted from this source should be listed in accordance with the OGP Application Instructions. A list of regulated air pollutants and a link to EPA's list of hazardous air pollutants is provided in the OGP Application Instructions.

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".

LIST OF FIGURES

FIGURE 1:

SITE TOPOGRAPHICAL MAP



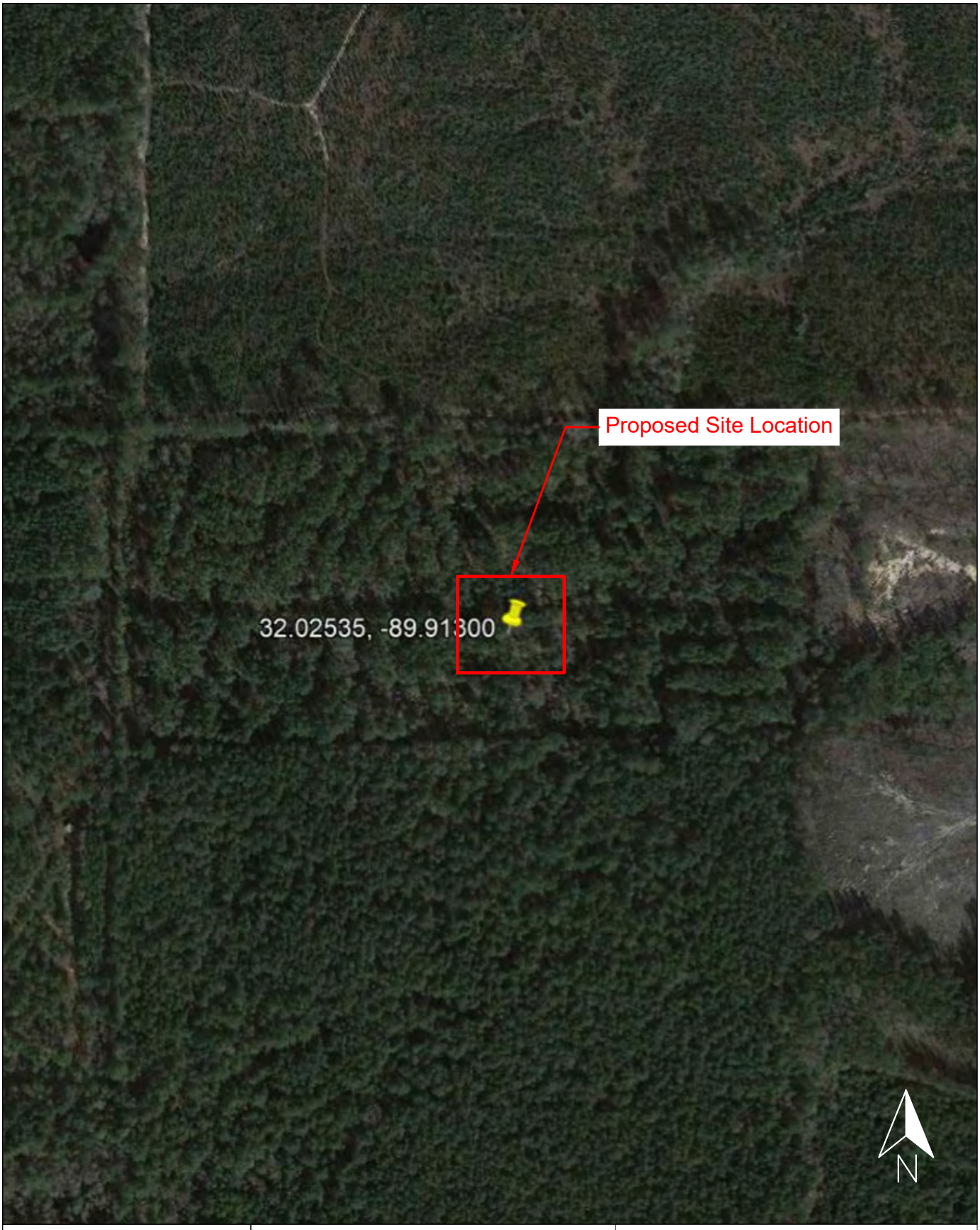
FC&E Engineering, LLC
Water ▪ Soils ▪ Air ▪ Compliance

Venture Oil & Gas, Inc.
Mitzi Shows 8-11 No. 1
32.02535, -89.91300
Simpson County, MS

Figure Number: 1
Figure Name: Site Topographic Map
Project: Permit Coverage App
Drawn By: TF
Date Drawn: 2/8/21

FIGURE 2:

SITE AERIAL VIEW



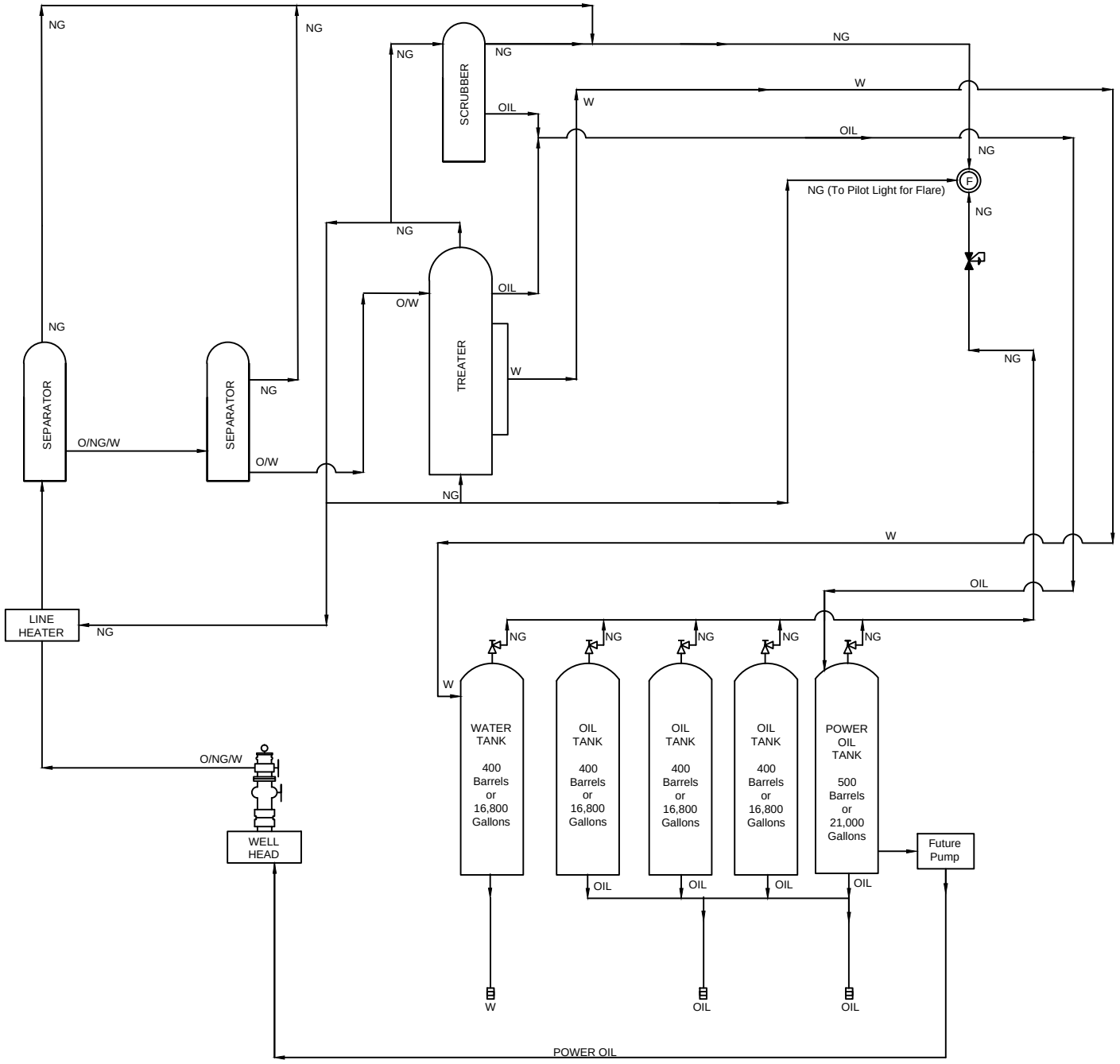
FC&E Engineering, LLC
Water ▪ Soils ▪ Air ▪ Compliance

Venture Oil & Gas, Inc.
Mitzi Shows 8-11 No. 1
32.02535, -89.91300
Simpson County, MS

Figure Number: 2
Figure Name: Site Aerial Map
Project: Permit Coverage App
Drawn By: TF
Date Drawn: 2/8/21

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.

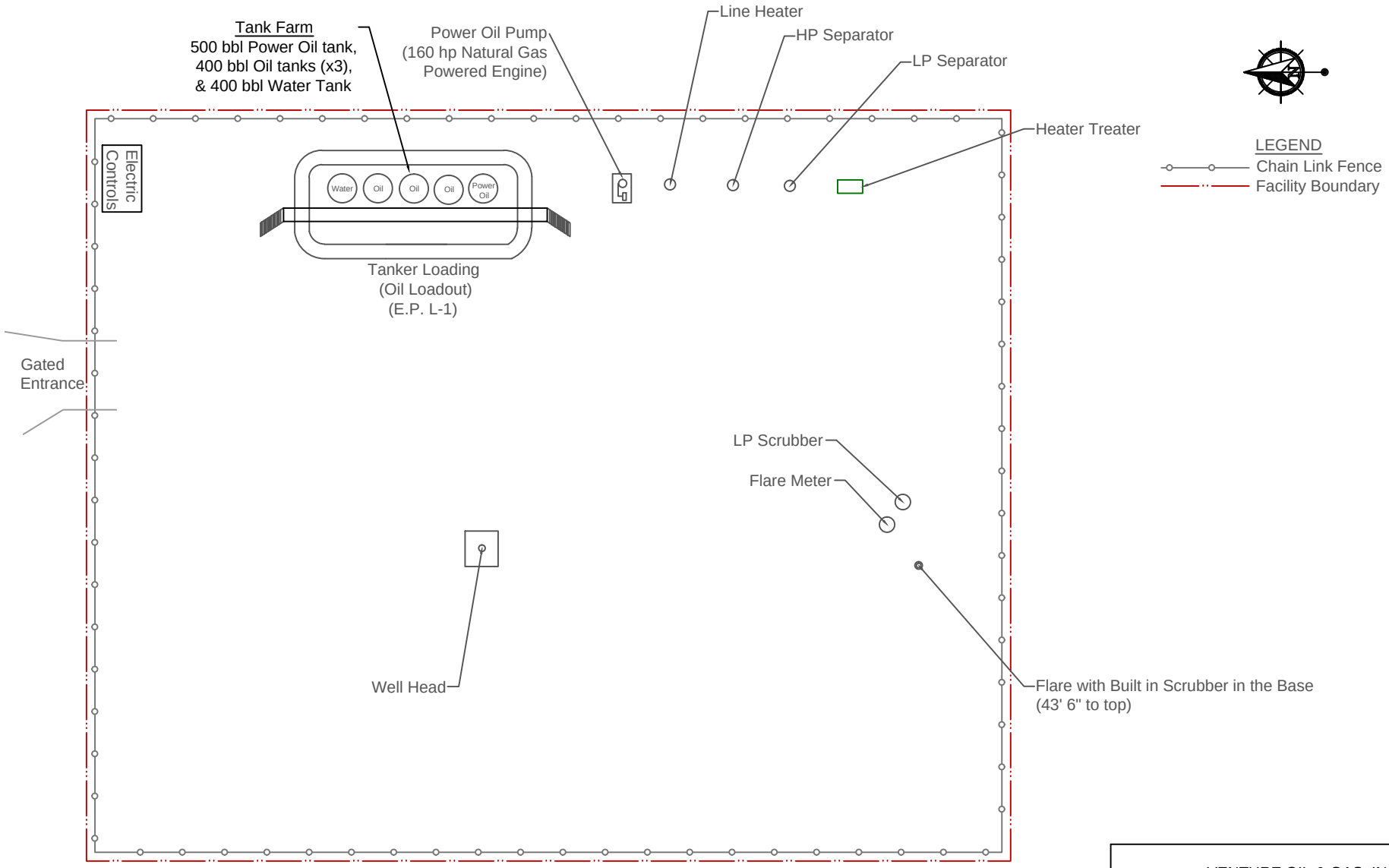
PROCESS FLOW DIAGRAM
Mitzi Shows 8-11 No 1
Simpson County, Mississippi

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

Drawn By: CC - Reviewed By: TC - Date Drawn: 2/9/2021

FIGURE 4:

SITE LAYOUT DIAGRAM



VENTURE OIL & GAS, INC.

EQUIPMENT LAYOUT
Mitzi Shows 8-11 No 1
Simpson County, Mississippi

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

Drawn By: CC - Reviewed By: TC - Date Drawn: 2/9/2021

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

ATTACHMENT A

Calculations for Venture Mitzi Shows 8-11 No. 1 Tank Battery

Site Information for Calculations

Site Name: Mitzi Shows No. 1 Tank Battery			
Potential Crude Production	73,000	bbl/yr	
Potential Gas production	91,250	mcf/yr	
Potential Produced Water	3,650	bbl/yr	
Initial Crude Production	200	bbl/day	(expected maximum daily production)
Initial Gas Production	250	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-002a	Compressor Engine	150	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	0.25	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	0.13	0.13	0.13	15.12	4.65	25.30	0.00	0.7538	8136.67	31.52	0.01	8928.66
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	0.051	0.104	0.104	0.16	11.83	19.91	0.003	0.1735	624.23	0.02	0.00	625.14
AA-002a	Compressor Engine	0.046	0.094	0.094	0.09	6.78	18.10	0.002	0.1577	567.48	0.01	0.00	568.10
AA-003	Fugitive emissions- equipment leaks	-	-	-	0.28	-	-	-	0.0159	0.03	0.01	0.00	0.29
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)	0.00408	0.01632	0.01632	0.01181	0.21471	0.18035	0.00129	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				11.17				0.2029	0.03	0.17	0	4.16
AA-010	Line Heater	0.00204	0.00816	0.00816	0.01	0.10735	0.09018	0.00064	0.0020	127.73	0.00	0.00	127.86
	Totals	**0.23**	**0.34**	**0.34**	**26.86**	**23.49**	**63.50**	**0.01**	**1.3274**	**9609.48**	**31.74**	**0.02**	**10407.68**

Notes:
Storage tanks emissions are included in flare emissions.

Potential Annual Emissions, uncontrolled

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	-	-	-	756.16	-	-	-	37.69	144.65	1981.27	0.00	49676.29
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-002a	Compressor Engine	0.046	0.094	0.094	0.14	10.75	18.10	0.003	0.16	567.48	0.01	0.00	568.07
AA-003	Fugitive emissions- equipment leaks	-	-	-	0.28	-	-	-	0.02	0.03	0.33	0.00	8.21
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	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 flare											
AA-009	Truck Loading				11.17				0.2029	0.03	0.17	0	4.16
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	**0.10**	**0.21**	**0.21**	**767.95**	**22.79**	**38.19**	**0.01**	**38.26**	**1568.65**	**1981.79**	**0.00**	**51114.08**

Notes:
Storage tanks emissions are included in flare emissions, AA-001.

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	3.45	1.06	5.78	0.00	0.17	1857.69	7.20	0.00	2038.51
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	0.01	0.00	142.73
AA-002a	Compressor Engine	0.01	0.02	0.02	0.03	2.45	4.13	0.00	0.04	129.56	0.00	0.00	129.70
AA-003	Fugitive emissions- equipment leaks	-	-	-	0.06	-	-	-	0.00	0.01	0.00	0.00	0.07
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	0.95
AA-010	Line Heater	0.00	0.00	0.00	0.00	0.02	0.02	0.00	0.0005	29.16	0.00	0.00	29.19
	Totals	**0.05**	**0.08**	**0.08**	**121.31**	**6.27**	**14.50**	**0.002**	**5.52**	**2193.95**	**7.25**	**0.00**	**2376.18**

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

4.38 tpy = 1 PPH

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	2.157%	4.579%
N2	None	0.891%	1.204%
Methane	None	81.104%	62.757%
Ethane	None	9.041%	13.112%
Propane	VOC	7.242%	7.242%
Isobutane	VOC	0.783%	2.195%
Butane	VOC	1.187%	3.328%
Isopentane	VOC	0.413%	1.437%
Pentane	VOC	0.371%	1.291%
Hexane	VOC	0.000%	0.565%
n-Hexane	VOC and HAP	0.136%	0.565%
Heptanes+	VOC	0.297%	2.290%
Benzene	VOC and HAP	0.042%	0.051%
Toluene	VOC and HAP	0.010%	0.039%
e-Benzene	VOC and HAP	0.001%	0.004%
Xylenes	VOC and HAP	0.007%	0.020%
Total VOC		6.807%	18.348%
Total HAP		0.196%	0.679%

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%	44.1	0.140414
N2	None	0.00%	0.00%	28.01	0
Methane	None	4.76%	1.35%	16.04	0.762878
Ethane	None	7.23%	3.86%	30.07	2.174783
Propane	VOC	24.31%	19.03%	44.1	10.72005
Isobutane	VOC	23.60%	24.34%	58.12	13.71649
Butane	VOC	14.17%	14.62%	58.12	8.235546
Isopentane	VOC	9.38%	12.01%	72.15	6.766083
Pentane	VOC	5.77%	7.39%	72.15	4.163055
Hexane	VOC	3.28%	5.02%	86.18	2.8286
Heptanes+	VOC	4.52%	8.03%	100.21	4.526586
Benzene	VOC and HAP	0.32%	0.44%	78.11	0.247531
Toluene	VOC and HAP	0.27%	0.44%	92.14	0.245092
e-Benzene	VOC and HAP	0.01%	0.02%	106.17	0.009449
Xylenes	VOC and HAP	0.12%	0.23%	106.16	0.129091
n-hexane		1.95%	2.98%	86.18	1.677235
Total VOC		85.75%	91.56%		56.34289
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 ,	5,385,712	SCF/yr	615	SCF/hr
Total flash gas ,	319.97	tpy	73.05	lb/hr
Total tank W&B loss	95,678	SCF/yr	11	SCF/hr
Total tank W &B losses	6.35	tpy	1.45	lb/hr
Total tank emissions	326.32	tpy	74.50	lb/hr
Tank emissions to flare	326.32	tpy	74.50	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 30-day Average Production Values

Gas Flow to Flare:

		Potential	
Flow to flare of tank flash gas	=	319.97	tpy
Flow to flare of tank W&B emissions		6.35	tpy
flow to flare from truck loading	=	0.00	tpy
Total process gas to flare	=	326.32	tpy
Produced gas to flare	=	3147.46	tpy
	=	91250.00	mcf/yr

Produced gas combustion heat	=	123461.25	MMBtu/yr
process gas combustion heat	=	13271.52	MMBtu/yr
flare gas combustion heat, total	=	136732.77	MMBtu/yr

			Potential Emissions				Potential Emissions
	Pollutant	Emission factor, lbs/MMBtu	lb/hr	tpy	Pollutant	lb/hr	tpy
	NOx	0.068	1.061	4.649	n-hexane	0.1318	0.5775
Calculation	CO	0.37	5.775	25.296	benzene	0.0154	0.0675
	PM	0.00186	0.003	0.127	e-benzene	0.0010	0.0044
	VOC	mass balance	3.453	15.123	toluene	0.0151	0.0660
	SO_2	mass balance	0.000	0.000	xylenes	0.0088	0.0385
	PM10/PM2.5	0.00745	0.116	0.509	Total HAPs	0.1721	0.7538

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.

ank Battery HAP emissions calculated using mass balance and 98% destruction efficiency
Oil General Permit Coverage Application

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	=	73.05	lbs/hr
Flow to flare of tank W&B emissions		1.45	lbs/hr
flow to flare from truck loading	=	0.00	lbs/hr
Total process gas to flare	=	74.50	lbs/hr
Produced gas to flare	=	718.60	lbs/hr
	=	10.42	mcf/hr

Produced gas combustion heat	=	14.09	MMBtu/hr
process gas combustion heat	=	1.52	MMBtu/hr
flare gas combustion heat, total	=	15.61	MMBtu/hr

			Maximum Hourly Emissions		Potential Emissions
	Pollutant	Emission factor, lbs/MMBtu	lb/hr	Pollutant	lb/hr
	NOx	0.068	1.061	n-hexane	0.1318
Calculation	CO	0.37	5.775	benzene	0.0154
	PM	0.00745	0.116	e-benzene	0.0010
	VOC	mass balance	3.453	toluene	0.0151
	SO_2	mass balance	0.000	xylenes	0.0088
				Total HAPs	0.1721

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	=	319.97 tpy
Flow to flare from tank W&B emissions	=	6.35
flow to flare from truck loading	=	0.00 tpy
Produced gas to flare from separators	=	3147.46 tpy

			Potential Emissions	
	Pollutant	Emission factor, lbs/MMBtu	lb/hr	tpy
	VOC	mass balance	172.640	756.16
	H2S	mass balance	0.000	0.00
	n-hexane	mass balance	6.592	28.87
	benzene	mass balance	0.771	3.38
	e-benzene	mass balance	0.050	0.22
	toluene	mass balance	0.753	3.30
Calculation	xylenes	mass balance	0.439	1.92
	total HAPs	mass balance	8.605	37.69
	methane	mass balance	452.344	1981.27
	CO2	mass balance	33.025	144.65

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

Calculation of Flare GHG Emissions

Process gas to flare, mmcf/yr	5.38
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
			1.13E+00	1.24E+04	2.62E-01	7.31E-04	7.91E+00
1	6.09E+05	3.52E+01	*				3.52E+01
2	6.84E+05	3.96E+01					3.96E+01
3	3.13E+06	1.81E+02					1.81E+02
4	6.91E+06	4.00E+02					4.00E+02
5+	7.04E+06	4.07E+02					4.07E+02
Total	1.84E+07	1.06E+03	1.13E+00	1.24E+04	2.62E-01	7.31E-04	1.07E+03

PRODUCED GAS

produced gas to flare, mmcf/yr	91.25

carbon atoms	CO2 (from combustion)		CO2 input	CH4, uncombusted		N2O	CO2e
	cubic ft.	tpy	tpy	cubic ft.	tpy	tpy	tpy
			1.14E+02	1.48E+06	3.13E+01	1.24E-02	8.99E+02
1	7.25E+07	4.20E+03					4.20E+03
2	1.62E+07	9.36E+02					9.36E+02
3	1.94E+07	1.12E+03					1.12E+03
4	7.05E+06	4.08E+02					4.08E+02
5+	5.10E+06	2.95E+02					2.95E+02
Total	1.20E+08	6.96E+03	1.14E+02	1.48E+06	3.13E+01	1.24E-02	7.86E+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:	**37**											
gas/vapor	24	0.027	0.044702609	0.18	0.008	0.04	0.68%	0.000	0.001	0.007087	0.097233	2.44
light oil[2]	13	0.05	0.04484058	0.54	0.024	0.11	5.34%	0.002	0.010	0.007109	0.088667	2.22
heavy oil	0	0.0005	0	0.18	0.000	0.00	0.68%	0.000	0.000	0	0	0.00
Pumps:			0	0.18			0.68%	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	0.18			0.68%	0.000	0.000	0	0	0.00
Flanges:	46		0	0.18			0.68%	0.000	0.000	0	0	0.00
gas/vapor		0	0	0.18	0.000	0.00	0.68%	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	0.001509	0.018825	0.47
heavy oil	0	0.0009	0	0.18	0.000	0.00	0.68%	0.000	0.000	0	0	0.00
Relief Valve:			0	0.18			0.68%	0.000	0.000	0	0	0.00
gas/vapor	4	0.04	0.011037681	0.18	0.002	0.01	0.68%	0.000	0.000	0.00175	0.021826	0.55
Connectors:	101		0	0.18			0.68%	0.000	0.000	0	0	0.00
gas/vapor	67	0.003	0.013866087	0.18	0.003	0.01	0.68%	0.000	0.000	0.002198	0.027418	0.69
light oil	34	0.007	0.016418551	0.73	0.012	0.05	1.66%	0.000	0.001	0.002603	0.032466	0.81
heavy oil	0	0.0003	0	0.18	0.000	0.02	0.68%	0.000	0.000	0	0	0.00
Other	1	0.3	0.020695652	0.18	0.004	0.02	1.66%	0.000	0.002	0.003281	0.040923	1.03
				Totals	**0.060**	**0.278**		**0.004**	**0.016**	**0.026**	**0.327**	**8.209**

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	0.00303	0.01327
benzene	0.00027	0.00120
ethyl benzene	0.00002	0.00009
toluene	0.00021	0.00092
xylene	0.00011	0.00047

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	1	12	0	57	4	0
dehydrator	0	0	0	0	0	0
total		37	46	101	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
AA-002a	150	1.11	10.75	0.14	18.10	0.00	0.05	0.09	0.09	567.48	1.07E-02	0.001	568.07
		Total	22.58	0.30	38.01	0.01	0.10	0.20	0.20	1191.71	0.02	0.00	1192.95

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		AA-002a HAP EMISSIONS	
		lbs/hr	tpy	lbs/hr	tpy
1,1,2,2-Tetrachloroethane	2.53E-05	3.09E-05	1.35E-04	2.81E-05	1.23E-04
1,1,2-Trichloroethane	1.53E-05	1.87E-05	8.19E-05	1.70E-05	7.44E-05
1,3-Butadiene	6.63E-04	8.10E-04	3.55E-03	7.36E-04	3.23E-03
1,3-Dichloropropene	1.27E-05	1.55E-05	6.80E-05	1.41E-05	6.18E-05
Acetaldehyde	2.79E-03	3.41E-03	1.49E-02	3.10E-03	1.36E-02
Acrolein	2.63E-03	3.21E-03	1.41E-02	2.92E-03	1.28E-02
Benzene	1.58E-03	1.93E-03	8.46E-03	1.75E-03	7.69E-03
Carbon Tetrachloride	1.77E-05	2.16E-05	9.47E-05	1.97E-05	8.61E-05
Chlorobenzene	1.29E-05	1.58E-05	6.90E-05	1.43E-05	6.28E-05
Chloroform	1.37E-05	1.67E-05	7.33E-05	1.52E-05	6.67E-05
Ethylbenzene	2.48E-05	3.03E-05	1.33E-04	2.75E-05	1.21E-04
Ethylene Dibromide	2.13E-05	2.60E-05	1.14E-04	2.37E-05	1.04E-04
Formaldehyde	2.05E-02	2.50E-02	1.10E-01	2.28E-02	9.97E-02
Methanol	3.06E-03	3.74E-03	1.64E-02	3.40E-03	1.49E-02
Methylene Chloride	4.12E-05	5.03E-05	2.20E-04	4.58E-05	2.00E-04
Naphthalene	9.71E-05	1.19E-04	5.20E-04	1.08E-04	4.72E-04
PAH	1.41E-04	1.72E-04	7.55E-04	1.57E-04	6.86E-04
Styrene	1.19E-05	1.45E-05	6.37E-05	1.32E-05	5.79E-05
Toluene	5.58E-04	6.82E-04	2.99E-03	6.20E-04	2.71E-03
Vinyl Chloride	7.18E-06	8.77E-06	3.84E-05	7.98E-06	3.49E-05
Xylene	1.95E-04	2.38E-04	1.04E-03	2.17E-04	9.49E-04
Total		3.96E-02	1.73E-01	3.60E-02	1.58E-01

AA-002 heat input= 1.22 mmBtu/hr
AA-002a heat input= 1.11 mmBtu/hr
annual operating hours= 8760
Emission factors from AP-42, Table 3.2-3

Truck Loading Emissions Calculations 30-Day Average production

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	3,066	16,000	7.96	127.30	12.20

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	0.05361
Toluene	0.053082
e-Benzene	0.002047
Xylenes	0.027959
n-hexane	0.363258
	0.499956

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 Mitzi Shows 8-11 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	0.000	127.73	0.00	0.00	127.86
Totals		0.006	0.024	0.024	0.322	0.271	0.018	0.002	0.004	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
annual operating hours= 8760
Emission factors from AP-42, Table 1.4-3

Venture Mitzi Shows 8-11 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 Mitzi Shows 8-11 No. 1
Date : 2021.01.08

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