

OIL PRODUCTION GENERAL PERMIT NOTICE OF INTENT

**BLACK SNAKE PETROLEUM LLC,
HOLLIMAN 18-5 NUMBER 1 FACILITY**

**Caledonia, Mississippi
Lowndes County**

May 2024

PREPARED BY:

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EXECUTIVE SUMMARY

Black Snake Petroleum LLC (Black Snake) owns and intends to operate the Holliman 18-5 Number 1 Facility for the purpose of oil production. The facility is located in Lowndes County, Mississippi. The site will include a conventional tank battery, heater treater, flare, and associated well pad activities. Consequently, Black Snake is requesting coverage under the State of Mississippi Oil Production General Permit (OPGP) and simultaneous termination of the facility's Air SMOP.

Due to the remote location of the well, no pipeline outlet exists for the gas. Therefore, Black Snake will flare all produced gas from the well via a conventional candlestick (open-tipped) flare. Black Snake will collect produced water into two (2) 400-bbl water tanks prior to offsite transport to a disposal well. Oil will be collected into two (2) 400-bbl oil storage tanks before being trucked to market. Emissions associated with truck loading are vented to the atmosphere. Black Snake may also operate various small chemical storage vessels, including totes and drums, which are typically associated with well pad activities. Black Snake will route all emissions from the oil storage tanks to the flare.

Black Snake is submitting the attached Notice of Intent (NOI) and associated information for issuance of coverage under the OPGP. Based on the facility's potential to emit, the facility's uncontrolled potential emissions of Volatile Organic Compounds (VOC) exceed the threshold limits to be classified as a True Minor Source. Therefore, Black Snake will restrict facility operations such that the flare is operated at all times during gas venting. Combustion of produced gas from the well and process gas from the oil storage tanks will ensure VOC emissions from the facility do not exceed the Air Title V Major Source threshold of 100 tons per year.

Black Snake will monitor the volume of gas produced by the well and will calculate the amount of gas emitted from the well and tanks that is routed to the flare. Black Snake will calculate corresponding monthly VOC emissions flared from the well's gas and from the process gas. A meter will measure monthly flow of produced gas to the flare. Monthly oil production records, gas metering, and/or 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.

Further, it has been determined the facility is not subject to any of the following federal regulations.

40 CFR 60, Subpart Kb

The oil and water storage tanks each qualify under 40 CFR 60.110b(d)(4) as a vessel with a design capacity less than or equal to 1,589.874 m³ (420,000 gallons) used for petroleum or condensate stored, processed, or treated prior to custody transfer. Therefore, the tanks are not subject to NSPS Kb.

40 CFR 60, Subpart OOOOa

The facility's oil storage tanks have uncontrolled VOC emissions that exceed the applicability threshold cited in 40 CFR 60.5365a of 6 tpy. Black Snake will route the oil storage tanks' emissions to the flare.

40 CFR 60, Subpart JJJJ

The facility will operate one 2014 (1) 10-horsepower natural gas-fired pump engine. The engine will comply as a certified engine.

Non-Applicability of All Other NSPS

NSPS standards are developed for particular industrial source categories. Other than the NSPS addressed above, the applicability of a particular NSPS to a facility can be readily ascertained based on the industrial source category covered. All other NSPS are categorically not applicable to the facility.

40 CFR 63, Subpart HH

There are no TEG dehydration units at the facility; therefore, the facility is not subject to NESHAP HH.

40 CFR 63, Subpart HHH

The facility is an area source; therefore, NESHAP HHH is not applicable to the facility.

40 CFR 63, Subpart ZZZZ

The facility will operate one (1) 10-horsepower gas-fired pump engine. The engine will meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under this part.

Non-Applicability of All Other NESHAP

As with the NSPS standards, NESHAP are primarily developed for particular industrial source categories. Therefore, the applicability of a particular NESHAP to a facility can be readily ascertained based on the industrial source category covered. The facility is not subject to any provisions of 40 CFR 61 or 40 CFR 63.

NOTICE OF INTENT (NOI) FORMS

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
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1. Name, Address, and Location of Facility

A. Owner/Company Name: Black Snake Petroleum, LLC

B. Facility Name(*if different than A. above*): Holliman 18-5 Number 1 Facility

C. Physical Address

1. Street Address: Shelton Road

2. City: Caledonia 3. State: MS

4. County: Lowndes 5. Zip Code: 39740

6. Telephone No.: N/A 7. Fax No.: N/A

8. Are facility records kept at this location? Yes No. Please complete Item 10 of this form.

D. Mailing Address

1. Street Address or P.O. Box: 1490 NorthBank Parkway, Ste. 248

2. City: Tuscaloosa 3. State: AL

4. Zip Code: 35406

E. Latitude/Longitude Data

1. Collection Point (*check one*):
 Site Entrance Other: Well location

2. Method of Collection (*check one*):
 GPS Specify coordinate system (NAD 83, etc.)
 Map Interpolation (Google Earth, etc.) Other: MSOGB

3. Latitude (*degrees/minutes/seconds*): 33° 40' 34.28"

4. Longitude (*degrees/minutes/seconds*): 88° 21' 54.03"

5. Elevation (*feet*): 240

2. Name and Address of Facility Contact

A. Name: Buddy Simonis Title: Owner

B. Mailing Address

1. Street Address or P.O. Box: 1490 NorthBank Parkway, Ste. 248

2. City: Tuscaloosa 3. State: AL

4. Zip Code: 35406 5. Email: alansimonis3@gmail.co

6. Telephone No.: 256-527-1138 7. Fax No.: N/A

TRM

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: _____ Title: _____

B. Mailing Address

1. Street Address or P.O. Box: _____

2. City: _____ 3. State: _____

4. Zip Code: _____ 5. Email: _____

6. Telephone No.: _____ 7. Fax No.: _____

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: Buddy Simonis Title: Owner

B. Mailing Address

1. Street Address or P.O. Box: 1490 NorthBank Parkway, Ste. 248

2. City: Tuscaloosa 3. State: AL

4. Zip Code: 35406 5. Email: alansimonis3@gmail.co

6. Telephone No.: 256-527-1138 7. Fax No.: _____

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)

- | | |
|--|---|
| <input checked="" type="checkbox"/> Initial Coverage | <input type="checkbox"/> Re-Coverage for existing Coverage |
| <input type="checkbox"/> Modification with Public Notice | <input type="checkbox"/> Modification without Public Notice |
| <input type="checkbox"/> 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 Facility:

Produced Material	Throughput	Units
Gas	0.2	MMCF/day
Oil	100	barrels/day
Water	tbd	barrels/day
Other (Specify)		

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

Produced Material	Throughput	Units
Flared Gas	0.2	MMCF/day
Oil	100	barrels/day
Water	tbd	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:	<u>1490 NorthBank Parkway, Ste. 248</u>		
2. City:	<u>Tuscaloosa</u>	3. State:	<u>AL</u>
4. County:	<u>Lowndes</u>	5. Zip Code:	<u>35406</u>
6. Telephone No.:	<u>256-527-1138</u>	7. Fax No.:	<u>N/A</u>

Records must be readily accessible in accordance with OPGP Condition 5.1.

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

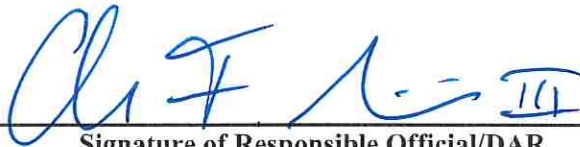
Facility (Agency Interest) Information

Section OPGP - A

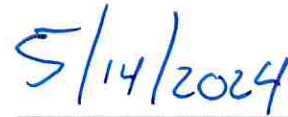
11. Certification

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.



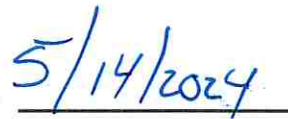
Signature of Responsible Official/DAR



Date



Printed Name



Date

Section OPGP-B.1: Maximum Uncontrolled Emissions (under normal operating conditions)
**MDEQ NOTICE OF INTENT FOR COVERAGE UNDER THE OIL PRODUCTION GENERAL PERMIT TO
 CONSTRUCT/OPERATE AIR EMISSIONS EQUIPMENT AT A SYNTHETIC MINOR SOURCE**

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 OGP-B.3 and GHGs in Section OGP-B.4. Emission Point numbering must be consistent throughout the application package. 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		NO _x		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
E1	---	---	---	---	---	---	---	---	---	---	---	---	77.74	340.50	16.25	71.16	0.00	0.00	16.25	71.16
E2	---	---	---	---	---	---	---	---	---	---	---	---	2.11	9.25	0.21	0.93	0.00	0.00	0.21	0.93
E3	---	---	---	---	---	---	---	---	---	---	---	---	0.03	0.14	0.01	0.03	0.00	0.00	0.01	0.03
E4	---	---	---	---	---	---	---	---	---	---	---	---	8.41	34.97	0.85	3.53	0.00	0.00	0.85	3.53
E5	0.00	0.01	0.00	0.01	0.00	0.01	0.00	0.00	0.05	0.21	0.04	0.18	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
E6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.16	0.70	0.26	1.14	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.01
Totals	0.00	0.02	0.00	0.02	0.00	0.02	0.00	0.01	0.21	0.91	0.30	1.32	88.30	384.89	17.32	75.67	0.00	0.00	17.32	75.67

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 (H₂S), methyl mercaptan (CH₄S), dimethyl sulfide (C₂H₆S), and dimethyl disulfide (C₂H₆S₂).

Section OPGP-B.2: Proposed Allowable Emissions

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

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. 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		NO _x		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
E1	0.08	0.34	0.08	0.34	0.08	0.34	0.00	0.00	0.70	3.07	3.19	13.99	1.55	6.81	0.00	0.00	0.00	0.00
E2	---	---	---	---	---	---	---	---	---	---	---	---	2.11	9.25	0.00	0.00	0.00	0.00
E3	---	---	---	---	---	---	---	---	---	---	---	---	0.03	0.14	0.00	0.00	0.00	0.00
E4	---	---	---	---	---	---	---	---	---	---	---	---	0.17	0.74	0.00	0.00	0.00	0.00
E5	0.00	0.01	0.00	0.01	0.00	0.01	0.00	0.00	0.05	0.21	0.04	0.18	0.00	0.01	0.00	0.00	0.00	0.00
E6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.16	0.70	0.26	1.14	0.00	0.01	0.00	0.00	0.00	0.00
Totals	0.08	0.35	0.08	0.35	0.08	0.35	0.00	0.01	0.91	3.98	3.49	15.31	3.87	16.96	0.00	0.01	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 (H₂S), methyl mercaptan (CH₄S), dimethyl sulfide (C₂H₆S), and dimethyl disulfide (C₂H₆S₂).

Section OPGP-B.3: Proposed Allowable Hazardous Air Pollutants (HAPs)
MDEQ NOTICE OF INTENT FOR COVERAGE UNDER THE OIL PRODUCTION GENERAL PERMIT TO
CONSTRUCT/OPERATE AIR EMISSIONS EQUIPMENT AT A SYNTHETIC MINOR SOURCE

In the table below, report the Proposed Allowable Emissions (Potential to Emit) for each HAP from each regulated emission unit if the HAP > 0.01 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. 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		n-Hexane		formaldehyde													
	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
E1	0.32	1.42	0.32	1.42	0.00	0.00												
E2	0.21	0.93	0.21	0.93	0.00	0.00												
E3	0.01	0.03	0.01	0.03	0.00	0.00												
E4	0.02	0.07	0.02	0.07	0.00	0.00												
E5	0.00	0.00	0.00	0.00	0.00	0.00												
E6	0.00	0.01	0.00	0.00	0.00	0.01												
Totals:	0.56	2.47	0.56	2.46	0.00	0.01												

Section OPGP-B.4: Greenhouse Gas Emissions

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

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 ₂ O ton/yr	CH ₄ ton/yr	SF ₆ ton/yr	PFC/HFC ³ ton/yr					Total GHG Mass Basis ton/yr ⁵	Total CO ₂ e ton/yr ⁶
Emission Point ID	GWPs¹	1	1	298	25	22,800	footnote 4						
E1	mass GHG	7996.78	0	0.01	32.48	0	0					8029.27	N/A
	CO₂e	7996.78	0	2.98	812.00	0	0					N/A	8811.76
E5	mass GHG	256.11	0	0.00	0.00	0	0					256.12	N/A
	CO₂e	256.11	0	0.14	0.12	0	0					N/A	256.37
E6	mass GHG	0.00	0	0.00	0.17	0	0					0.17	N/A
	CO₂e	0.00	0	0.00	4.28	0	0					N/A	4.28
FACILITY TOTAL	mass GHG	8252.89	0	0.01	32.66	0.00	0.00					8285.56	N/A
	CO₂e	8252.89	0	3.12	816.40	0.00	0.00					N/A	9,072

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 CO₂ in this total.

⁶ **CO₂e** means Carbon Dioxide Equivalent and is calculated by multiplying the TPY mass emissions of the greenhouse gas by its GWP. Do not include biogenic CO₂e in this total.

Section OPGP-B.5: Stack Parameters and Exit Conditions
MDEQ NOTICE OF INTENT FOR COVERAGE UNDER THE OIL PRODUCTION GENERAL PERMIT TO
CONSTRUCT/OPERATE AIR EMISSIONS EQUIPMENT AT A SYNTHETIC MINOR SOURCE

Emission Point numbering must be consistent throughout the application package.

Emission Point ID	Orientation (H=Horizontal V=Vertical)	Rain Caps	Height Above Ground	Base Elevation	Exit Temp.	Inside Diameter or Dimensions	Velocity	Moisture by Volume	Geographic Position (degrees/minutes/seconds)	
		(Yes or No)	(ft)	(ft)	(°F)	(ft)	(ft/sec)	(%)	Latitude	Longitude
E1	V	No	20	240	est. 1600	0.5	2	<1	TBD	TBD
E2	Truck Loading Activities - No dedicated stack									
E3	Fugitive Equipment Leaks - No dedicated stack									
E4	Oil Tanks routed to Flare; Water Tanks - No dedicated stacks									
E5	V	No	N/A	240	~75	~0.5	1-5	<1	TBD	TBD
E6	V	No	N/A	240	~600	~0.3	1-5	<1	TBD	TBD

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

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

Fuel Burning Equipment – External Combustion Sources

Section OPGP-C

1. Emission Point Description

- A. Emission Point Designation (Ref. No.): E5
- B. Equipment Description: One (1) Heater Treater, with a 0.5 MMBTUH burner.
- C. Manufacturer: Custom D. Date of Manufacture and No.: Pre-2015
- E. Maximum Heat Input (higher heating value): 0.5 MMBtu/hr F. Nominal Heat Input Capacity: 1.0 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	4.36 MMCF

Please list any fuel components that are hazardous air pollutants and the percentage in the fuel:
HAP constituency of the well's produced gas is speciated in the attached gas analysis.

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

Fuel Burning Equipment – External Combustion Sources

Section OPGP-C

1. Emission Point Description

- A. Emission Point Designation (Ref. No.): E1
- B. Equipment Description: One (1) flare for flaring gas, including a 0.05 MMBTUH Field-Gas Fired Pilot.
- C. Manufacturer: custom D. Date of Manufacture and No.: Pre-2015
- E. Maximum Heat Input (higher heating value): 0.05 MMBtu/hr F. Nominal Heat Input Capacity: 0.05 MMBtu/hr
- G. Use: Line Heater Heater Treater TEG Burner
 Space Heat Process Heat Other (describe): Flare Pilot
- 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	varies	varies

Please list any fuel components that are hazardous air pollutants and the percentage in the fuel:
HAP constituency of the well's produced gas is speciated in the attached gas analysis.

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

Fuel Burning Equipment – Internal Combustion Engines

Section OPGP- D

1. Emission Point Description

- A. Emission Point Designation (Ref. No.): E6
- B. Equipment Description (including serial number): Pump Engine
- C. Manufacturer: Arrow D. Date of Manufacture and Model No.: 2014 / C-46
- E. Maximum Heat Input (higher heating value): 0.07 MMBtu/hr
- F. Rated Power: 10 hp --- kW
- G. Is the engine an EPA-certified engine? Yes 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: 2024

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
Natural (Field) Gas	1000 BTU/SCF	0.00	0.00	84	0.7 MMCF

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.): E4 (Oil Storage Tank No. 1 of 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: 2024

2. Tank Data

- A. Tank Specifications:
- | | | | |
|---|---------------|----------|-------------------|
| 1. Design capacity | <u>16,800</u> | gallons | |
| 2. True vapor pressure at storage temperature: | <u>3.54</u> | psia @ | <u>65</u> °F |
| 3. Maximum true vapor pressure (as defined in §60.111b) | <u>4.28</u> | psia @ | <u>65</u> °F |
| 4. Reid vapor pressure at storage temperature: | <u>11.5</u> | psia @ | <u>ambient</u> °F |
| 5. Density of product at storage temperature: | <u>5.9</u> | lb/gal | |
| 6. Molecular weight of product vapor at storage temp. | <u>50</u> | 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 are vented to the flare.
- 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: _____ 24 feet
 2. Shell Diameter: _____ 11 feet
 3. Maximum Liquid Height: _____ 24 feet
 4. Average Liquid Height: _____ ~10 feet
 5. Working Volume: _____ 16,800 gal
 6. Turnovers per year: _____ ~45 (est. for each oil storage tank)
 7. Maximum throughput: _____ 36,500 bbl/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: _____ 24.5 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 Guniting 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 Guniting Lining

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

Tank Summary

Section OPGP-E

6. External Floating Roof Tank (continued)

A. Tank Characteristics (continued):

6. Paint Color/Shade:

- White/White Aluminum/Specular Aluminum/Diffuse
 Gray/Light Gray/Medium Red/Primer

7. Paint Condition: Good Poor

B. Roof Characteristics

1. Roof Type: Pontoon Double Deck

2. Roof Fitting Category: Typical Detail

C. Tank Construction and Rim-Seal System:

1. Tank Construction: Welded Riveted

2. Primary Seal:

- Mechanical Shoe Liquid-mounted Vapor-mounted

3. Secondary Seal

- None Shoe-mounted Rim-mounted Weather shield

7. Pollutant Emissions

A. Fixed Roof Emissions:

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

B. Floating Roof Emissions:

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

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

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

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

Tank Summary

Section OPGP-E

1. Emission Point Description

- A. Emission Point Designation (Ref. No.): E4 (Oil Storage Tank No. 2 of 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: 2024

2. Tank Data

- A. Tank Specifications:
- | | | | |
|---|---------------|----------|-------------------|
| 1. Design capacity | <u>16,800</u> | gallons | |
| 2. True vapor pressure at storage temperature: | <u>3.54</u> | psia @ | <u>65</u> °F |
| 3. Maximum true vapor pressure (as defined in §60.111b) | <u>4.28</u> | psia @ | <u>65</u> °F |
| 4. Reid vapor pressure at storage temperature: | <u>11.5</u> | psia @ | <u>ambient</u> °F |
| 5. Density of product at storage temperature: | <u>5.9</u> | lb/gal | |
| 6. Molecular weight of product vapor at storage temp. | <u>50</u> | 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 are vented to the flare.
- 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: _____ 24 feet
 2. Shell Diameter: _____ 11 feet
 3. Maximum Liquid Height: _____ 24 feet
 4. Average Liquid Height: _____ ~10 feet
 5. Working Volume: _____ 16,800 gal
 6. Turnovers per year: _____ ~45 (est. for each oil storage tank)
 7. Maximum throughput: _____ 36,500 bbl/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: _____ 24.5 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 Guniting 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 Guniting Lining

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

Tank Summary

Section OPGP-E

6. External Floating Roof Tank (continued)

A. Tank Characteristics (continued):

6. Paint Color/Shade:

- White/White Aluminum/Specular Aluminum/Diffuse
 Gray/Light Gray/Medium Red/Primer

7. Paint Condition: Good Poor

B. Roof Characteristics

1. Roof Type: Pontoon Double Deck

2. Roof Fitting Category: Typical Detail

C. Tank Construction and Rim-Seal System:

1. Tank Construction: Welded Riveted

2. Primary Seal:

- Mechanical Shoe Liquid-mounted Vapor-mounted

3. Secondary Seal

- None Shoe-mounted Rim-mounted Weather shield

7. Pollutant Emissions

A. Fixed Roof Emissions:

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

B. Floating Roof Emissions:

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

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

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

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

Tank Summary

Section OPGP-E

1. Emission Point Description

- A. Emission Point Designation (Ref. No.): E4 (Water Storage Tank No. 1 of 2)
- 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: 2024

2. Tank Data

- A. Tank Specifications:
- | | | | |
|---|---------------|----------|-------------------|
| 1. Design capacity | <u>16,800</u> | gallons | |
| 2. True vapor pressure at storage temperature: | <u>1.15</u> | psia @ | <u>ambient</u> °F |
| 3. Maximum true vapor pressure (as defined in §60.111b) | <u>1.15</u> | psia @ | <u>ambient</u> °F |
| 4. Reid vapor pressure at storage temperature: | <u>1.15</u> | psia @ | <u>ambient</u> °F |
| 5. Density of product at storage temperature: | <u>7.2</u> | lb/gal | |
| 6. Molecular weight of product vapor at storage temp. | <u>50</u> | 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 are vented to the flare.
- 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: _____ <10 _____
 7. Maximum throughput: _____ 3,650 _____ bbl/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 Guniting 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 Guniting 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			0.0379
HAPs			0.0036

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.): E4 (Water Storage Tank No. 2 of 2)
- 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: 2024

2. Tank Data

- A. Tank Specifications:
- | | | | |
|---|---------------|----------|-------------------|
| 1. Design capacity | <u>16,800</u> | gallons | |
| 2. True vapor pressure at storage temperature: | <u>1.15</u> | psia @ | <u>ambient</u> °F |
| 3. Maximum true vapor pressure (as defined in §60.111b) | <u>1.15</u> | psia @ | <u>ambient</u> °F |
| 4. Reid vapor pressure at storage temperature: | <u>1.15</u> | psia @ | <u>ambient</u> °F |
| 5. Density of product at storage temperature: | <u>7.2</u> | lb/gal | |
| 6. Molecular weight of product vapor at storage temp. | <u>50</u> | 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 are vented to the flare.
- 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: _____ <10 _____
 7. Maximum throughput: _____ 3,650 _____ bbl/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 Guniting 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 Guniting 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			0.0379
HAPs			0.0036

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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Flare

Section OPGP-F

1. Equipment Description

- A. Emission Point Designation (Ref. No.): E1
- B. Equipment Description (include the process(es) that the flare controls emissions from): The flare is utilized to combust all produced gas from the well and to combust emissions from the oil 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: > 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: _____
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 OOOO	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
<i>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.</i>				
Flare	11 Miss. Admin. Code Pt. 2, R.1.4.B(2). and OPGP conditions	2024	2024	N/A
Tanks	40 CFR 60, Subpart OOOOa (Applicability only-no requirements since tank emissions are controlled)	2024	2024	N/A
Engine	40 CFR 60, Subpart JJJJ	2024	2024	N/A

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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 ₂ S	1 grain H ₂ S per 100 standard cubic feet (1 gr/100 scf)	Recordkeeping of H ₂ S 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.

Flare	11 Miss. Admin. Code Pt. 2, R.1.4.B(2). and OPGP Condition 3.7	H ₂ S	1 grain H ₂ S per 100 standard cubic feet (1 gr/100 scf)	Recordkeeping of H ₂ S composition of gas by gas analysis; Maintenance of continuous flame for gas combustion while emissions are routed to the flare via auto igniter.
Flare	OPGP Condition 3.10	VOC	Shall route all produced gas to the flare for control of emissions.	Monitoring of Operations
Flare	OPGP Condition 3.11.a.	VOC	The flare shall be operated at all times when emissions may be vented to it.	Monitoring of Operations

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Section OPGP-G

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EMISSION UNIT (Ref No.)	APPLICABLE REQUIREMENT (Specific Regulatory citation)	POLLUTANT	LIMITS/ REQUIREMENTS	TEST METHOD/ COMPLIANCE MONITORING
Flare	OPGP Condition 3.11.b.	VOC	The flare shall be operated and maintained according to the manufacturer's recommendations	Monitoring of Operations
Flare	OPGP Condition 3.11.c.	VOC	The flare shall be operated with no visible emissions as determined by EPA Method 22, except for periods not to exceed a total of five (5) minutes during any two (2) consecutive hours.	VEEs
Flare	OPGP Condition 3.11.d.	VOC	The permittee shall maintain a flare pilot flame or auto-igniter system at all times when emissions may be vented to the flare.	Monitoring of Operations
Flare	OPGP Condition 3.11.e.	VOC	The flare shall only be used with a combustion gas mixture whose net heating value is 300 BTU/scf or greater if the flare is air or steam-assisted. If the flare is non-assisted, the flare shall only be used with a combustion gas mixture whose net heating value is 200 BTU/scf or greater.	Gas Analyses
Flare	OPGP Condition 5.3	VOC	An annual gas analysis of the produced gas routed to the flare shall be taken.	Annual Gas Analysis Sampling
Flare	OPGP Condition 5.6.a-b	VOC	Shall continuously monitor and record the presence of the flare pilot flame by use of a thermocouple or any other equivalent device to detect the presence of a flame, or shall continuously maintain and operate an auto-igniter system on the flare to ensure a flame is immediately restored when emissions are being sent to the flare	Auto ignition device is installed.

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Section OPGP-G

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EMISSION UNIT (Ref No.)	APPLICABLE REQUIREMENT (Specific Regulatory citation)	POLLUTANT	LIMITS/ REQUIREMENTS	TEST METHOD/ COMPLIANCE MONITORING
Flare	OPGP Condition 5.6.c	VOC	<p>Shall demonstrate initial compliance with the visible emissions limit in Condition 3.11.c. within ninety (90) days of initial issuance of coverage by conducting an EPA Method 22 test for a period of two (2) consecutive hours. Gas flow rate to the flare shall be monitored and records kept of the gas flow rate to the flare during the test.</p> <p>Corrective action shall be taken immediately if the VE limit in Condition 3.11.c. is not met during the Method 22 test. Immediately following completion of the corrective action(s), a follow-up two-hour EPA Method 22 test must be conducted.</p>	2-hour Method 22 VEE will be completed within ninety (90) days of initial issuance of coverage.
Flare	OPGP Condition 5.6.d	VOC	<p>Shall perform monthly VE tests for a minimum of fifteen (15) minutes using EPA Method 22.</p> <p>If VE are observed for a period greater than one (1) minute, corrective action shall be taken immediately. Immediately following the corrective action(s), a follow-up two-hour EPA Method 22 test must be conducted. The monthly VE tests shall be separated by at least fifteen (15) days between each test.</p>	15-minute Method 22 VEE will be completed monthly
Flare	OPGP Condition 5.7.a	VOC	Shall maintain a copy of the flare manufacturer operating and maintenance recommendations and detailed records	Records will be kept.

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Section OPGP-G

Part 2. Applicable Requirements

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EMISSION UNIT (Ref No.)	APPLICABLE REQUIREMENT (Specific Regulatory citation)	POLLUTANT	LIMITS/ REQUIREMENTS	TEST METHOD/ COMPLIANCE MONITORING
			of all maintenance performed on the flare.	
Flare	OPGP Condition 5.7.b	VOC	Shall maintain continuous records of the thermocouple or equivalent device output demonstrating the presence of a flame in the control flare whenever the facility is in operation.	Records will be kept.
Flare	OPGP Condition 5.7.c	VOC	Shall maintain records of all EPA Method 22 tests, and details of any corrective/preventative action(s) taken.	Records will be kept.
Flare	OPGP Condition 5.7.d	VOC	Shall maintain records of all gas analyses performed to determine the net heating value of the gas being combusted in the flare.	Records will be kept.
Flare	OPGP Condition 5.7.e	VOC	Shall maintain records of any instances in which the auto-igniter system did not function, the date and times of the occurrence, the corrective actions taken, preventative measures adopted to prevent reoccurrence, all instances of alarm activation, including the date and cause of alarm activation, actions taken to bring the flare into normal operating conditions, and any maintenance activities conducted on the auto-igniter system.	Records will be kept.
Flare	OPGP Condition 6.2.b	VOC	Shall include all produced gas analyses performed during the reporting period in the certified annual synthetic minor monitoring report	Data shall be included in the annual SMOP compliance report

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Section OPGP-G

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EMISSION UNIT (Ref No.)	APPLICABLE REQUIREMENT (Specific Regulatory citation)	POLLUTANT	LIMITS/ REQUIREMENTS	TEST METHOD/ COMPLIANCE MONITORING
Flare	OPGP Condition 6.2.c	VOC	Shall include details of any periods where the pilot flame was not present or the auto-igniter system was not operational, including date, start and end times, duration, cause, corrective and preventative actions taken, and whether or not any gases were being vented to the flare, in the certified annual synthetic minor monitoring report	Data shall be included in the annual SMOP compliance report
Flare	OPGP Condition 6.2.d	VOC	Shall include copies of data sheets for all EPA Method 22 tests performed during the reporting period, including data on gas flow rate to the flare where required by Conditions 5.7.c. & d., and details of any accompanying corrective and preventative actions taken, in the certified annual synthetic minor monitoring report	Data shall be included in the annual SMOP compliance report
Flare	OPGP Condition 6.2.e	VOC	Shall include continuous pilot flame monitor downtime data: monitor downtime event date, start and end times, duration, cause, corrective and preventive actions taken, and total duration monitor downtime for the reporting period, in the certified annual synthetic minor monitoring report	Data shall be included in the annual SMOP compliance report
Flare	OPGP Condition 6.2.f	VOC	Shall include Auto-igniter system data: report of any instances in which the auto-igniter system did not function, the date and times of the occurrence, the corrective actions taken, preventative measures adopted to prevent	Data shall be included in the annual SMOP compliance report

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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
			reoccurrence, all instances of alarm activation, including the date and cause of alarm activation, actions taken to bring the flare into normal operating conditions, and any maintenance activities conducted on the auto-igniter system, in the certified annual synthetic minor monitoring report	
Oil Tanks	40 CFR 60.5395a(a)(1)	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.
Engine	40 CFR 63.6590(c)(1)	HAPs	Must meet Subpart ZZZZ requirements by meeting the requirements of 40 CFR part 60 subpart JJJJ.	Certified Engine

APPENDIX A: EMISSIONS CALCULATIONS

Emission Unit ID	Emission Unit Description	Facility-Wide Controlled Pollutant Emissions													
		PM10		SO2		NOx		CO		VOC		HAPs		n-Hexane	
		lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
E1	Flare	0.08	0.34	0.00	0.00	0.70	3.07	3.19	13.99	1.55	6.81	0.32	1.42	0.32	1.42
E2	Truck Loading	---	---	---	---	---	---	---	---	2.11	9.25	0.21	0.93	0.21	0.93
E3	Fugitives	---	---	---	---	---	---	---	---	0.03	0.14	0.01	0.03	0.01	0.03
E4	Tanks	---	---	---	---	---	---	---	---	0.17	0.74	0.02	0.07	0.02	0.07
E5	Heater Treater Burner	0.00	0.01	0.00	0.00	0.05	0.21	0.04	0.18	0.00	0.01	0.00	0.00	0.00	0.00
E6	Engine	0.00	0.00	0.00	0.01	0.16	0.70	0.26	1.14	0.00	0.01	0.00	0.01	0.00	0.00
Totals		0.08	0.35	0.00	0.01	0.91	3.98	3.49	15.31	3.87	16.96	0.56	2.47	0.56	2.46

Emission Unit ID	Emission Unit Description	Facility-Wide Uncontrolled Pollutant Emissions													
		PM10		SO2		NOx		CO		VOC		HAPs		n-Hexane	
		lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
E1	Flare	---	---	---	---	---	---	---	---	77.79	340.71	16.25	71.16	16.25	71.16
E2	Truck Loading	---	---	---	---	---	---	---	---	2.11	9.25	0.21	0.93	0.21	0.93
E3	Fugitives	---	---	---	---	---	---	---	---	0.03	0.14	0.01	0.03	0.01	0.03
E4	Tanks	---	---	---	---	---	---	---	---	8.41	34.97	0.85	3.53	0.85	3.53
E5	Heater Treater Burner	0.00	0.01	0.00	0.00	0.05	0.21	0.04	0.18	0.00	0.01	0.00	0.00	0.00	0.00
E6	Engine	0.00	0.00	0.00	0.01	0.16	0.70	0.26	1.14	0.00	0.01	0.00	0.01	0.00	0.00
Totals		0.00	0.02	0.00	0.01	0.21	0.91	0.30	1.32	88.34	385.10	17.32	75.67	17.31	75.66

Flare

The following calculations represent emissions from produced gas from the Holliman 18-5-1 well.

Gas Production (Flow to Flare): 200 MCF/Day
 73,000 MCF/Year

	Potential	<u>Sample Calculations</u>
Total produced gas to flare =	1,914.1 tpy	73000 MCF/Yr x 1,000 CF/MCF x 1 mole/ 379.5 cf x 19.901784 lb/mole / 2000 lb/ton
Produced gas combustion heat =	90,228.0 MMBtu/yr	73000 MCF/Yr x 1,000 CF/MCF x 1236 BTU/CF / 1,000,000 BTU/MMBTU
Total flare combustion heat =	90,228.0 MMBtu/yr	
Total flare combustion heat =	10.30 MMBtu/hr	

<u>Pollutant</u>	<u>Emission factor, lbs/MMBtu</u>	<u>Controlled PTE</u>		<u>Sample Calculations</u>	<u>Uncontrolled PTE</u>	
		lb/hr	tpy		lb/hr	tpy
NOx	0.068	0.70	3.07	90228 MMBTU/yr x 0.068 lb/MMBTU / 2,000 lb/ton		
CO	0.31	3.19	13.99	90228 MMBTU/yr x 0.31 lb/MMBTU / 2,000 lb/ton		
PM	0.00745	0.08	0.34	90228 MMBTU/yr x 0.00745 lb/MMBTU / 2,000 lb/ton		
VOC	mass balance	1.55	6.81			
HAP	mass balance	0.32	1.42			
SO2	mass balance	0.00	0.00			
H2S	mass balance	0.00	0.00			

Notes:

- 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.
- Mass balance calculations utilize produced gas flow only (no process gas) and a minimum flare destruction efficiency of 98%.

Sample Calculations:

$$\text{VOC} = 1914.1 \text{ tpy Produced Gas} \times 0.178 \text{ wt. fraction VOC} \times (1.0 - 0.98, \text{ combust. effic.}) = 6.81 \text{ tpy}$$

where 0.233 is the VOC weight fraction of produced gas

$$\text{SO}_2 = 200 \text{ MCF/Day} \times 365 \text{ Days/Year} \times 1,000 \text{ CF/MCF} \times 1 \text{ mole gas/379.5 CF gas} \times 0.00 \text{ mole \% H}_2\text{S} \times 64.08 \text{ lb/mole} \times 1 \text{ ton/2,000 lb} \times 98 \text{ (combust. effic.)/100} = 0.00 \text{ tpy}$$

$$\text{H}_2\text{S} = 200 \text{ MCF/Day} \times 365 \text{ Days/Year} \times 1,000 \text{ CF/MCF} \times 1 \text{ mole gas/379.5 CF gas} \times 0.00 \text{ mole \% H}_2\text{S} \times 34.08 \text{ lb/mole} \times 1 \text{ ton/2,000 lb} \times 2 \text{ (combust. effic.)/100} = 0.00 \text{ tpy}$$

$$\text{HAPs} = 6.81 \text{ TPY VOC} \times 0.209 = 1.42 \text{ tpy}$$

where 0.099 is the HAP to VOC weight ratio

Truck Loading Emissions Calculations

$$L_L = 12.46 \cdot (SPM)/T \quad (\text{from EPA AP-42 Section 5.2.2.1})$$

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

EPA "S" Factor	True VP of Liquid	Mol. Wt. Of Vapors	Temp. of Liquid	Sales Volume	Loading Rate	Uncontrolled Estimated Emissions, Total Hydrocarbons			Uncontrolled VOC Emissions	Uncontrolled HAP Emissions
	(psia)	(lb/lb-mole)	(R)	(10 ³ gal/yr)	(gal/hr)	L_L	(lb/hr)	(tpy)	(tpy)	(tpy)
1.45	10.0	56.00	545	1,533.0	16,000	18.56	297.03	14.23	9.25	0.93

Gas Analysis and Conversions: Combined Gas from the Meter Run

12/20/2023

Component	VOC and/or HAP?	% Volume	Molecular Weight (lbs/lb-mole)	Weight (lb)	Gas Composition, % by Weight	Rel. Density
H2S	None	0.000%	34.08	0.000	0.00%	0.00000
O2	None	0.000%	16.00	0.000	0.00%	0.00000
CO2	None	0.039%	44.10	0.017	0.09%	0.00217
N2	None	0.921%	28.01	0.258	1.30%	0.03971
Methane	None	84.140%	16.04	13.496	67.81%	0.47354
Ethane	None	8.589%	30.07	2.583	12.98%	0.00000
Propane	VOC	3.285%	44.10	1.449	7.28%	0.09709
Isobutane	VOC	0.369%	58.12	0.214	1.08%	0.01357
Butane	VOC	1.041%	58.12	0.605	3.04%	0.03699
Isopentane	VOC	0.361%	72.15	0.260	1.31%	0.00968
Pentane	VOC	0.383%	72.15	0.276	1.39%	0.01051
Hexanes +	VOC and HAP	0.862%	86.18	0.743	3.73%	0.00000

100.00%

VOC Weight (lb)	3.548 lb
VOC, weight fraction	0.178
HAP weight % of Gas	3.73%
HAP Weight (lb)	0.743 lb
HAP to VOC Weight Ratio	0.2090
H2S to VOC Weight Ratio	0.0000
H2S to SO2 Conversion Factor	1.8809
SO2 Weight (lb)	0.000 lb
SO2 to VOC Weight Ratio	0.0000
HAP Percentage of VOCs	20.94%
VOC Percent Volume of Gas	6.301%
Heat of combustion, Btu/cf (Dry)	1236
Molecular weight	19.90

Gas Analysis and Conversions: Flash Gas from Tanks

Component	VOC and/or HAP?	% Volume	Molecular Weight (lbs/lb-mole)	Weight (lb)	Gas Composition, % by Weight
H2S	None	0.000%	34.08	0.000	0.00%
O2	None	0.000%	16.00	0.000	0.00%
CO2	None	0.194%	44.10	0.086	0.21%
N2	None	0.000%	28.01	0.000	0.00%
Methane	None	24.526%	16.04	3.934	9.66%
Ethane	None	25.150%	30.07	7.563	18.58%
Propane	VOC	21.417%	44.10	9.445	23.20%
Isobutane	VOC	4.691%	58.12	2.727	6.70%
Butane	VOC	9.813%	58.12	5.703	14.01%
Isopentane	VOC	3.232%	72.15	2.332	5.73%
Pentane	VOC	3.874%	72.15	2.795	6.87%
Hexanes +	VOC	4.008%	86.18	3.454	8.49%
Total HAP as n-C6	HAP	3.10%	86.18	2.667	6.55%

VOC Weight (lb)	26.456 lb
VOC, weight fraction	0.650
HAP weight % of Gas	6.55%
HAP Weight (lb)	2.667 lb
HAP to VOC Weight Ratio	0.1010
H2S to VOC Weight Ratio	0.0000
H2S to SO2 Conversion Factor	1.8809
SO2 Weight (lb)	0.000 lb
SO2 to VOC Weight Ratio	0.0000
HAP Percentage of VOCs	10.08%
VOC Percent Volume of Gas	47.035%

Equipment Component Fugitive Emissions

Components	Counts	Emission Factor ¹	Emissions	Wt. Fraction VOC	VOC Emissions		VOC% HAP ³	HAP Emissions		GHG Emissions, ton/yr		
		scf/hr/component	lbs/hr		lb/hr	tpy		lb/hr	tpy	CO2	CH4	CO2e
Valves:	57											
gas/vapor	18	0.027	0.0255	0.18	0.005	0.02	20.94%	0.0009	0.0042	0.000	0.076	1.893
light oil ²	39	0.05	0.1023	0.18	0.018	0.08	20.94%	0.0038	0.0167	0.000	0.304	7.594
heavy oil	0	0.0005	0.0000	0.18	0.000	0.00	20.94%	0.0000	0.0000	0.000	0.000	0.000
Pumps:												
Light oil	0	0.01	0.0000	0.18	0.000	0.00	20.94%	0.0000	0.0000	0.000	0.000	0.000
heavy oil	0	0	0.0000	0.18	0.000	0.00	20.94%	0.0000	0.0000	0.000	0.000	0.000
Flanges:	102											
gas/vapor	36	0										
light oil	46	0.003	0.0072	0.18	0.001	0.01	20.94%	0.0003	0.0012	0.000	0.021	0.537
heavy oil	0	0.0009	0.0000	0.18	0.000	0.00	20.94%	0.0000	0.0000	0.000	0.000	0.000
Relief Valve:												
gas/vapor	0	0.04	0.0000	0.18	0.000	0.00	20.94%	0.0000	0.0000	0.000	0.000	0.000
Connectors:	102											
gas/vapor	30	0.003	0.0047	0.18	0.001	0.00	20.94%	0.0002	0.0008	0.000	0.014	0.350
light oil	72	0.007	0.0264	0.18	0.005	0.02	20.94%	0.0010	0.0043	0.000	0.079	1.963
heavy oil	0	0.0003	0.0000	0.18	0.000	0.00	20.94%	0.0000	0.0000	0.000	0.000	0.000
Other	1	0.3	0.0157	0.18	0.003	0.01	20.94%	0.0006	0.0026	0.000	0.047	1.168
Totals					0.03	0.14		0.01	0.03	0.00	0.54	13.51

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 fugitive emission components are assumed to be same composition as produced gas.

Oil Tanks Emissions Summary

Total flash gas	0.00085 ton VOC/bbl
Total flash gas	24.27 SCF/bbl
Total flash gas	31.15 VOC tpy
Oil tank W&B Losses	2.95 SCF/bbl
Oil tank W&B Losses	3.79 tpy
Oil tank W&B Losses	0.00010 ton VOC/bbl
Oil tank W&B Losses	2.95 SCF/bbl
Oil tank annual throughput	36,500 bbl/year
Oil tank daily throughput	100.0 bbl/day
Total tank W&B loss	107,705 SCF/yr
Total tank W&B VOC losses	3.79 VOC tpy
Total Uncontrolled tank VOC emissions	34.94 tpy
Total Uncontrolled tank HAP emissions	3.53 tpy
Total Flared tank VOC emissions	0.70 tpy
Total Flared tank HAP emissions	0.07 tpy

Water Tanks Emissions Summary

Total Uncontrolled tank VOC emissions	0.0379 tpy
Total Uncontrolled tank HAP emissions	0.0036 tpy

Vertical Heater Treater

Combustion Source	Capacity	Emissions (tpy)					
	MMBTUH	CO	VOC	HAP	SO2	NOx	PM10
Natural Gas Fired Heater Treater	0.50	0.180	0.012	0.004	0.001	0.215	0.012
Totals	0.50	0.180	0.012	0.004	0.001	0.215	0.012

Emission Factors, lbs/MMBtu

PM	0.007451
PM10	0.005588
PM2.5	0.005588
NOx	0.098039
CO	0.082353
VOC	0.005392
SO2	0.000588
HAPs	0.001851

Pump Engine

Engine Max. Rated 10 HP
Capacity: 0.07 MMBTUH

Pollutant	Uncontrolled Emission Factor	Uncontrolled Emission Rate	
		lbs/hr	tpy
NOx	2.27 lb/MMBTU	0.16	0.70
CO	3.72 lb/MMBTU	0.26	1.14
VOC	0.0296 lb/MMBTU	0.00	0.01
SO2	0.0194 lb/MMBTU	0.00	0.01
PM	0.0095 lb/MMBTU	0.00	0.00
PM10	0.0095 lb/MMBTU	0.00	0.00
PM2.5	0.00950	0.00	0.00

Notes:

1. Uncontrolled emission factors obtained from AP-42 Table 3.2-3 for 4-Stroke Rich-Burn Engines.
2. Emission rates based on maximum horsepower and 8,760 hours of operation per year.

HAP	Emission Factor	Engine	
		0.07 MMBTUH	
	(lb/MMBTU)	(pph)	(tpy)
1,1,2,2 - tetrachloroethane	2.53E-05	0.00	0.00
1,1,2-trichloroethane	1.53E-05	0.00	0.00
1,3-butadiene	6.63E-04	0.00	0.00
1,3-dichloropropene	1.27E-05	0.00	0.00
acetaldehyde	2.79E-03	0.00	0.00
acrolein	2.63E-03	0.00	0.00
benzene	1.58E-03	0.00	0.00
carbon tetrachloride	1.77E-05	0.00	0.00
chlorobenzene	1.29E-05	0.00	0.00
chloroform	1.37E-05	0.00	0.00
ethylbenzene	2.48E-05	0.00	0.00
ethylene dibromide	2.13E-05	0.00	0.00
formaldehyde	2.05E-02	0.00	0.01
methanol	3.06E-03	0.00	0.00
methylene chloride	4.12E-05	0.00	0.00
naphthalene	9.71E-05	0.00	0.00
PAH	1.41E-04	0.00	0.00
styrene	1.19E-05	0.00	0.00
toluene	5.58E-04	0.00	0.00
vinyl chloride	7.18E-06	0.00	0.00
xylene	1.95E-04	0.00	0.00
Totals		0.00	0.01

Emission factors were obtained from EPA AP-42, Chapter 3.2-3 for 4-stroke, rich-burn engines.

Project Setup Information

*

Project File : Holiman 7-12-1 and 7-13-2
 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

Filed Name : Southern Energy

* Data Input *

Separator Pressure : 42.00[psig]
 Separator Temperature : 110.00[F]
 Ambient Pressure : 14.70[psia]
 Ambient Temperature : 110.00[F]
 C10+ SG : 0.8790
 C10+ MW : 283.00

-- Low Pressure Oil -----

No.	Component	mol %
1	H2S	0.0000
2	O2	0.0000
3	CO2	0.0100
4	N2	0.0000
5	C1	1.0900
6	C2	1.5000
7	C3	2.1200
8	i-C4	0.8400
9	n-C4	2.2800
10	i-C5	1.6400
11	n-C5	2.5200
12	C6	2.6100
13	C7	9.7300
14	C8	8.9300
15	C9	5.8900
16	C10+	47.7300
17	Benzene	2.7500
18	Toluene	5.3000
19	E-Benzene	0.2000
20	Xylenes	1.3900
21	n-C6	3.4700
22	224Trimethylp	0.0000

-- Sales Oil -----

Production Rate: 30 [bbl/day]

Days of Annual Operation : 365 [days/year]

API Gravity : 39.0

Reid Vapor Pressure : 5.40[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   : 0.54

```

Page 1----- E&P TANK

```

-- Meteorological Data -----
City                : Jackson, MS
Ambient Pressure    : 14.70[psia]
Ambient Temperature : 110.00[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	1.120	0.256
Total HC	16.788	3.833
VOCS, C2+	15.407	35.18
VOCS, C3+	12.583	2.873

```

Uncontrolled Recovery Info.
Vapor      818.5400 x1E-3 [MSCFD]
HC Vapor   817.1100 x1E-3 [MSCFD]
GOR        27.28 [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	0.030	0.007
4	N2	0.000	0.000
5	C1	1.381	0.315
6	C2	2.823	0.645
7	C3	3.939	0.899
8	i-C4	1.181	0.270
9	n-C4	2.483	0.567
10	i-C5	1.017	0.232
11	n-C5	1.215	0.277
12	C6	0.485	0.111
13	C7	0.775	0.177
14	C8	0.286	0.065
15	C9	0.080	0.018
16	C10+	0.000	0.000
17	Benzene	0.329	0.075

18	Toluene	0.235	0.054
19	E-Benzene	0.004	0.001
20	Xylenes	0.023	0.005
21	n-C6	0.532	0.121
22	224Trimethylp	0.000	0.000
	Total	16.818	3.840

-- Stream Data -----

No.	Component	MW	LP Oil mol %	Flash Oil mol %	Sale Oil mol %	Flash Gas mol %	W&S Gas mol %	Total Emissions 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	0.0100	0.0023	0.0000	0.1942	0.0181	0.1750
4	N2	28.01	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
5	C1	16.04	1.0900	0.1056	0.0000	24.5258	0.0002	21.8449
6	C2	30.07	1.5000	0.5066	0.0746	25.1503	12.9835	23.8203
7	C3	44.10	2.1200	1.3095	0.7687	21.4172	32.7955	22.6610
8	i-C4	58.12	0.8400	0.6782	0.5571	4.6914	8.9354	5.1553
9	n-C4	58.12	2.2800	1.9636	1.7207	9.8131	19.1921	10.8383
10	i-C5	72.15	1.6400	1.5731	1.5140	3.2318	6.3857	3.5766
11	n-C5	72.15	2.5200	2.4631	2.4063	3.8738	7.5224	4.2726
12	C6	86.16	2.6100	2.6632	2.6824	1.3439	2.4402	1.4638

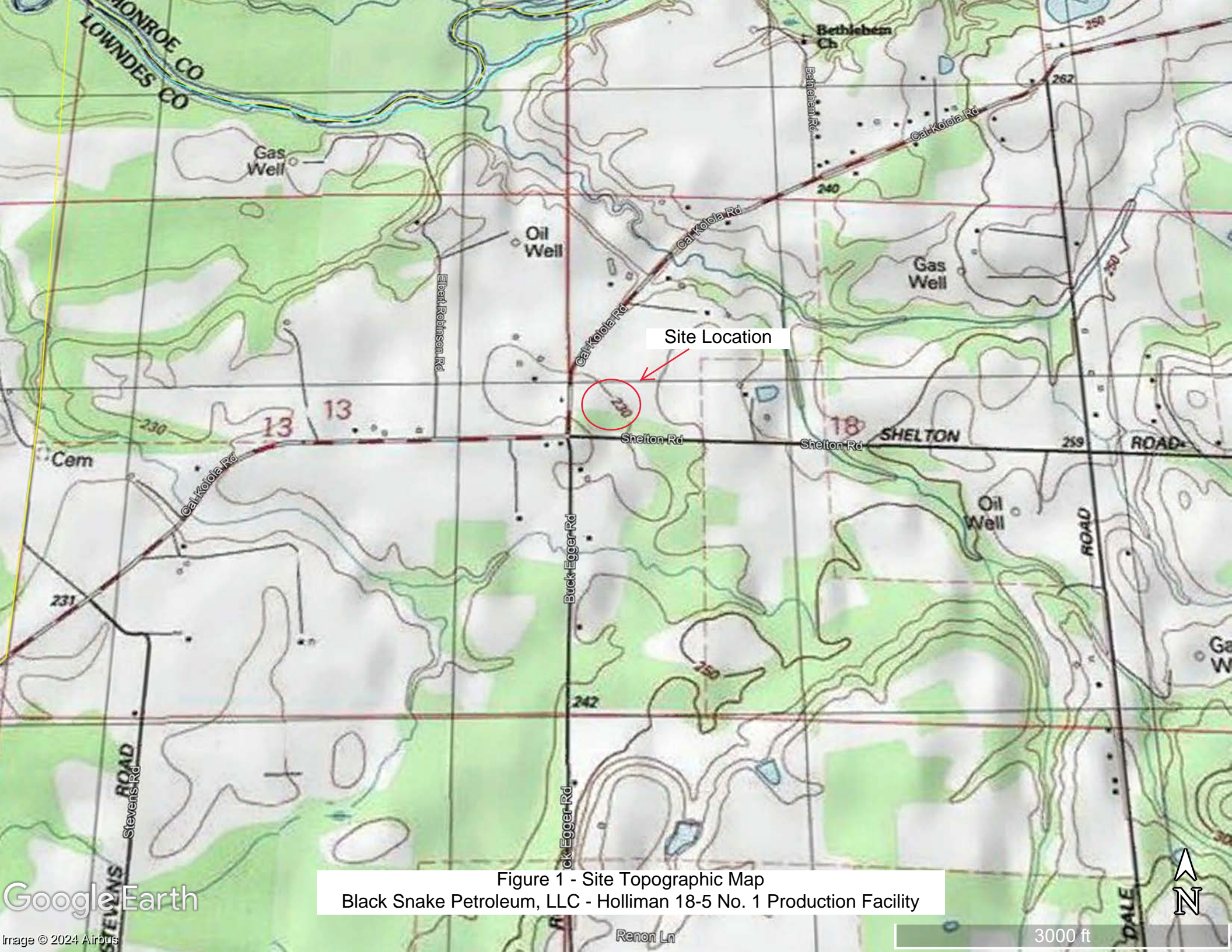
Page 2----- E&P TANK

13	C7	100.20	9.7300	10.0594	10.2170	1.8876	3.1591	2.0266
14	C8	114.23	8.9300	9.2791	9.4519	0.6184	0.9455	0.6542
15	C9	128.28	5.8900	6.1308	6.2506	0.1579	0.2211	0.1648
16	C10+	166.00	47.7300	49.7348	50.7316	0.0000	0.0000	0.0000
17	Benzene	78.11	2.7500	2.8242	2.8561	0.9845	1.7643	1.0698
18	Toluene	92.13	5.3000	5.4971	5.5935	0.6066	0.9891	0.6484
19	E-Benzene	106.17	0.2000	0.2080	0.2120	0.0084	0.0126	0.0089
20	Xylenes	106.17	1.3900	1.4462	1.4741	0.0518	0.0764	0.0545
21	n-C6	86.18	3.4700	3.5551	3.5906	1.4432	2.5588	1.5652
22	224Trimethylp	114.24	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

MW		181.95	187.87	189.81	41.06	55.78	42.67
Stream Mole Ratio		1.0000	0.9597	0.9547	0.0403	0.0049	0.0453
Heating Value	[BTU/SCF]				2333.79	3114.29	2419.11
Gas Gravity	[Gas/Air]				1.42	1.93	1.47
Bubble Pt. @ 100F	[psia]	56.46	13.66	5.58			
RVP @ 100F	[psia]	100.08	47.54	29.92			
Spec. Gravity @ 100F		0.753	0.756	0.757			

LIST OF FIGURES

FIGURE 1:
SITE TOPOGRAPHICAL MAP



Site Location

Figure 1 - Site Topographic Map
Black Snake Petroleum, LLC - Holliman 18-5 No. 1 Production Facility

FIGURE 2:
SITE AERIAL VIEW



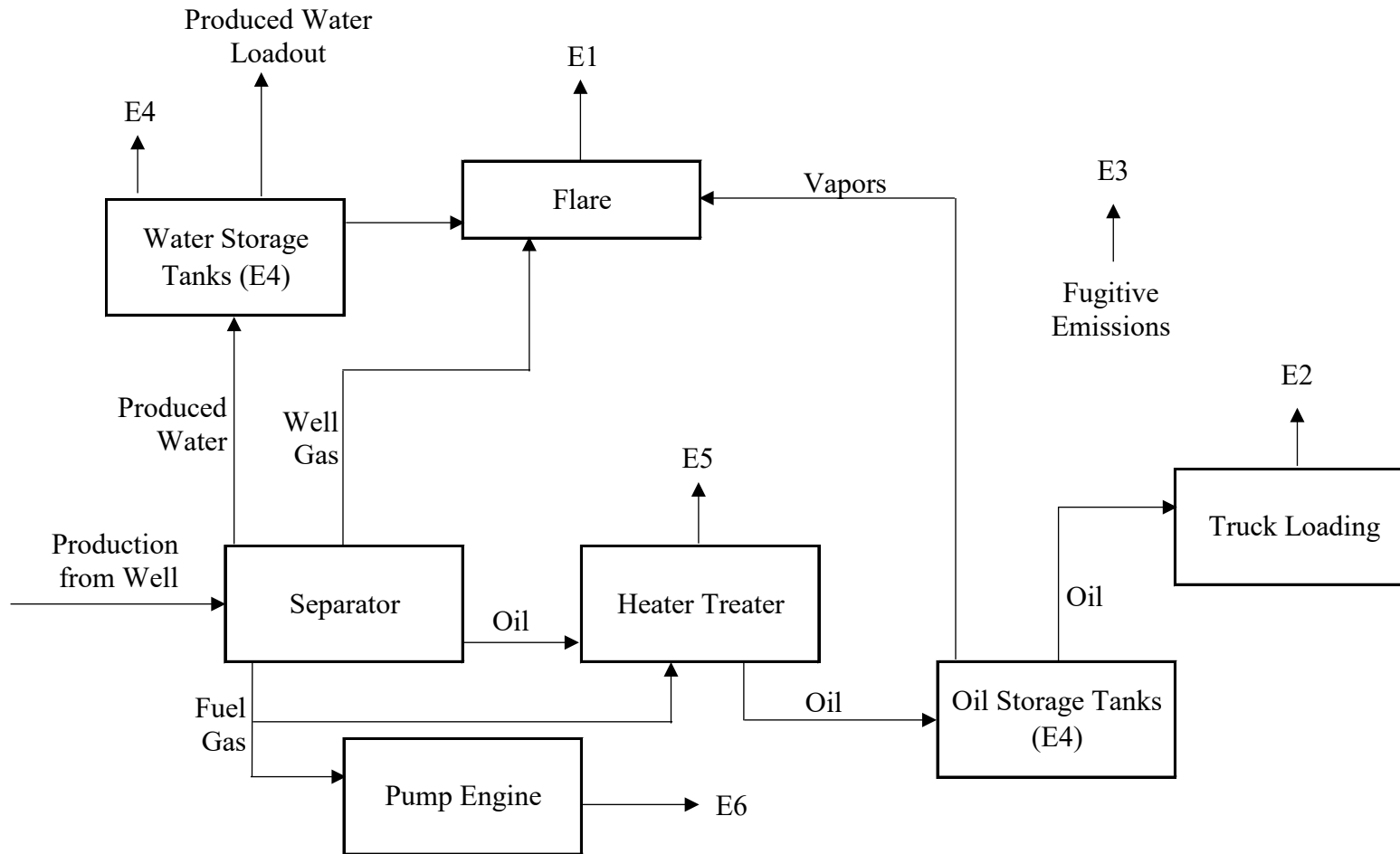
Site Location

Figure 2 - Site Aerial View
Black Snake Petroleum, LLC - Holliman 18-5 No. 1 Production Facility



FIGURE 3:
PROCESS FLOW DIAGRAM

Black Snake Petroleum LLC
Tank Battery 18-5 No. 1
Process Flow Diagram



APPENDIX B: BACKUP DOCUMENTATION



Michael Watson

SECRETARY OF STATE

This is not an official certificate of good standing.

Name History

Name	Name Type
Black Snake Petroleum, LLC	Legal

Business Information

Business Type:	Limited Liability Company
Business ID:	1283625
Status:	Good Standing
Effective Date:	05/21/2021
State of Incorporation:	AL
Principal Office Address:	1490 Northbank Parkway, Suite 254 Tuscaloosa, AL 35406

Registered Agent

Name
Joel Byrd
107 Tidewater Road
Hattiesburg, MS 39402

Officers & Directors

Name	Title
Alan Simonis III 1490 Northbank Parkway, Suite 254 Tuscaloosa, AL 35406	Manager