SPOONER
Petroleum Company

625 Highland Colony Parkway
Suite 101
Ridgeland, Mississippi 39157
601.969.1831
601.353.4117 Fax
kmagee@spoonercompanies.com

December 18, 2019

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

Re: Spooner Petroleum Company, Blackstone 32-10
Pre-Permit Construction Approval Request
Smith County, Mississippi

Dear Ms. Rudolph:

Spooner Petroleum Company (Spooner) is respectfully submitting this letter and attached information requesting approval to construct a new oil production facility before obtaining the required permit to construct per 11 Miss. Admin. Code Pt. 2, R. 2.15.B: Optional Pre-Permit Construction. Therefore, the following list of items is provided to document compliance with the nine requirements (a thru i), as identified in 11 Miss. Admin. Code Pt. 2, R. 2.15.B.

- This letter serves as our request for approval to construct (Item 1) before obtaining the required permit to construct;
- A copy of the completed ten day notice (Item 2) will be submitted upon completion of the notice period;
- Spooner is eligible for this permitting action (Item 3), as it is not a major modification described in 11 Miss. Admin. Code Pt. 2, R. 2.15.B(9);
- Process description(s) (Item 4) are detailed within the Oil Production General Permit Coverage Notice of Intent (NOI) forms;
- Equipment list(s) (Item 5) are included within the NOI forms referenced in Item 4;
- Proposed emission limits (Item 6) are included within the NOI forms referenced in Item 4;
- Proof that buffer zone requirements (Item 7) in 11 Miss. Admin. Code Pt. 2, R. 2.2.B.(14) are met; This item is included in the accompanying figures within the NOI forms referenced in Item 4;
- This letter also serves as certification (Item 8) that Spooner understands that construction is at the applicants own risk, and;
- This letter serves as certification (Item 9) that Spooner shall not contest the final permit coverage decision based on the fact that construction has already begun.

Should you have any questions regarding the attached material, please contact Mr. Chad Winter at (601) 540-3966, or Mr. Toby Cook at (601) 613-1915.

Sincerely,

Harry Spooner

Harry Spooner
Vice-President, Spooner Petroleum Co.

Attachment

cc: Mr. Toby Cook, P.E., FC&E Engineering, LLC
Mr. Chad Winter, P.E., FC&E Engineering, LLC

ORIGINAL

OIL PRODUCTION GENERAL PERMIT NOTICE OF INTENT

SPOONER PETROLEUM COMPANY, BLACKSTONE 32-10

RECEIVED
DEC 18 2019
MDEQ

Polkville, Mississippi
Smith County

December 2019

PREPARED BY:

FC&E ENGINEERING, LLC
BRANDON-STARKVILLE-MONROE-ST. LOUIS
(601) 824-1860

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

EXECUTIVE SUMMARY

Spooner Petroleum Company (Spooner) plans to drill a new well for the purposes of oil production. The well (Blackstone 32-10 No. 1) will be located in Section 5, Township 3N, Range 6E, in Smith 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 150 thousand cubic feet (MCF) of gas produced per day and 300 barrels (bbl) of oil produced per day, along with 1 bbl/day of produced water. Due to the remote location of the well, no pipeline outlet exists for the gas. Therefore, Spooner proposes to flare all produced gas from the well via an onsite flare. Spooner will collect produced water into a 400-bbl water tank prior to offsite transport to a disposal well. Oil will be collected into two (2) 400-bbl oil storage tanks before being trucked to market. Spooner will route emissions from the oil and water storage tanks, as well as the heater treater, to the flare. Emissions associated with truck loading will be vented to the atmosphere. Spooner may also operate various small chemical storage vessels, including totes and drums, which are typically associated with well pad activities. Spooner intends to install and operate an electric pumping unit and associated power oil tank in the future, as needed.

Consequently, Spooner 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) exceed the threshold limits to be classified as a True Minor Source. Therefore, Spooner proposes to 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 heater treater and 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.

Spooner will monitor the volume of gas produced by the well and will calculate the amount of gas emitted from the heater treater and tanks that is routed to the flare. Spooner 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 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.

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Spooner Petroleum Company
Blackstone 32-10

NOTICE OF INTENT (NOI) FORMS

December 2019

ORIGINAL

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

RECEIVED DEC 18 2019 BY:

A. Owner/Company Name: Spooner Petroleum Company

B. Facility Name(*if different than A. above*) : Blackstone 32-10

C. Physical Address

1. Street Address: Smith County Road 144
2. City: Polkville
3. State: MS
4. County: Smith
5. Zip Code: 39117
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: 625 Highland Colony Pkwy # 101
2. City: Ridgeland
3. State: MS
4. Zip Code: 39157

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:
3. Latitude (*degrees/minutes/seconds*) : 32 8' 31.77"
4. Longitude (*degrees/minutes/seconds*): 89 42' 3.85"
5. Elevation (*feet*): 390

2. Name and Address of Facility Contact

A. Name: Ken R. Magee Title: Operations Manager

B. Mailing Address

1. Street Address or P.O. Box: 625 Highland Colony Pkwy # 101
2. City: Ridgeland
3. State: MS
4. Zip Code: 39157
5. Email: kmagee@spoonercompa
6. Telephone No.: 601-969-1831
7. Fax No.: 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

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: Harry Spooner Title: Vice-President

B. Mailing Address

1. Street Address or P.O. Box: 625 Highland Colony Pkwy # 101
2. City: Ridgeland 3. State: MS
4. Zip Code: 39157 5. Email: hspooner@spoonercom
6. Telephone No.: 601-969-1831 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*)

☑ 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	0.15	MMCF/day
Oil	300	barrels/day
Water	1	barrels/day
Other (Specify)		

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

Produced Material	Throughput	Units
Flared Gas	0.15	MMCF/day
Oil	<300	barrels/day
Water	<1	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: 625 Highland Colony Pkwy # 101
2. City: Ridgeland
3. State: MS
4. County: Madison
5. Zip Code: 39157
6. Telephone No.: 601-969-1831
7. Fax No.: N/A

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.

Harry Spooner

Signature of Responsible Official/DAR

12/18/2019

Date

Harry Spooner

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		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
E1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	109.39	479.13	0.00	0.00	0.00	0.00	3.59	15.71
E2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.46	0.00	0.00	0.00	0.00	0.01	0.03
E3	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E4	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	0.00	0.00
E5	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	0.019	0.00	0.00	0.00	0.00	0.00	0.02
E6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.92	69.73	0.00	0.00	0.00	0.00	1.84	8.05
E7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.79	12.20	0.00	0.00	0.00	0.00	0.05	0.20
Totals	0.00	0.00	0.00	0.02	0.00	0.02	0.00	0.00	0.05	0.21	0.04	0.18	128.21	561.55	0.00	0.00	0.00	0.00	5.48	24.01

[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 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		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
E1	0.07	0.20	0.07	0.20	0.07	0.20	0.00	0.00	0.64	1.87	3.48	10.17	3.28	9.58	0.00	0.00	0.00	0.00
E2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.46	0.00	0.00	0.00	0.00
E3	Gas routed to flare																	
E4	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
E5	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
E6	Gas routed to flare																	
E7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.18	6.35	0.00	0.00	0.00	0.00
Totals	0.07	0.21	0.07	0.22	0.07	0.22	0.00	0.00	0.69	2.08	3.53	10.35	7.57	16.43	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 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		Benzene		n-Hexane		Toluene		Ethylbenzene		Xylenes							
	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	0.1076	0.3146	0.0537	0.1568	0.0244	0.0712	0.0195	0.0569	0.0016	0.0046	0.0085	0.0247						
E2	0.0074	0.0325	0.0017	0.0073	0.0050	0.0220	0.0003	0.0015	0.0001	0.0003	0.0003	0.0014						
E3	Gas routed to flare																	
E4	0.0009	0.0041	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001						
E5	0.0043	0.0190	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001						
E6	Gas routed to flare																	
E7	0.0695	0.3043	3.4030	0.32284	5.4453	0.51659	2.2505	0.2135	0.0330	0.00313	0.2003	0.0190						
Totals:	0.1898	0.6745	3.4584	0.4869	5.4747	0.6098	2.2703	0.2719	0.0347	0.0080	0.2091	0.0451						

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_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**						
E1	**mass GHG**	3793	0	0.01	11.88	0	0					3804.47	N/A
	CO_2e	3792.58	0	1.73	297.00	0	0					N/A	4091.31
E2	**mass GHG**	0.03	0	0.00	0.33	0	0					0.36	N/A
	CO_2e	0.03	0	0.01	8.28	0	0					N/A	8.32
E3	**mass GHG**	0.00	0	0.00	0.00	0	0					0.00	N/A
	CO_2e	0.00	0	0.00	0.00	0	0					N/A	0.00
E4	**mass GHG**	281.51	0	0.00	0.01	0	0					281.52	N/A
	CO_2e	281.51	0	0.16	0.13	0	0					N/A	281.80
E5	**mass GHG**	0.00	0	0.00	0.00	0	0					0.00	N/A
	CO_2e	0.00	0	0.00	0.00	0	0					N/A	0.00
E6	**mass GHG**	0.00	0	0.00	0.00	0	0					0.00	N/A
	CO_2e	0.00	0	0.00	0.00	0	0					N/A	0.00
E7	**mass GHG**	0.00	0	0.00	0.00	0	0					0.00	N/A
	CO_2e	0.00	0	0.00	0.00	0	0					N/A	0.00
FACILITY TOTAL	**mass GHG**	4074.12	0	0.01	12.22							4086.34	N/A
	CO_2e	4074.12	0	1.90	305.41							N/A	4,381

[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 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 (Yes or No)	Height Above Ground (ft)	Base Elevation (ft)	Exit Temp. (°F)	Inside Diameter or Dimensions (ft)	Velocity (ft/sec)	Moisture by Volume (%)	Geographic Position (degrees/minutes/seconds)	
									Latitude	Longitude
E1	V	No	30	390	1600	0.3	236	<1	32/8/31.77	89/42/5.0
E2	Fugitive Equipment Leaks - No dedicated stack									
E3	Produced Gas - Emissions routed to E1									
E4	V	No	30	390	Ambient	0.5	N/A	<1	32/7/53.0	89/42/5.0
E5	Miscellaneous Chemical Storage Tanks - No dedicated stacks									
E6	Oil and Water Storage Tanks - Emissions routed to E1									
E7	Truck Loading Activities - No dedicated stack									

[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.): E4

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

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

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

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

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

H. Heat Mechanism: ☒ Direct ☐ Indirect

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

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

K. Status: ☐ Operating ☒ Proposed ☐ Under Construction

2. Fuel Type

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

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

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

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

Fuel Burning Equipment – External Combustion Sources

Section OPGP-C

1. Emission Point Description

A. Emission Point Designation (Ref. No.): 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.: 2019

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:
No analyzed HAP's have been identified as components in the fuel; however, AP-42, Tables 1.4-2, 1.4-3, and 1.4-4 project certain HAP's to be potentially present in exhaust vapors.

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

Tank Summary | Section OPGP-E

1. Emission Point Description

A. Emission Point Designation (Ref. No.): E6 (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: 2019/20

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

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: 21,000 gal
6. Turnovers per year: 146 (est. for entire estimated annual throughput)
7. Maximum throughput: 3.066 MMgal/yr (for entire tank battery)
8. Is the tank heated? ☐ Yes ☒ No

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

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

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

Tank Summary | Section OPGP-E

5. Internal Floating Roof Tank

A. Tank Characteristics:

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

B. Rim Seal System:

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

C. Deck Characteristics:

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

6. External Floating Roof Tank

A. Tank Characteristics

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

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

Tank Summary — Section OPGP-E

6. External Floating Roof Tank (continued)

A. Tank Characteristics (continued):

6. Paint Color/Shade:
   - ☐ White/White ☐ Aluminum/Specular ☐ Aluminum/Diffuse
   - ☐ Gray/Light ☐ Gray/Medium ☐ Red/Primer

7. Paint Condition: ☐ Good ☐ Poor

B. Roof Characteristics

1. Roof Type: ☐ Pontoon ☐ Double Deck

2. Roof Fitting Category: ☐ Typical ☐ Detail

C. Tank Construction and Rim-Seal System:

1. Tank Construction: ☐ Welded ☐ Riveted

2. Primary Seal:
   ☐ Mechanical Shoe ☐ Liquid-mounted ☐ Vapor-mounted

3. Secondary Seal
   ☐ None ☐ Shoe-mounted ☐ Rim-mounted ☐ Weather shield

7. Pollutant Emissions

A. Fixed Roof Emissions:

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

B. Floating Roof Emissions:

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

1. All regulated air pollutants including hazardous air pollutants emitted from this source should be listed in accordance with the OGP Application Instructions. A list of regulated air pollutants and a link to EPA's list of hazardous air pollutants is provided in the OGP Application Instructions.
2. Landing losses should be determined according to the procedures in *Organic Liquid Storage Tanks* chapter of EPA's AP-42 emission factors. If the roof is not landed at least once/yr, enter "NA".

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

Tank Summary | Section OPGP-E

1. Emission Point Description

A. Emission Point Designation (Ref. No.): E6 (Oil Storage Tank No. 1)

B. Product(s) Stored: Oil

C. Status: ☐ Operating ☒ Proposed ☐ Under Construction

D. Date of construction, reconstruction, or most recent modification (for existing sources) or date of anticipated construction: 2019/20

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.): E6 (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: 2019/20

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.): E6 (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: 2019/20

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".

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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 heater treater and oil and water storage tanks.

C. Manufacturer: Custom D. Model: Custom

E. Status: ☐ Operating ☒ Proposed ☐ Under Construction

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

2. System Data

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

B. Flare Data (if applicable):

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

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

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.				
Fugitive Emissions	40 CFR 60, Subpart OOOOa	01/01/2020	Est. 01/15/2020	N/A
Flare	40 CFR 60, Subpart OOOOa	01/01/2020	Est. 01/15/2020	N/A
Flare	11 Miss. Admin. Code Pt. 2, R.1.4.B(2).	01/01/2020	12/02/2019	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 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.				
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 while emissions are routed to the flare.
Fugitive Emissions	40 CFR 60.5365a(i)	GHG	Applicability	Applicability only
Fugitive Emissions	40 CFR 60.5397a(a-g)	VOC	Develop a fugitive emission monitoring plan	Upon startup

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
Fugitive Emissions	40 CFR 60.5397a(h)	VOC	Fugitive emission source repair or replacement requirements	Written Plan development
Fugitive Emissions	40 CFR 60.5425a and Table 3	VOC	Applicability	Applicability only
Fugitive Emissions	40 CFR 60.5410a(j)	VOC	Demonstration of initial compliance	Monitoring
Fugitive Emissions	40 CFR 60.415a(h)	VOC	Demonstration of continuous compliance	Monitoring
Fugitive Emissions	40 CFR 60.5420a(c)	VOC	Recordkeeping requirements	Monitoring and Recordkeeping
Fugitive Emissions	40 CFR 60.5420a(b)	VOC	Reporting requirements	Reporting
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 will be routed to the flare for destruction at all times of operations.

LIST OF FIGURES

ORIGINAL

FIGURE 1:

SITE TOPOGRAPHICAL MAP

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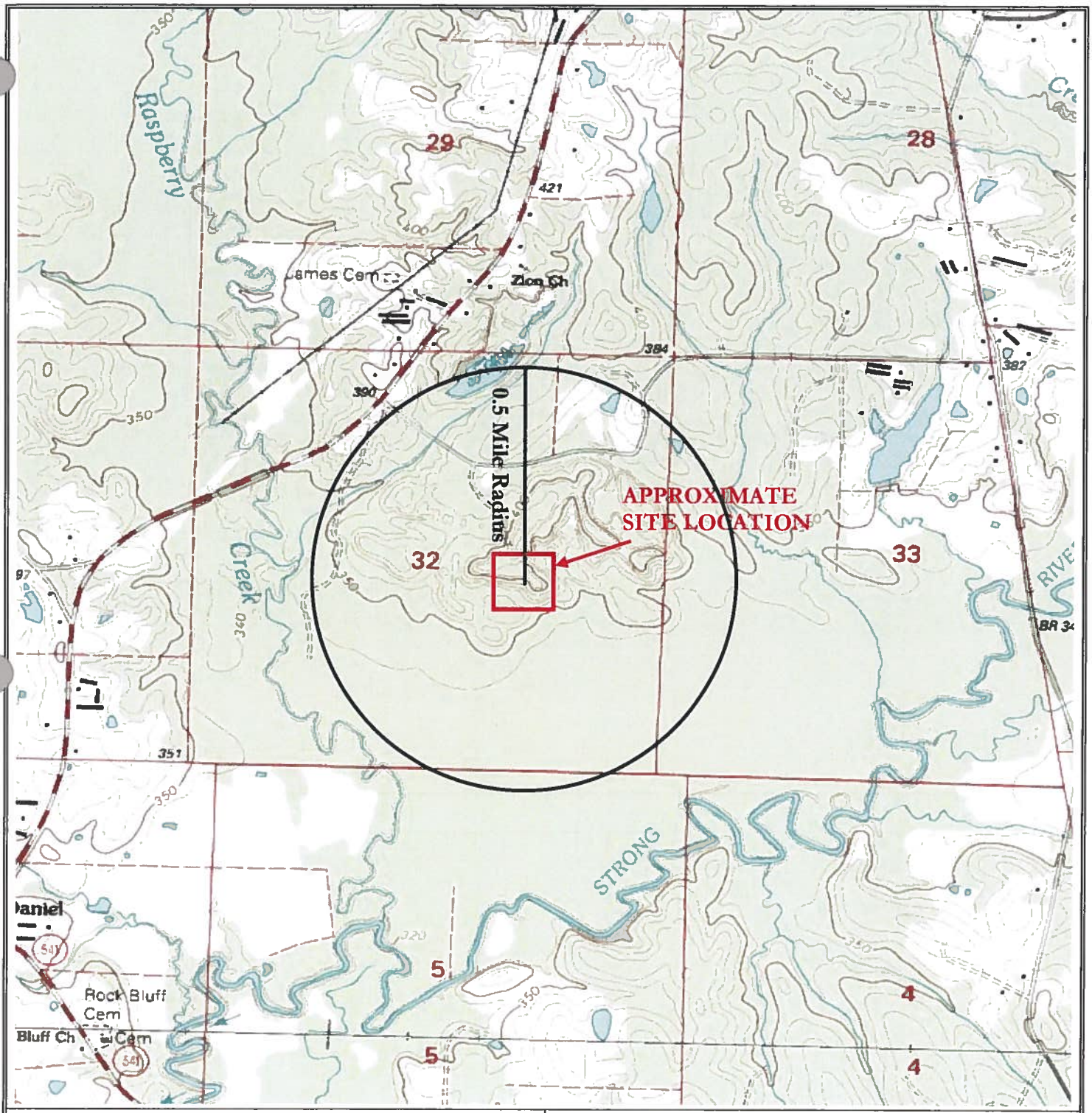


Blackstone 32-10
Smith Co. Road 144
Polkville, MS 39117

FC&E ENGINEERING, LLC
BRANDON-STARKVILLE-MONROE-ST. LOUIS
(601) 824-1860

N

FIGURE 1 - USGS Quad Map

SITE LOCATION

Polkville, Mississippi

Smith County

Scale 1" = 1,740 feet

Map Info: Polkville, MS, 2000

ORIGINAL

FIGURE 2:

SITE AERIAL VIEW

Blackstone 32-10
Smith Co. Road 144
Polkville, MS 39117

FC&E ENGINEERING, LLC
BRANDON-STARKVILLE-MONROE-ST. LOUIS
(601) 824-1860

N

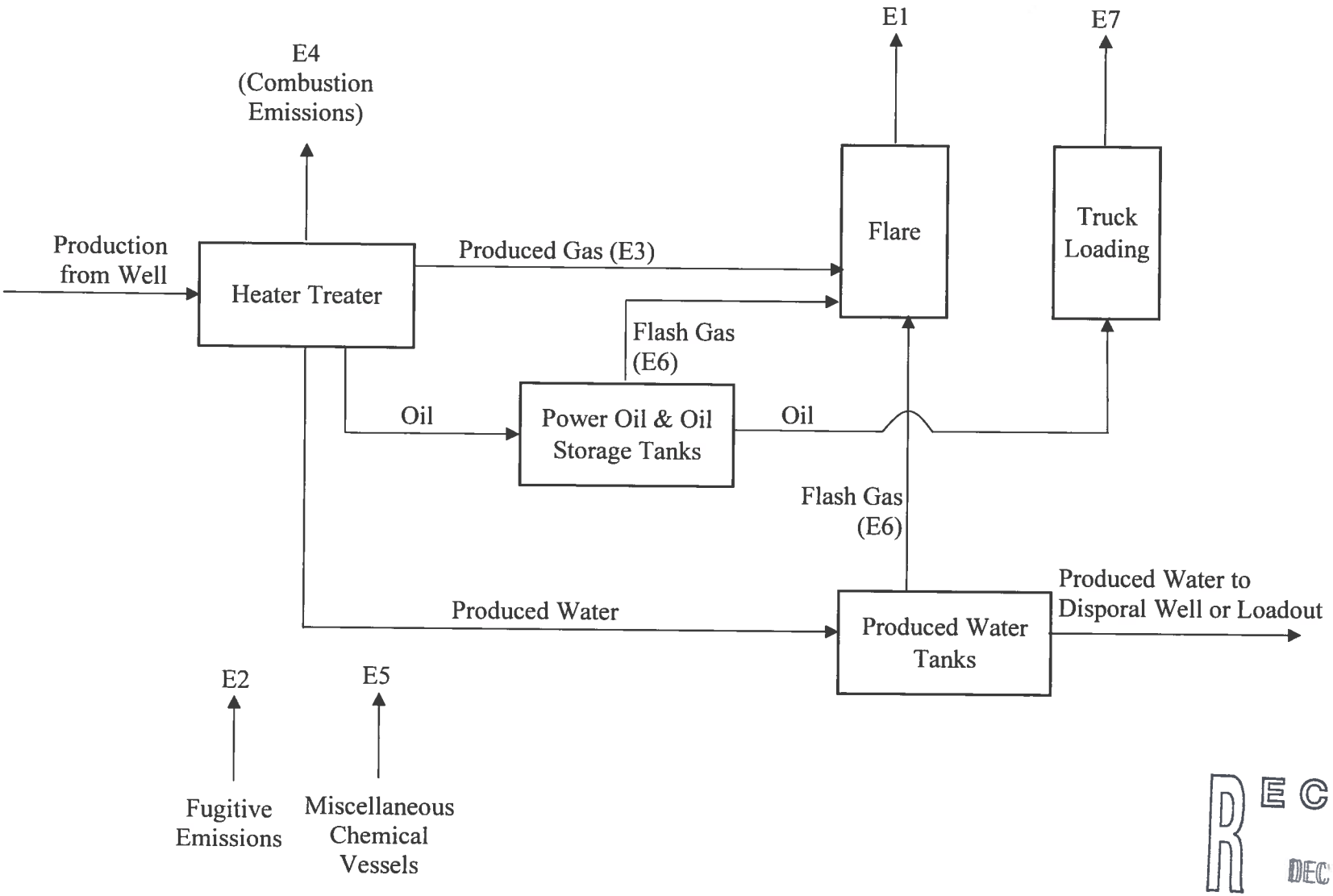
FIGURE 2 - Aerial Map
SITE LOCATION
Polkville, Mississippi
Smith County
Scale 1" = 785 feet
Map Info: September 1, 2016

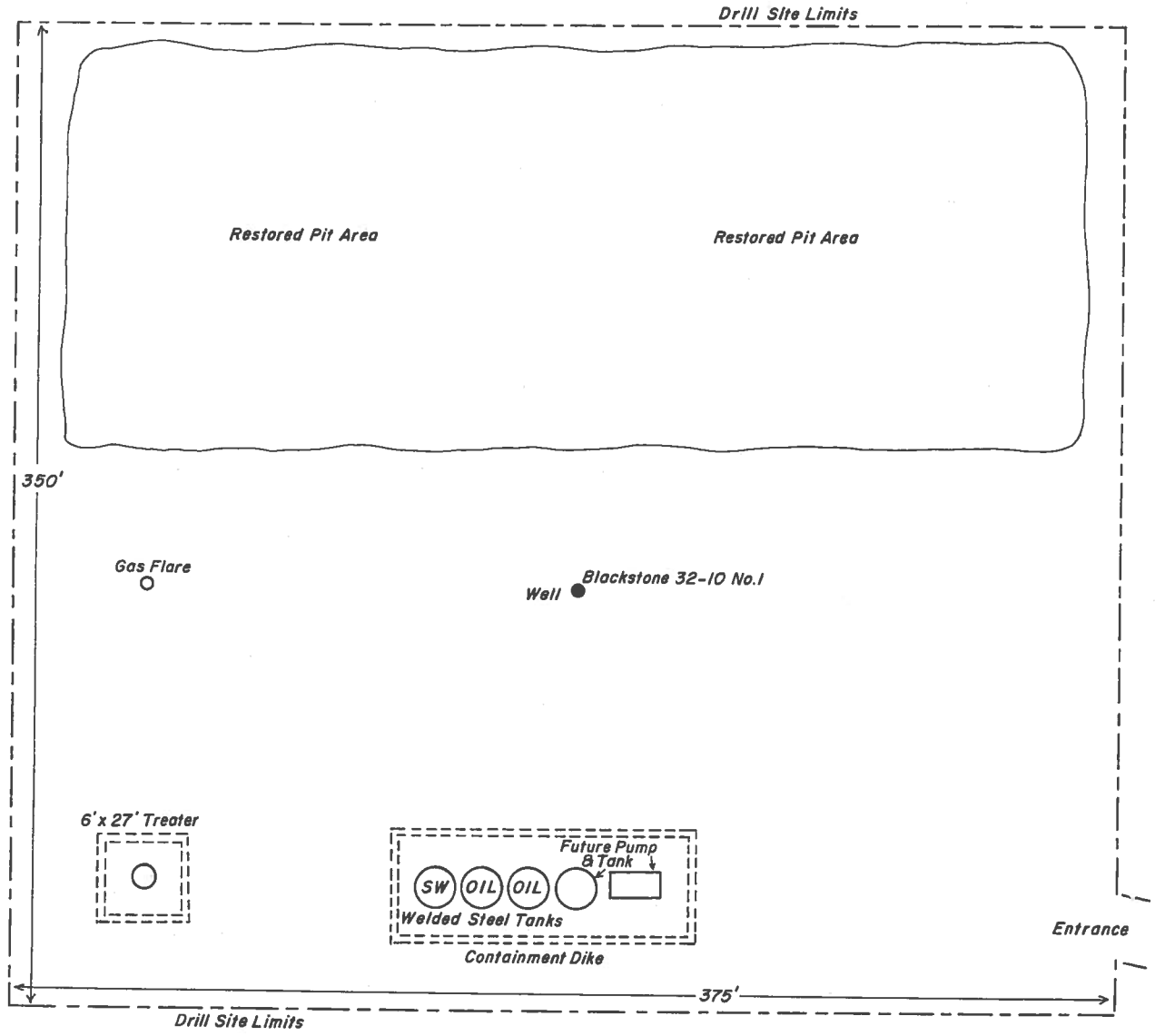
FIGURE 3:

PROCESS FLOW DIAGRAM

ORIGINAL

Spooner Petroleum Compay
Blackstone 32-10 No. 1 Tank Battery
Process Flow Diagram





PROPOSED PRODUCTION FACILITY LAYOUT

Spooner Petroleum Company
Blackstone 32-10 No.1

SECTION 32, T4N-R6E
SMITH COUNTY, MS

APPENDIX A:

EMISSIONS CACULATIONS

ORIGINAL

Site Information for Calculations

Site Name: Blackstone 32-10 No. 1 Tank Battery

Potential Crude Production	73,000	bbl/yr	(projected intial 30-day average)
Potential Gas production	36,500	mcf/yr	(projected intial 30-day average)
Potential Produced Water	365	bbl/yr	(projected intial 30-day average)
Initial Crude Production	300	bbl/day	(expected maximum daily production)
Initial Gas Production	150	mcf/day	(expected maximum daily production)
Initial Water Production	1	bbl/day	(expected maximum daily production)
Crude Gravity	39		
Oil tank W&B Losses	2.96	SCF/stock tank bbl	(estimated using E&P Tanks)
Oil tank Flash Gas	24.32	SCF/stock tank bbl	(estimated using E&P Tanks)
Water tank W&B Losses	0.0296	SCF/stock tank bbl	(using 1% of oil tank emissions)
Water tankFlash Gas	0.2432	SCF/stock tank bbl	(using 1% of oil tank emissions)
VRU recovery efficiency	0.00%		
Flare destruction efficiency	98.00%		

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Emission Point Summary

Emission Point Ref. Number	Emission Point Description	Design Capacity	Units	Operating Hours
E1	Flare	10.25	MMBtu/hr	8760
E1a	Flare Pilot	0.05	MMBtu/hr	8760
E2	Fugitive emissions- equipment leaks	-	-	8760
E3	Heater Treater (process vent)	-	-	8760
E4	Heater Treater (burner)	0.5	MMBtu/hr	8760
E5	Misc. Chemical Tanks	-	-	8760
E6	Oil and Water Storage Tanks	-	-	8760
E7	Truck Loading	16,000	gal/hr	As needed

Note: Storage tanks 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
E1	Flare	0.20	0.20	0.20	9.58	1.87	10.17	0.00	0.31	3415.96	10.78	0.01	3687.09
E1a	Flare Pilot	0.00	0.00	0.00	0.00	0.02	0.02	0.00	0.00	25.59	0.00	0.00	25.62
E2	Fugitive emissions- equipment leaks	0.00	0.00	0.00	0.46	0.00	0.00	0.00	0.03	0.04	0.30	0.00	7.57
E3	Heater Treater	Gas routed to flare											
E4	Heater Treater (burner)	0.00	0.02	0.02	0.01	0.21	0.18	0.00	0.00	255.45	0.00	0.00	255.71
E5	Misc. Chemical Tanks (4)	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00
E6	Oil and Water Tanks (3)	Gas routed to flare											
E7	Truck Loading	0.00	0.00	0.00	6.35	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00
Totals		**0.21**	**0.22**	**0.22**	**16.43**	**2.11**	**10.37**	**0.00**	**0.5730**	**3697.04**	**11.09**	**0.01**	**3975.99**

Notes:

Storage tanks emissions and gas from heater treaters 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
E1	Facility gas emissions	0.00	0.00	0.00	479.13	0.00	0.00	0.00	15.71	466.61	6392.61	0.00	160281.86
E2	Fugitive emissions- equipment leaks	0.00	0.00	0.00	0.46	0.00	0.00	0.00	0.03	0.04	0.30	0.00	7.57
E3	Heater Treater	Gas routed to flare											
E4	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
E5	Misc. Chemical Tanks	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00
E6	Oil and Water Storage Tanks	Gas routed to flare											
E7	Truck Loading	0.00	0.00	0.00	6.35	0.00	0.00	0.00	0.2028	0.00	0.00	0.00	0.00
Totals		**0.00**	**0.02**	**0.02**	**485.97**	**0.21**	**0.18**	**0.00**	**15.97**	**698.88**	**6392.92**	**0.00**	**160521.90**

Notes:

Storage tanks emissions and gas from heater treater 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
E1	Flare	0.07	0.07	0.07	3.28	0.64	3.48	0.00	0.11	779.90	2.46	0.00	841.80
E1a	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
E2	Fugitive emissions- equipment leaks	0.00	0.00	0.00	0.40	0.00	0.00	0.00	0.03	0.04	0.30	0.00	7.57
E3	Heater Treater	Gas routed to flare											
E4	Heater Treater (burner)	0.00	0.00	0.00	0.00	0.05	0.04	0.00	0.00	53.02	0.00	0.00	53.07
E5	Misc. Chemical Tanks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
E6	Oil and Water Storage Tanks	Gas routed to flare											
E7	Truck Loading	0.00	0.00	0.00	66.94	0.00	0.00	0.00	11.33	0.02	0.00	0.00	0.02
	Totals	**0.07**	**0.08**	**0.08**	**70.64**	**0.69**	**3.53**	**0.00**	**11.48**	**838.82**	**2.76**	**0.00**	**908.31**

Notes:

Storage tanks emissions and gas from heater treaters are included in flare emissions.

Initial well production test rates used to calculate maximum hourly emissions

Flash Gas Analysis and Conversions

Component	VOC and/or HAP?	Mol %	Wt %
Total S	None	***	0.00000%
CO2	None	0.194%	0.2305%
N2	None	0.000%	0.0000%
Methane	None	24.526%	10.5869%
Ethane	None	25.150%	20.3524%
Propane	VOC	21.417%	25.4180%
Isobutane	VOC	4.691%	7.3378%
Butane	VOC	9.813%	15.3487%
Isopentane	VOC	3.232%	6.2751%
Pentane	VOC	3.874%	7.5217%
Hexane	VOC	1.344%	3.1168%
Heptanes	VOC	1.8876%	5.0905%
Octane	VOC	0.6184%	1.9010%
Nonane	VOC	0.1579%	0.5451%
Decanes+	VOC	0.0000%	0.0000%
Benzene	VOC and HAP	0.985%	2.0695%
Toluene	VOC and HAP	0.607%	1.5041%
e-Benzene	VOC and HAP	0.008%	0.0240%
Xylenes	VOC and HAP	0.052%	0.1480%
n-hexane	VOC and HAP	1.443%	3.3471%
Total VOC		50.130%	65.483%
Total HAP		3.095%	7.093%

Heat of combustion, Btu/ft^3	2334
Molecular weight	41.06

Gas analysis generated by E&P Tanks software.

Produced Gas Analysis and Conversions

Component	VOC and/or HAP?	Mol %	Wt %
Total S	None	***	0.00000%
CO2	None	2.958%	5.1990%
N2	None	1.541%	1.7240%
Methane	None	68.578%	43.9390%
Ethane	None	12.605%	15.1380%
Propane	VOC	5.725%	10.0830%
Isobutane	VOC	1.522%	3.5330%
Butane	VOC	2.878%	6.6810%
Isopentane	VOC	1.107%	3.1900%
Pentane	VOC	1.124%	3.2390%
Hexane	VOC	0.000%	0.0000%
n-Hexane	VOC and HAP	0.400%	1.3770%
Heptanes+	VOC	1.3650%	5.2400%
Benzene	VOC and HAP	0.146%	0.4550%
Toluene	VOC and HAP	0.026%	0.0960%
e-Benzene	VOC and HAP	0.004%	0.0170%
Xylenes	VOC and HAP	0.021%	0.0890%
Total VOC		14.318%	34.000%
Total HAP		0.597%	2.034%

Heat of combustion, Btu/ft^3 1377.0
Molecular weight 25.04

Note: Gas analysis from another Smith County well used as a conservative estimate of gas composition.

TANK W & B GAS COMPOSITION

Component	VOC and/or HAP?	Mol %	Wt %
Total S	None	0.000%	0.00000%
CO2	None	0.02%	0.02%
N2	None	0.00%	0.00%
Methane	None	0.00%	0.00%
Ethane	None	12.98%	7.50%
Propane	VOC	32.80%	27.78%
Isobutane	VOC	8.94%	9.97%
Butane	VOC	19.19%	21.42%
Isopentane	VOC	6.39%	8.85%
Pentane	VOC	7.52%	10.42%
Hexane	VOC	2.44%	4.04%
Heptanes	VOC	3.16%	6.08%
Octane	VOC	0.95%	2.07%
Nonane	VOC	0.22%	0.54%
Decanes+	VOC	0.00%	0.00%
Benzene	VOC and HAP	1.76%	2.65%
Toluene	VOC and HAP	0.99%	1.75%
e-Benzene	VOC and HAP	0.01%	0.03%
Xylenes	VOC and HAP	0.08%	0.16%
n-hexane	VOC and HAP	2.56%	4.24%
Total VOC		84.44%	52.07%
Total HAP		5.401%	1.66%

Heat of combustion, Btu/ft^3	3114.0
Molecular weight	55.78

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

Tank Uncontrolled Emissions Summary

	Potential		Initial Production	
Total flash gas	1,775,449	SCF/yr	304	SCF/hr
Total flash gas	94.11	tpy	32.23	lb/hr
Total tank W&B loss	216,091	SCF/yr	37	SCF/hr
Total tank W &B losses	15.56	tpy	5.33	lb/hr
Total tank emissions	109.67	tpy	37.56	lb/hr
Tank emissions to flare	109.67	tpy	37.56	lb/hr
	88.77			
	0.0047	0.00	0.0000	

Notes:

Total flash gas calculated using gas/oil ratio from E&P tanks program and potential crude and water production

All tank emissions included with flare, Emission Point AA-001.

Potential Tank emissions based on projected initial 30 day average production.

Initial (highest) production used for hourly emissions calculations.

Combined Uncontrolled Tank Emissions, TPY

	VOC	Benzene	Toluene	Ethyl benzene	xylenes	n-hexane
Flash	61.63	1.95	1.42	0.02	0.14	3.15
W&B	8.10	0.4119	0.2724	0.0040	0.0242	0.6591
Total	69.73	2.3595	1.6880	0.0266	0.1635	3.8091

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	=	94.11 tpy
Flow to flare of tank W&B emissions	=	15.56 tpy
flow to flare from truck loading	=	0.00 tpy
Total process gas to flare	=	109.67 tpy
Produced gas to flare	=	1204.12 tpy
		36500.00 mcf/yr

Produced gas combustion heat	=	50260.50 MMBtu/yr
Process gas combustion heat	=	4731.81 MMBtu/yr
flare gas combustion heat, total	=	54992.31 MMBtu/yr

Pollutant	Emission factor, lbs/MMBtu	Potential Emissions		Potential Emissions		
		lb/hr	tpy	Pollutant	lb/hr	tpy
NOx	0.068	0.427	1.870	n-hexane	0.0163	0.0712
CO	0.37	2.323	10.174	benzene	0.0358	0.1568
PM	0.00745	0.004	0.205	e-benzene	0.0011	0.0046
VOC	mass balance	2.188	9.583	toluene	0.0130	0.0569
SO_2	mass balance	0.000	0.000	xylenes	0.0056	0.0247
				Total HAPs	0.0717	0.3142

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 flare input process gas flow and a flare destruction efficiency of 98%.

Mass balance for sulfur assumes all sulfur converted to SO2 in flare.

Gas flow calculated based on planned initial 30 day average production rates.

HAP emissions calculated using mass balance and 98% destruction efficiency.

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

Gas Flow to Flare:		Potential
Flow to flare of tank flash gas	=	32.23 lbs/hr
Flow to flare of tank W&B emissions	=	5.33 lbs/hr
Flow to flare from truck loading	=	0.00 lbs/hr
Total process gas to flare	=	37.56 lbs/hr
Produced gas to flare	=	412.37 lbs/hr
		6.25 mcf/hr
Produced gas combustion heat	=	8.61 MMBtu/hr
Process gas combustion heat	=	0.81 MMBtu/hr
Flare gas combustion heat, total	=	9.42 MMBtu/hr

Pollutant	Emission factor, lbs/MMBtu	Max. Hourly Emissions lb/hr	Potential Emissions	
			Pollutant	lb/hr
NOx	0.068	0.640	n-hexane	0.0244
CO	0.37	3.484	benzene	0.0537
PM	0.00745	0.070	e-benzene	0.0016
VOC	mass balance	3.282	toluene	0.0195
SO_2	mass balance	0.000	xylenes	0.0085
			Total HAPs	0.1076

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 flare input process gas flow and a flare destruction efficiency of 98%.

Mass balance for sulfur assumes all sulfur converted to SO2 in flare.

Gas flow calculated based on initial well production rates.

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	=	94.11 tpy
Flow to flare from tank W&B emissions	=	15.56 tpy
Flow to flare from truck loading	=	0.00 tpy
Produced gas to flare from heater treater	=	1204.12 tpy

		Potential Emissions	
Pollutant	Emission factor, lbs/MMBtu	lb/hr	tpy
VOC	mass balance	109.390	479.13
H2S	mass balance	0.000	0.00
n-hexane	mass balance	0.813	3.56
benzene	mass balance	1.790	7.84
e-benzene	mass balance	0.053	0.23
toluene	mass balance	0.649	2.84
xylenes	mass balance	0.282	1.24
total HAPs	mass balance	3.587	15.71
methane	mass balance	123.068	539.04
CO2	mass balance	14.343	62.82

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

Calculation of Flare GHG Emissions

Process gas to flare, mmcf/yr	2.03
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
			2.28E-01	9.94E+03	2.10E-01	2.75E-04	5.56E+00
1	4.87E+05	2.82E+01	*				2.82E+01
2	9.99E+05	5.78E+01					5.78E+01
3	1.28E+06	7.39E+01					7.39E+01
4	1.15E+06	6.67E+01					6.67E+01
5+	1.27E+06	7.34E+01					7.34E+01
Total	5.18E+06	3.00E+02	2.28E-01	9.94E+03	2.10E-01	2.75E-04	3.06E+02

PRODUCED GAS

produced gas to flare, mmcf/yr 36.50

carbon atoms	CO2 (from combustion)		CO2 input	CH4, uncombusted		N2O	CO2e
	cubic ft.	tpy	tpy	cubic ft.	tpy	tpy	tpy
			6.25E+01	5.01E+05	1.06E+01	4.96E-03	3.28E+02
1	2.45E+07	1.42E+03					1.42E+03
2	9.02E+06	5.22E+02					5.22E+02
3	6.14E+06	3.55E+02					3.55E+02
4	6.30E+06	3.64E+02					3.64E+02
5+	6.78E+06	3.93E+02					3.93E+02
Total	5.28E+07	3.05E+03	6.25E+01	5.01E+05	1.06E+01	4.96E-03	3.38E+03

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

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:	**37**											
gas/vapor	12	0.027	0.021	0.34	0.007	0.03	2.03%	0.000	0.002	0.005	0.041	1.033
light oil[2]	25	0.05	0.082	0.65	0.054	0.24	7.09%	0.006	0.026	0.019	0.144	3.623
heavy oil	0	0.0005	0	0.34	0.000	0.00	2.03%	0.000	0.000	0.000	0.000	0.000
Pumps:			0	0.34			2.03%	0.000	0.000	0.000	0.000	0.000
Light oil	0	0.01	0	0.73	0.000	0.00	1.66%	0.000	0.000	0.000	0.000	0.000
heavy oil	0	0	0	0.34			2.03%	0.000	0.000	0.000	0.000	0.000
Flanges:	22		0	0.34			2.03%	0.000	0.000	0.000	0.000	0.000
gas/vapor		0	0	0.34	0.000	0.00	2.03%	0.000	0.000	0.000	0.000	0.000
light oil	22	0.003	0.004	0.73	0.003	0.01	1.66%	0.000	0.000	0.001	0.008	0.191
heavy oil	0	0.0009	0	0.34	0.000	0.00	2.03%	0.000	0.000	0.000	0.000	0.000
Relief Valve:			0	0.34			2.03%	0.000	0.000	0.000	0.000	0.000
gas/vapor	0	0.04	0	0.34	0.000	0.00	2.03%	0.000	0.000	0.000	0.000	0.000
Connectors:	114		0	0.34			2.03%	0.000	0.000	0.000	0.000	0.000
gas/vapor	40	0.003	0.008	0.34	0.003	0.01	2.03%	0.000	0.001	0.002	0.014	0.348
light oil	74	0.007	0.034	0.73	0.025	0.11	1.66%	0.001	0.002	0.008	0.060	1.501
heavy oil	0	0.0003	0	0.34	0.000	0.03	2.03%	0.000	0.000	0.000	0.000	0.000
Other	1	0.3	0.020	0.34	0.007	0.03	1.66%	0.000	0.001	0.004	0.035	0.870
				Totals	**0.099**	**0.463**		**0.007**	**0.032**	**0.039**	**0.301**	**7.566**

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	0.00502	0.02199
benzene	0.00166	0.00727
ethyl benzene	0.00006	0.00027
toluene	0.00035	0.00153
xylene	0.00032	0.00142

Equipment	Count	Valves	Flanges	Fittings	prv
wellhead	1	5	10	4	0
heater treater	1	8	12	20	0
header	0	0	0	0	0
separator	0	0	0	0	0
meters/piping	2	24	0	90	0
compressor	0	0	0	0	0
dehydrator	0	0	0	0	0
total		37	22	114	0

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)	Uncontrolled VOC Estimated Emissions (tpy)
1.45	5	48.00	545	3,066	16,000	7.96	127.30	12.20	6.35

PRODUCED WATER

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)	Uncontrolled VOC Estimated Emissions (tpy)
1.45	0.05	48.00	545	15	16,000	0.08	1.27	0.00	0.00

HAPs	tons/yr
Benzene	0.3228
Toluene	0.2135
e-Benzene	0.0031
Xylenes	0.0190
n-hexane	0.5166
total	1.075061

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

OIL

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 Estimated Emissions
	(psia)	(lb/lb-mole)	(R)	(10^3 gal/hr)	(gal/hr)	L_L	(lb/hr)	(lb/hr)
1.45	5	48.00	545	16.0	16,000	7.96	127.30	4.14

PRODUCED WATER

EPA "S" Factor	True VP of Liquid	Mol. Wt. Of Vapors	Temp. of Liquid	Loaded Volume	Loading Rate	Uncontrolled Estimated Emissions, Total Hydrocarbons		Uncontrolled VOC Estimated Emissions
	(psia)	(lb/lb-mole)	(R)	(10^3 gal/hr)	(gal/hr)	L_L	(lb/hr)	(lb/hr)
1.45	0.05	48.00	545	16.0	16,000	0.08	1.27	0.04

Notes:
Emissions averaged over 24 hour production period

HAPs	lbs/hr
Benzene	3.4030
Toluene	2.2505
e-Benzene	0.0330
Xylenes	0.2003
n-hexane	5.4453
total	11.3321

External Combustion Equipment Emissions Calculations

Source	Capacity	Emissions, tons/yr								GHG Emissions, metric tons/yr			
	MMBtu/hr	PM	PM10	Pm 2.5	NOx	CO	VOC	SO2	HAP	CO2	CH4	N2O	CO2e
Heater Treater	0.5	0.00	0.02	0.02	0.21	0.18	0.01	0.00	0.00	255.45	0.00	0.00	255.72
Totals		0.00	0.02	0.02	0.21	0.18	0.01	0.00	0.00	255.45	0.00	0.00	255.72

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 HAPs		Flare Pilot HAPs	
		lbs/hr	tpy	lbs/hr	tpy
Benzene	2.06E-06	1.03E-06	4.51E-06	1.03E-07	4.51E-07
Dichlorobenzene	1.18E-06	5.88E-07	2.58E-06	5.88E-08	2.58E-07
Formaldehyde	7.35E-05	3.68E-05	1.61E-04	3.68E-06	1.61E-05
Hexane	1.76E-03	8.82E-04	3.86E-03	8.82E-05	3.86E-04
Naphthalene	5.98E-07	2.99E-07	1.31E-06	2.99E-08	1.31E-07
Polycyclic Organic Matter	2.38E-05	1.19E-05	5.21E-05	1.19E-06	5.21E-06
Toluene	3.33E-06	1.67E-06	7.30E-06	1.67E-07	7.30E-07
Total		**9.35E-04**	**4.09E-03**	**9.35E-05**	**4.09E-04**

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

FLARE PILOT CALCULATIONS

Emission Unit ID	Combustion Source	Capacity	Criteria Emissions, tons/yr							
		MMBTUH	PM	PM10	PM2.5	NOx	CO	VOC	SO2	HAP
E-7	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
E-7	Flare (Pilot)	0.05	23.223	0.000	0.000	23.246	25.59	0.00	0.00	25.62

Gas combustion

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

```
*     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

Filed Name                  : Wildcat
Well Name                   : Blackstone 32-10
Date                        : 2019.12.16


**********************************************************************************
*     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	3.518
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	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	0.0100	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
Page 2----------							E&P TANK	
12	C6	86.16	2.6100	2.6632	2.6824	1.3439	2.4402	1.4638
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			

ORIGINAL

APPENDIX B:

BACKUP DOCUMENTATION

DELBERT HOSEMANN
Secretary of State

This is not an official certificate of good standing.

Name History

Name	Name Type
SPOONER PETROLEUM COMPANY	Legal

Business Information

Business Type:	Profit Corporation
Business ID:	519532
Status:	Good Standing
Effective Date:	11/14/1984
State of Incorporation:	Mississippi
Principal Office Address:	625 Highland Colony Parkway Ste 101 Ridgeland, MS 39157

Registered Agent

Name
MICHAL SPOONER
625 Highland Colony Parkway, Suite 101
Ridgeland, MS 39157

Officers & Directors

Name	Title
Michal Spooner 625 Highland Colony Parkway Ste 101 Ridgeland, MS 39157	Director, President, Treasurer
Harry Spooner 625 Highland Colony Parkway Ste 101 Ridgeland, MS 39157	Director, Secretary, Vice President

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

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

Public Notice Start Date: 12/25/2019

Spooner Petroleum Company, for the Blackstone 32-10 No. 1 facility, located approximately 3.6 miles south-southwest of Polkville in Smith County, MS, and approximately 0.25 miles south of Smith County Road 144, in Section 32, TWP 4N, R 6E, telephone No. 601-969-1831, is requesting an Optional Pre-Permit Construction approval from the Mississippi Department of Environmental Quality (MDEQ) as allowed by 11 Miss. Admin. Code Pt. 2, R. 2.15.B(2). The facility is publishing this public notice to provide the public with the opportunity to comment to the MDEQ regarding the proposed project.

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

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

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

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

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

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

Public Notice Start Date: December 25, 2019

Spooner Petroleum Company Inc., for the Blackstone 32-10 No. 1 facility, located approximately 3.6 miles south-southwest of Polkville in Smith County, MS, and approximately 0.25 miles south of Smith County Road 144, in Section 32, TWP 4N, R 6E, telephone No. 601-969-1831, has applied to the Mississippi Department of Environmental Quality (MDEQ) for coverage and/or modification 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, separator, storage tanks, oil and water loading operations, and other associated equipment, including a flare for control of air emissions. 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 location during normal business hours:

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

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