Michelle McCracken
HES Professional

Marathon Oil

Marathon Oil Company
990 Town & Country Blvd
Houston, TX 77024
(713) 296-3272
mmccracken@marathonoil.com

8/23/2022

To: Air Program (Mail Code 8P-AR)
US EPA Region 8
Part 71 Permit Contact, Air Permitting and Monitoring Branch
1595 Wynkoop Street
Denver, Colorado 80202

Re: Part 71 Operating Permit Application
Marathon Oil Company – Bakken Asset Team
Fisher 21 USA well pad – Mountrail County, North Dakota

To Whom it May Concern:
Marathon Oil Company's (Marathon) Fisher 21 USA well pad has become subject to permitting requirements under 40 CFR Part 71 Federal Operating Permit Programs when the facility Volatile Organic Compounds (VOC) emissions exceeded 100 tons per year major source permitting threshold. Attached is the Part 71 Permit application for the facility and the affected wells are listed. Please note that the PTE is based upon the registration submitted on 4/25/2022.

Facility Name	**API Number**
Fisher USA 21-5H	33-061-01085
Evans USA 11-5TFH	33-061-04825
Morgan USA 21-5TFH	33-061-04826

Please do not hesitate to contact me at the telephone number listed above or by email if you have any questions regarding this registration.

Sincerely,

Michelle McCracken
Michelle McCracken

Enclosures

Part 71 Operating Permit Application
Fisher 21 USA Well Pad
Mountrail County, North Dakota
August 2022

Marathon Oil Company
Bakken Asset Team
3172 Highway 22 North
Dickinson, ND 58601

Check No	Check Date	Bank	Bank No	Vendor No	Marathon Oil Company 990 Town and Country Blvd. Houston, TX 77024	Direct Inquiries to: ACCOUNTS PAYABLE DEPARTMENT Accounts Payable Phone: 866-323-1836	Hndlg
1497608	08/25/2022	NCBA	7780	0005004375			HS

Invoice Number	Invoice Date	Document No	Remit Comment	Gross Amount	Discount	Invoice/Pay Amount
0822 EP877866		1900004591		8,778.66		8,778.66
			TOTAL:	8,778.66		8,778.66

(FOLD ON PERFORATION BELOW AND DETACH CHECK STUB BEFORE DEPOSITING)

DO NOT CASH UNLESS WARNING BAND AND THE CHECK BACKGROUND ARE IN VIOLET. THE LINE BELOW CONTAINS MICROPRINTING.

FORM 2591 REV. 5/00

ACCOUNTS PAYABLE CHECK

Marathon Oil Company
990 Town and Country Blvd.
Houston, TX 77024

56-389 / 412

CHECK DATE 8/25/2022

CHECK NUMBER 1497608

Eight thousand seven hundred seventy eight and 66/100 Dollars

$8,778.66

PAY TO THE ORDER OF:

EPA US ENVIRONMENTAL PROTECTION
AGENCY
CINCINNATI FINACNCE CENTER
ST LOUIS, MO 63197-9000

U.S. Funds

MATCH AMOUNT IN WORDS WITH NUMBERS

By: _____
Authorized Representative

PNC Bank, N.A. 070
Ashland, OH

VOID AFTER 180 DAYS

DO NOT CASH UNLESS THIS CHECK IS ON WATERMARKED PAPER. HOLD TO LIGHT TO VIEW. THE LINE ABOVE CONTAINS MICROPRINTING.

Administrative and Site Wide Information

Narrative description of the operations:

The Fisher 21 USA well pad includes the following wells: Fisher USA 21-5H, Evans USA 11- 5TFH, and the Morgan USA 21-5TFH. The Fisher 21 USA well pad is owned and operated by Marathon Oil Company (Marathon) and located on the Ft. Berthold Indian Reservation in Mountrail County, North Dakota. This oil and gas production facility consists of multiple wells and associated onsite equipment (discussed in detail below).

Produced fluid from the formation, initially an emulsion comprised of produced oil, natural gas, and produced water flows or is pumped from the well to a high pressure separator. Gas separated from the liquids goes to sales or is combusted by a control device with a 98% minimum destruction efficiency. Liquids from the separator are routed to the heater treater. The oil is then separated from the produced water and a small amount of gas is also separated. When necessary for maintenance or during operational upsets the separator may be bypassed. Oil and produced water transfer to above-ground storage tanks while the gas goes to sales or is combusted by a control device with a 98% minimum destruction efficiency. This site may have compressors in order to supply high-pressure gas for artificial lift as well as to compress unsold gas and sell it to a secondary pipeline. This site may contain natural gas liquid (NGL) recovery equipment to remove NGLs from gas prior to sales or combustion.

Produced water may be loaded into tanker trucks for off-site disposal or sent to disposal via pipeline. The oil will be loaded into tanker trucks for sale or pass through a Lease Automated Custody Transfer (LACT) unit prior to shipment via pipeline. Finally, storage tanks will utilize a control device with a 98% minimum destruction efficiency to reduce emissions from these tanks.

Identification and description of all emission units and air pollution generating activities; include portable equipment:

The following is a narrative of potential emission equipment that may be used at this facility. Site-specific equipment for Marathon facilities may vary depending on gas sales and equipment placement.

1. Electrically-operated pumping units extract produced fluid from the formation. The fluid leaves the production well casing head via an underground flowline and enters a heater treater for separation. The heater treater is equipped with a 500,000 to 2,000,000 Btu/hr burner fueled by natural gas from the well or liquefied petroleum gas (LPG) from a pressurize storage tank. Production from locations where wells share common ownership may be commingled. Under this scenario, multiple heater treaters may be used to determine production rates of individual wells for accounting purposes.

2. Natural gas produced from the heater treater is routed to the heater treater burner to provide its fuel or to control devices with a 98% destruction efficiency equipped with a continuous automatic

igniter and pilot flame with a thermocouple. This device is monitored visually (when personnel are on site) or via the Supervisory Control and Data Acquisition (SCADA) network. The separator and heater treater gas at this facility may be flared temporarily until the gas sales line installation is complete. Once gas sales line installation is complete, the separator gas and sometimes the treater gas is routed to it. If the temperature of the sales gas is too high, the site may require the use of one or more natural gas-driven coolers to meet sales temperature specification.

3. Produced oil from the heater treater is routed to multiple vertical above ground fixed-roof storage tanks, where it is stored prior to tanker truck loading via submerged fill lines or custody transfer via a LACT unit. Emissions of regulated air pollutants (i.e., Volatile Organic Compounds (VOCs) and Hazardous Air Pollutants (HAPs)) from working/breathing/flash losses are routed to a control device with a 98% minimum destruction efficiency equipped with a continuous automatic igniter and pilot flame with a thermocouple. This device is monitored visually (when personnel are on site) or via SCADA. Individual produced oil storage tanks may be subject to 40 CFR 60, subpart OOOOa (NSPS OOOOa) because VOC emissions from these tanks exceed the six tons per year (TPY) per tank threshold.

4. Produced water is routed from the heater treater to vertical above ground fixed- roof storage tanks, where it is stored prior to tanker truck loading or transfer to pipeline. Emissions from produced water tanks are routed to the same control device with a 98% minimum destruction efficiency equipped with a continuous automatic igniter and pilot flame with a thermocouple. This device is monitored visually (when personnel are on site) or via SCADA. Produced water storage tanks are not subject to NSPS OOOOa, because emissions from these tanks do not exceed the six TPY of VOC per tank threshold; however, water tanks share the same vent collection system as the oil tanks and therefore may be subject to the rule.

5. Emissions from oil tanker truck loading are evaluated in the attached calculation spreadsheet. Emissions are calculated based on the assumption that a small percentage of the total oil produced is loaded onto trucks vs. passing through the LACT to pipeline. Produced water loading emissions are assumed to be negligible.

6. If additional separation is necessary to meet buyer specifications, a recirculation pump is used to recirculate produced oil from storage tanks to the heater treater. This pump is powered by on-site electrical power or a gasoline-powered spark ignition (SI) reciprocating internal combustion engines (RICE) producing eight horsepower (hp). Each SI RICE used is manufactured after July 1, 2008 and certified in accordance with the requirements for new non-road SI engines (40 CFR Part 90) and is operated in accordance with the manufacturer's instructions (40 CFR 60.4243(a)(1)). Additionally, each SI RICE is subject to the maintenance and recordkeeping requirements for SI RICE in 40 CFR 63, subpart ZZZZ effective October 19, 2013.

7. This facility design may include multiple pneumatic controllers on-site. Marathon uses intermittent bleed pneumatic devices powered by pressurized natural gas for flow control devices and for maintaining process conditions such as liquid level, pressure, delta- pressure, and temperature. These devices are snap-acting that discharge the full volume of the actuator intermittently when control action is necessary but do not bleed continuously. If throttling devices are used, they vent less than six scf/h and are not subject to NSPS OOOOa.

8. The well pad sites may have one or more generators onsite to provide power to facility equipment. For the purpose of this application, calculations were prepared assuming generators operate for 8,760 hours per year. Once the site is connected to electrical power, generators are removed from the site. Generator engines may be fueled by natural gas or propane and are SI RICE, manufactured after July 1, 2008, certified in accordance with the requirements for new non-road SI engines (40 CFR Part 90), operated in accordance with the manufacturer's instructions (40 CFR 60.4243(a) (1)), and subject to the maintenance and recordkeeping requirements for SI RICE in 40 CFR 63, subpart ZZZZ effective October 19, 2013.

United States Environmental Protection Agency

OMB No. 2060-0336, Expires 11/30/2022

Federal Operating Permit Program (40 CFR Part 71)
CERTIFICATION OF TRUTH, ACCURACY, AND COMPLETENESS (CTAC)

This form must be completed, signed by the "Responsible Official" designated for the facility or emission unit, and sent with each submission of documents (i.e., application forms, updates to applications, reports, or any information required by a part 71 permit).

A. Responsible Official

Name: (Last)	Parker	(First)	Jeff		
Title	Production Manager				
Street or P.O. Box	3172 Highway 22 N				
City	Dickinson	State	ND	ZIP	58601
Telephone	(701) 456-7502	Facsimile	(701) 456-7545		

B. Certification of Truth, Accuracy and Completeness (to be signed by the responsible official)

I certify under penalty of law, based on information and belief formed after reasonable inquiry, the statements and information contained in these documents are true, accurate and complete.

Name (signed) Jeff Parker

Name (typed) Jeff Parker Date 07 26 2022

United States Environmental Protection Agency

OMB No. 2060-0336, Expires 11/30/2022

Federal Operating Permit Program (40 CFR Part 71)
GENERAL INFORMATION AND SUMMARY (GIS)

A. Mailing Address and Contact Information

Facility Name	Fisher 21 USA Well Pad				
Mailing Address: Street or PO BOX	3172 Highway 22 N				
City	Dickinson	State	ND	ZIP	58601
Contact Person	Michelle McCracken	Title	HSE Professional		
Telephone	(713) 296-3772	Facsimile			

B. Facility Location

Temporary source? (Y/N)	No	Plant Location			
City		State	ND	County	Mountrail
EPA Region	8				
Is the facility located within:					
Indian lands? (Y/N)	Yes	An offshore source in federal waters? (Y/N)			No
Non-attainment area? (Y/N)	No	If yes, for what air pollutants?			
Within 50 miles of affected State? (Y/N)		No	If yes, what state(s)?		

C. Owner

Name	Marathon Oil Corporation	Street/P.O. Box	3172 Highway 22 N		
City	Dickinson	State	ND	ZIP	58601
Telephone	(701) 456-7500				

D. Operator

Name	Marathon Oil Corporation	Street/P.O. Box	3172 Highway 22 N		
City	Dickinson	State	ND	ZIP	58601
Telephone	(701) 456-7500				

E. Application Type

Mark only one permit application type and answer the supplementary question appropriate for the type marked.

X	Initial Permit		Significant Mod		Minor Permit Mod(MPM)
	Renewal		Group Processing, MPM		Administrative Amendment

For initial permits, when did operations commence? 9/3/2021

For permit renewal, what is the expiration date of current permit?

F. Applicable Requirement Summary

Mark the types of applicable requirements that apply:

	SIP	X	FIP/TIP		PSD		Non-attainment NSR
X	Minor source NSR		Section 111				Phase I/II Acid Rain
	Stratospheric ozone		OCS		NESHAP		Sec. 112(d) MACT
	Sec.112(g) MACT		Early reduction of HAP				RMP [Sec.112(r)]
	Sec 112(j) MACT		Section 129				
			NAAQS, increments or visibility but for temporary sources				

Is the source subject to the Deepwater Port Act? (Y/N) No

Has a risk management plan been registered? (Y/N) No Agency

Phase II acid rain application submitted?- (Y/N) No If YES, Permitting Authority

G. Source-Wide PTE Restrictions and Generic Applicable Requirements

Cite and describe any emissions-limiting requirements and/or facility-wide "generic" applicable requirements.

No emissions-limiting requirements applicable. Site is applicable to the Federal Implementation Plan for Oil and Natural Gas Well Production Facilities; Fort Berthold Indian Reservation (Mandan, Hidatsa and Arikara Nation), North Dakota

H. Process Description

List processes, products, and SIC codes for the facility.

Process	Products	SIC
Oil and Natural Gas Extraction	Crude Petroleum and Natural Gas	1311

I. Emission Unit Identification

Assign an emissions unit ID and describe each emissions unit at the facility. Control equipment and/or alternative operating scenarios associated with emissions units should by listed on a separate line. Applicants may exclude from this list any insignificant emissions units or activities.

Emission Unit ID	Description of Unit
HT	1 - Heater Treater
FUG	Fugitives
LOAD	Truck Loading
OT	4 625-BBL Oil Tanks
WT	2 625-BBL Oil Tanks
HP Flare	1 - High Pressure Flare
LP Flare	2 - Low Pressure Tank Flares

J. Facility Emissions Summary

Enter potential to emit (PTE) for the facility as a whole for each regulated air pollutant listed below. Enter the name of the single HAP emitted in the greatest amount and its PTE. For all pollutants, stipulations to major source status may be indicated by entering "major" in the space for PTE. Indicate the total actual emissions for fee purposes for the facility in the space provided. Applications for permit modifications need not include actual emissions information.

NOx	20.3 tons/yr	VOC	184.7 tons/yr	SO2	0.0 tons/yr
PM-10	0.0 tons/yr	CO	83.3 tons/yr	Lead	0 tons/yr
Total HAP	7.2 tons/yr				
Single HAP with greatest amount	n-hexane	PTE	295.6 tons/yr		
Total of regulated pollutants (for fee calculation), Sec. F, line 5 of form FEE	116.4 tons/yr				

K. Existing Federally-Enforceable Permits

Permit Number		Permit Type		Permitting Authority	
Permit Number		Permit Type		Permitting Authority	

L. Emission Unit(s) Covered by General Permits

Emission unit(s) subject to general permit			
Check one:	Application made		Coverage granted
General Permit Identifier		Expiration date	

M. Cross-referenced Information

Does this application cross-reference information? (Y/N)	No	(If yes, see instructions)

United States Environmental Protection Agency

OMB No. 2060-0336, Expires 11/30/2022

Federal Operating Permit Program (40 CFR Part 71)
INITIAL COMPLIANCE PLAN AND COMPLIANCE CERTIFICATION (I-Comp)

SECTION A - COMPLIANCE STATUS AND COMPLIANCE PLAN

Complete this section for each unique combination of applicable requirements and emissions units at the facility. List all compliance methods (monitoring, recordkeeping and reporting) you used to determine compliance with the applicable requirement described above. Indicate your compliance status at this time for this requirement and compliance methods and check "YES" or "NO" to the follow-up question.

Emission Unit ID(s): FUG

Applicable Requirement (Describe and Cite)
Subpart OOOOa-Standards of Performance for Crude Oil and Natural Gas Production
60.5365a and 60.5397a- fugitive emission standards at well sites

Compliance Methods for the Above (Description and Citation):
60.5397a- fugitive emission standards and monitoring components at well sites
60.5397a(c)(7)-optical gas imaging standards for fugitive monitoring

Compliance Status:

X	In Compliance: Will you continue to comply up to permit issuance?	Yes
	Not In Compliance: Will you be in compliance at permit issuance?	
	Future-Effective Requirement: Do you expect to meet this on a timely basis?	

Emission Unit ID(s): OT

Applicable Requirement (Describe and Cite)
Subpart OOOOa-Standards of Performance for Crude Oil and Natural Gas Production
60.5365a and 60.5397a- fugitive emission standards at well sites

Compliance Methods for the Above (Description and Citation):
60.5397a- fugitive emission standards and monitoring components at well sites
60.5397a(c)(7)-optical gas imaging standards for fugitive monitoring

Compliance Status:

X	In Compliance: Will you continue to comply up to permit issuance?	Yes
	Not In Compliance: Will you be in compliance at permit issuance?	
	Future-Effective Requirement: Do you expect to meet this on a timely basis?	

B. SCHEDULE OF COMPLIANCE

Complete this section if you answered "NO" to any of the questions in section A. Also, complete this section if required to submit a schedule of compliance by an applicable requirement. Please attach copies of any judicial consent decrees or administrative orders for this requirement.

Unit(s) _____ Requirement _____

Reason for Noncompliance. Briefly explain reason for noncompliance at time of permit issuance or that future-effective requirement will not be met on a timely basis:

Narrative Description of how Source Compliance Will be Achieved. Briefly explain your plan for achieving compliance:

Schedule of Compliance. Provide a schedule of remedial measures, including an enforceable sequence of actions with milestones, leading to compliance, including a date for final compliance.

Remedial Measure or Action	Date to be Achieved

C. SCHEDULE FOR SUBMISSION OF PROGRESS REPORTS

Only complete this section if you are required to submit one or more schedules of compliance in section B or if an applicable requirement requires submittal of a progress report. If a schedule of compliance is required, your progress report should start within 6 months of application submittal and subsequently, no less than every six months. One progress report may include information on multiple schedules of compliance.

Contents of Progress Report (describe):

First Report ___/___/___ Frequency of Submittal _____

Contents of Progress Report (describe):

First Report ___/___/___ Frequency of Submittal _____

D. SCHEDULE FOR SUBMISSION OF COMPLIANCE CERTIFICATIONS

This section must be completed once by every source. Indicate when you would prefer to submit compliance certifications during the term of your permit (at least once per year).

Frequency of submittal: Annual Beginning: 10/30/2022

E. COMPLIANCE WITH ENHANCED MONITORING & COMPLIANCE CERTIFICATION REQUIREMENTS

This section must be completed once by every source. To certify compliance with these, you must be able to certify compliance for every applicable requirement related to monitoring and compliance certification at every unit.

Enhanced Monitoring Requirements:	X	In Compliance		Not in Compliance
Compliance Certification Requirements:	X	In Compliance		Not in Compliance

United States Environmental Protection Agency

OMB No. 2060-0336, Expires 11/30/2022

Federal Operating Permit Program (40 CFR Part 71)
FEE FILING FORM (FF)

The purpose of this form is to ensure that fee payments made by check are credited to the proper facility and to the proper government account. Send this form, along with form FEE and the check, to the appropriate lockbox bank address listed on the following page. This form is required whenever you pay by check, including for initial fee payment and to pay annual fees. Part 71 fees may be paid by check or electronically, and further information on making payments by check or electronically is provided on the following page.

Source or Facility Name	Fisher 21 USA Well Pad
Source Location	47.846783 N, -102.614661 W
EPA Region where Source Located	8
Mailing Address:	
Street/P.O. Box	3172 Highway 22 N
City	Dickinson
State	ND ZIP 58601
Contact Person:	Michelle McCracken
Title	HSE Professional
Telephone	(713) 296-3772
Total Fee Payment Remitted:	$8,778.66

United States Environmental Protection Agency

OMB No. 2060-0336, Expires 11/30/2022

Federal Operating Permit Program (40 CFR Part 71)
FEE CALCUALTION WORKSHEET (FEE)

Use this form initially, or thereafter on an annual basis, to calculate part 71 fees.

A. General Information

Type of fee (Check one): X Initial _____ Annual

Deadline for submitting fee calculation worksheet 9/3/2022

For initial fees, emissions are based on (Check one):

X Actual emissions for the preceding calendar year. (Required in most circumstances.)

_____ Estimates of actual emissions for the current calendar year. (Required when operations commenced during the preceding calendar year.)

Date commenced operations 9/3/2021

_____ Estimates of actual emissions for the preceding calendar year. (Optional after a part 71 permit was issued to replace a part 70 permit, but only if initial fee payment is due between January 1 and March 31; otherwise use actual emissions for the preceding calendar year.)

For annual fee payment, you are required to use actual emissions for the preceding calendar year.

B. Source Information: Complete this section only if you are paying fees but not applying for a permit.

Source or facility name _____

Mailing address: Street or P.O. Box _____

City _____ State _____ ZIP _____

Contact person _____ Title _____

Telephone ____/____/____ Part 71 permit no. _____

C. Certification of Truth, Accuracy and Completeness: Only needed if not submitting a separate form CTAC.

I certify under penalty of law, based on information and belief formed after reasonable inquiry, the statements and information contained in this submittal (form and attachments) are true, accurate and complete.

Name (signed) _____

Name (typed) _____ Date ____/ /____

D. Annual Emissions Report for Fee Calculation Purposes -- Non-HAP

You may use this to report actual emissions (tons per year) of regulated pollutants (for fee calculation) on a calendar-year basis for both initial and annual fee calculation purposes. Section E is designed to report HAP emissions. Quantify all actual emissions, including fugitives, but do not include insignificant emissions and certain regulated air pollutants that are not counted for fee purposes, such as CO and GHGs (see instructions). Sum the emissions in each column to calculate subtotals. Subtotals should be reported to the nearest tenth (0.1) of a ton at the bottom of the page. If any subtotal exceeds 4,000 tons, enter 4,000 for that column.

This data is for 2021/2022 (year)

Emission Unit ID	NOx	VOC	SO2	PM10	Lead	Other
HT	0.4	0.0	0.0	0.0	0.0	0.0
Engines	0.0	0.0	0.0	0.0	0.0	0.0
FUG	0.0	4.7	0.0	0.0	0.0	0.0
LOAD	0.0	17.8	0.0	0.0	0.0	0.0
OT	All OT now represented at LP Flare					
WT	All WT now represented at LP Flare					
HP Flare	2.5	18.6	0.0	0.0	0.0	0.0
MP Flare	0.0	0.0	0.0	0.0	0.0	0.0
LP Flare	7.3	64.9	0.0	0.0	0.0	0.0
0	0.0	0.0	0.0	0.0	0.0	0.0
Subtotals	10.2	106.1	0.0	0.0	0.0	0.0

E. Annual Emissions Report for Fee Calculation Purposes – HAP

HAP Identification. Identify individual HAP emitted at the facility, identify the CAS number, and assign a unique identifier for use in the second table in this section. Whenever assigning identifier codes, use "HAP1" for the first, "HAP2" for the second, and so on.

Name of HAP	CAS No	Identifier
Benzene	71-43-2	HAP1
Toluene	108-88-3	HAP2
Ethylbenzene	100-41-4	HAP3
Xylene	1330-20-7	HAP4
n-Hexane	110-54-3	HAP5
2,2,4-Trimethylepentane	540-87-1	HAP6
Formaldehyde	50-00-0	HAP7

HAP Emissions. Report the actual emissions of individual HAP identified above. Use the identifiers assigned in the table above. Include all emissions, including fugitives, and do not include insignificant emissions. Sum the emissions in each column to calculate subtotals. Report subtotals to the nearest tenth (0.1) of a ton at the bottom of the page. If any subtotal exceeds 4,000 tons, enter 4,000.

This data is for 2021/2022 (year)

Emission Unit ID	Actual Emissions (Tons/Year)						
	HAP1	HAP2	HAP3	HAP4	HAP5	HAP6	HAP7
HT	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Engines	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FUG	0.0	0.0	0.0	0.0	0.1	0.0	0.0
LOAD	0.1	0.0	0.0	0.0	0.5	0.0	0.0
OT	All OT now represented at LP Flare						
WT	All WT now represented at LP Flare						
HP Flare	0.1	0.0	0.0	0.0	0.5	0.0	0.0
MP Flare	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LP Flare	0.3	0.1	0.0	0.1	1.8	0.0	0.0
0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Subtotals	0.4	0.1	0.0	0.1	2.9	0.0	0.0

F. Fee Calculation Worksheet

This worksheet is used to calculate the total fee owed (including the emissions-based fee and the GHG fee adjustment) for both initial and annual fee payment purposes. Reconciliation is only for cases where you are paying the annual fee and you used any type of estimate of actual emissions when you calculated the initial fee. If you do not need to reconcile fees, complete line 1-5 (emissions summary) and then skip down to line 21 (emission calculation). See instructions for more detailed explanation.

EMISSIONS SUMMARY

1. Sum the subtotals from section D of this form (non-HAP) and enter the total, rounded to the nearest tenth (0.1) of a ton.	116.4
2. Sum the subtotals from section E of this form (HAP) and enter the total, rounded to the nearest tenth (0.1) of a ton.	3.6
3. Sum lines 1 and 2.	120.0
4. Enter the emissions that were counted twice. If none, enter "0."	3.6
5. Subtract line 4 from line 3, round to the nearest ton, and enter the result here. This is the total emissions that count for fees purposes.	116.4
RECONCILIATION (WHEN INITIAL FEES WERE BASED ON ESTIMATES FOR THE "CURRENT" CALENDAR YEAR) Only complete lines 6-10 if you are paying the first annual fee and initial fees were based on estimated actual emissions for the calendar year in which you paid initial fees; otherwise skip to line 11 or to line 21.	
6. Enter the total estimated actual emissions for the year the initial fee was paid (previously reported on line 5 of the initial fee form).	
7. If line 5 is greater than line 6, subtract line 6 from line 5, and enter the result. Otherwise enter "0."	
8. If line 6 is greater than line 5, subtract line 5 from line 6, and enter the result. Otherwise enter "0."	
9. If line 7 is greater than 0, multiply line 7 by last year's fee rate ($/ton) and enter the result here. This is the underpayment. Go to line 21.	
10. If line 8 is greater than 0, multiply line 8 by last year's fee rate ($/ton) and enter the result here. This is the overpayment. Go to line 21.	

RECONCILIATION (WHEN INITIAL FEES WERE BASED ON ESTIMATES FOR THE "PRECEDING" CALENDAR YEAR) Only complete lines 11-20 if you are paying the first annual fee and initial fees were based on estimated actual emissions for the calendar year preceding initial fee payment; otherwise skip to line 21. If completing this section, you will also need to complete sections D and E to report actual emissions for the calendar year preceding initial fee payment.	
11. Sum the actual emissions from section D (non-HAP) for the calendar year preceding initial fee payment and enter the result here.	
12. Sum the actual emissions from section E (HAP) for the calendar year preceding initial fee payment and enter the result here.	
13. Add lines 11 and 12 and enter the total here. These are total actual emissions for the calendar year preceding initial fee payment.	
14. Enter double counted emission from line 13 here. If none, enter "0."	
15. Subtract line 14 from line 13, round to the nearest ton, and enter the result here.	
5 of the initial fee form. These are estimated actual emissions for the calendar year preceding initial fee payment.	
17. If line 15 is greater than line 16, subtract line 16 from line 15, and enter the result here. Otherwise enter "0."	
18. If line 16 is greater than line 15, subtract line 15 from line 16, and enter the result here. Otherwise enter "0."	
19. If line 17 is greater than 0, multiply line 17 by last year's fee rate ($/ton) and enter the result here. This is the underpayment.	
20. If line 18 is greater than 0, multiply line 18 by last year's fee rate ($/ton) and enter the result on this line. This is the overpayment.	
EMISSION FEE CALCULATION	
21. Multiply line 5 (tons) by the current fee rate ($/ton) and enter the result here. This is the unadjusted emissions fee. Continue on to line 23.	6542.66

GHG FEE ADJUSTMENT	
22. If you are submitting an initial permit application and this is the first time you are paying fees, enter $2,236, otherwise enter "0". [Note that any updates to the initial application are covered under this one-time charge.]	2236
23. Enter the number of permit modifications (or related permit actions) you have submitted to the permitting authority since you last paid fees. If none, skip to line 25.	
24. Multiply the number in line 23 by $365 and enter the result.	
25. If you have submitted a permit renewal application since the last time you paid fees enter $520, otherwise enter "0"	
26. Sum line 22, 24, and 25 and enter the result. This is the GHG fee adjustment	2236
OTHER ADJUSTMENTS	
26. Add the total on line 21 and the total on line 26 and enter the result.	8778.66
27. Enter any underpayment from line 9 or 19 here. Otherwise enter "0."	
28. Enter any overpayment from line 10 or 20 here. Otherwise enter "0."	
If line 29 is greater than "0," subtract this from line 27 and enter the result here. Otherwise enter the amount on line 27 here. This is the fee adjusted for over/underpayment.	
30. Enter any credit for fee assessment error here. Otherwise, enter "0."	
31. Subtract line 31 from line 30 and enter the result here. Stop here. This is the **TOTAL FEE (AFTER ADJUSTMENTS)** that you must remit to EPA.	8778.66

United States Environmental Protection Agency

OMB No. 2060-0336, Expires 11/30/2022

Federal Operating Permit Program (40 CFR Part 71)
POTENTIAL TO EMIT (PTE)

For each emissions unit at the facility, list the unit ID and the PTE of each air pollutant listed below and sum the values to determine the total PTE for the facility. It may be helpful to complete form EMISS before completing this form. Report each pollutant at each unit to the nearest tenth (0.1) of a ton; values may be reported with greater precision (i.e., more decimal places) if desired. Report facility total PTE for each listed pollutant on this form and in section J of form GIS. The HAP column is for the PTE of all HAPs for each unit. You may use an attachment to show any pollutants that may be present in major amounts that are not already listed on the form (this is not common).

Emissions Unit ID	Regulated Air Pollutants and Pollutants for which Source is Major (PTE in tons/yr)						
	NOx	VOC	SO2	PM10	CO	Lead	HAP
HT	0.4	0.0	0.0	0.0	0.4	0.0	0.0
FUG	0.0	4.7	0.0	0.0	0.0	0.0	0.1
LOAD	0.0	4.3	0.0	0.0	0.0	0.0	0.1
OT	0.0	103.4	0.0	0.0	0.0	0.0	5.2
WT	0.0	1.2	0.0	0.0	0.0	0.0	0.1
HP Flare	7.8	51.4	0.0	0.0	32.5	0.0	1.2
LP Flare	12.0	19.7	0.0	0.0	50.4	0.0	0.4
Facility Totals:	20.3	184.7	0.0	0.0	83.3	0.0	7.2

Supporting Documents

Gas and Liquids Analyses

Certificate of Analysis

Number: 172-21090218-003A

Williston Laboratory
5057 Owan Industrial Park
Unit 5
Williston, ND 58801

Garrett Lunde
Marathon
3172 Highway 22 N
Dickinson, ND 58601

Oct. 05, 2021

Station Name: FIsher USA 21 CTB
Method: GPA 2286
Analyzed: 10/05/2021 12:21:07 by SPL

Sampled By: Mitchell Stenberg
Sample Of: Gas Spot
Sample Date: 09/27/2021
Sample Conditions: 120 psig, @ 153 °F

Analytical Data

Components	Mol. %	Wt. %	GPM at 14.696 psia
Hydrogen Sulfide	ND	ND	
Nitrogen	2.6711	2.6916	
Carbon Dioxide	0.4902	0.7760	
Methane	52.5326	30.3152	
Ethane	22.0538	23.8541	5.9214
Propane	12.8323	20.3545	3.5493
Iso-Butane	1.4138	2.9559	0.4645
n-Butane	4.7779	9.9894	1.5123
Iso-Pentane	0.8791	2.2815	0.3228
n-Pentane	1.3033	3.3825	0.4743
n-Hexane	0.2576	0.7985	0.1064
Cyclohexane	0.0458	0.1387	0.0156
Hexanes	0.4391	1.3612	0.1809
Heptanes	0.2059	0.7422	0.0954
Methylcyclohexane	0.0277	0.0978	0.0112
Benzene	0.0190	0.0534	0.0053
Toluene	0.0057	0.0189	0.0019
Ethylbenzene	0.0005	0.0019	0.0002
Xylenes	0.0020	0.0076	0.0008
Octanes	0.0344	0.1413	0.0177
Nonanes	0.0082	0.0378	0.0046
Decanes Plus	ND	ND	ND
	100.0000	100.0000	12.6846

GPM TOTAL C2+ 12.682

Calculated Physical Properties	Total
Calculated Molecular Weight	27.80
GPA 2172 Calculation:	
Calculated Gross BTU per ft³ @ 14.696 psia & 60°F	
Real Gas Dry BTU	1595.1
Water Sat. Gas Base BTU	1568.1
Relative Density Real Gas	0.9658
Compressibility Factor	0.9935

Gregory Buske

Report generated by: Gregory Buske, Laboratory Technician

Quality Assurance: The above analyses are performed in accordance with ASTM, UOP, GPA guidelines for quality assurance, unless otherwise stated.

SPL, Inc.
2881 South 31st Ave.
Greeley, CO 80634
970-460-0055

EXTENDED HYDROCARBON LIQUID STUDY
CERTIFICATE OF ANALYSIS

Company:	**Marathon**	Sample Name:	**Fisher USA 21 CTB Pressurized Liquid**
Sample Date:	9/27/2021	Lab ID Number:	21100018-003A
Sample Facility:	2 Phase	Date Tested:	10/6/2021
Sample Equipment:	NOT INDICATED	Test Method:	GPA 2186M
Sample Location:	ND	Date Reported:	10/6/2021
Sample Pressure:	120 PSIG		
Sample Temperature:	153°F		
Sampling Method:	GPA-2174		
Type Sample:	Spot		

Components	Mole %	Weight %	Liq. Vol. %
Carbon Dioxide	0.026	0.008	0.007
Nitrogen	0.021	0.004	0.004
Methane	1.881	0.210	0.511
Ethane	3.426	0.717	1.469
Propane	5.344	1.640	2.361
iso-Butane	1.164	0.471	0.611
n-Butane	5.463	2.210	2.762
iso-Pentane	1.756	0.882	1.030
n-Pentane	3.451	1.733	2.006
2-Methylpentane	0.962	0.577	0.644
3-Methylpentane	0.804	0.482	0.526
Other Hexanes	0.657	0.394	0.440
Heptanes	7.522	5.012	5.219
Octanes	5.400	4.210	4.335
Nonanes	1.742	1.555	1.568
Decanes+	55.948	77.093	73.768
Benzene	0.451	0.245	0.202
Toluene	0.352	0.226	0.189
Ethylbenzene	0.223	0.165	0.138
m-Xylene	0.559	0.413	0.347
p-Xylene	0.090	0.067	0.056
o-Xylene	0.235	0.174	0.144
n-Hexane	2.521	1.512	1.663
2,2,4-Trimethylpentane	0.000	0.000	0.000
Totals	**100.000**	**100.000**	**100.000**

Page 1 of 2

CALCULATED SAMPLE CHARACTERISTICS

	Total	C10+
RELATIVE SPECIFIC GRAVITY	0.73144	0.7656
API GRAVITY AT 60/60 F	62.0	53.33
TRUE VAPOR PRESSURE AT 100 F, PSIA	138.070	0.0052
AVERAGE MOLECULAR WEIGHT	143.683	199.8
AVERAGE BOILING POINT, F	305.899	478.4
BTU / GALLON OF LIQUID AT 14.73 PSIA	125,311	130,807
LBS / GALLON OF LIQUID	6.098	6.383

NOTATION: ALL CALCULATIONS PERFORMED USING PHYSICAL CONSTANTS FROM GPA 2145-16, THE TABLES OF PHYSICAL CONSTANTS FOR HYDROCARBONS AND OTHER COMPOUNDS OF INTEREST TO THE NATURAL GAS INDUSTRY.

Page 2 of 2

Emissions Data and Calculations

Background
The Fisher 21 USA well pad has a single processing train with two new wells and one existing well. Sweep gas was implemented at the facility to minimize the risk of burn back. Sweep gas is routed to a flare with a 98 percent destruction efficiency.

General Emission Calculations

Equipment
This site has the following separation equipment in order of highest operating pressure to lowest operating pressure:
•Two or three phase separator(s) (sometimes referred to as high pressure separator(s)),
•Heater treater(s),
The site will also have:
•Oil tanks
•Water tanks
•High pressure flare(s) to control any gas from the high pressure separator(s) that cannot be sold and the gas from the heater treater(s)
•Low pressure flare(s) to control flash and working & breathing emissions from the oil and water tanks
•Truck loading point(s) as a backup to the pipeline LACT(s) for both oil and water
•Pneumatic device(s) (only at some locations)

Model
Pressurized oil sample(s) and a gas sample(s) are collected from the highest pressure separation equipment for analysis to model the emissions from the facility. The analyses are used in a process simulation, Promax, along with normal operating temperatures and pressures through the separation equipment to model emissions. If the analyses do not meet QA/QC criteria, another set of samples are collected, or representative analyses or sales gas analysis are used, and it will be noted. Samples are good if:

•Pressure on the sample vessel is within 15% of the pressure on the vessel sampled (from SCADA, account for pressure loss across sample valve),
•Passes lab QA/QC, and
•Methane is within 3 mole % of gas sales analysis.

Because the gas sample is collected off the highest pressure vessel and it may contain liquids, a flare scrubber (which is actually present in the field) is included in the model. If the sales gas analysis is used, the scrubber will be removed from the model.

User defined inputs into modelling software:

•Oil sample composition
•Gas sample composition
•Separation equipment operating temperatures and pressures
•Site ambient conditions (for tank emissions)
•Production throughputs for crude oil, produced water, and volume of gas flared from the highest pressure separation equipment.

The oil and gas sample compositions are used to estimate fugitive emissions using a count of major equipment at the site and default component counts are used based on the approach provided in EPA's Mandatory Reporting Rule for Greenhouse Gases (GHG MRR), 40 CFR Part 98, Subpart W, Table W-1B.

The gas sample composition is used to estimate emissions from the highest pressure separation equipment that is not sold. The majority of the gas is sold but a small amount of flared gas is included for times when some or all gas cannot be sold. Only the gas from the highest pressure separation equipment can be sold unless there is a VRU.

The heater treater temperature and pressure used in the model are the expected average over the course of the year. The heater treater was modelled as adiabatic.

Flash from the oil and water tanks is also modelled and working and breathing losses are estimated using the most current method from EPA AP-42. The total oil production is divided among the number of tanks in service to estimate the emissions from a single tank. Those emissions are then multiplied by the number of tanks in service. Tanks are modelled as adiabatic with no quench. Water tank emissions are assumed to contain 1% VOC for the purposes of estimating emissions. All emissions from storage tanks are controlled by the low pressure flare with a 98% destruction efficiency.

This site does not have gas pneumatic pumps or venting snap acting controllers. This site sells the majority of the oil through a pipeline so there are minimal truck loading emissions. Water loading, if present is de-minimus.

AIR PERMITTING ANALYSIS

Company Name:	Marathon Oil Company
Facility Name:	Fisher 21 USA Well Pad
Field:	Fort Berthold Reservation
Date Prepared:	8/25/2022
Prepared By:	Marathon Oil Company

	Annual Averaged		Annual Total	
Produced Gas	3,057	mscfd	1,115,805	mscf/yr
Well Gas Flared			40,328	mscf/yr
Oil Production	1,965	bbls/day	717,225	bbls/yr
Produced Water Production	1,791	bbls/day	653,715	bbls/yr
Heater Treater Temp. / Pressure	151	deg F	51	psig
HP Flare Control Efficiency	98%			
LP Flare Control Efficiency	98%			
Operating Period	365	days	8760	hours

Emission Sources	NOx	CO	VOC	HAPs	n-Hexane	PM_{10}	SO_2
Boilers and/or Heaters	0.43	0.36	0.02	--	--	0.03	0.00
Engines and/or Turbines	-	-	-	0.00	0.00E+00	-	-
Equipment Fugitives	--	--	4.71	0.11	0.08	--	--
Oil Truck Loading	--	--	17.81	0.63	0.51	--	--
Oil Tanks	Emissions represented at LP Flare						
Water Tank	Emissions represented at LP Flare						
High Pressure Flare	2.46	10.28	18.62	0.60	0.48	--	--
Mid Pressure Flare	--	--	--	--	--	--	--
Low Pressure Flare	7.33	30.64	64.93	2.29	1.83	--	--
Pneumatics	--	--	0.00	0.00	--	--	--
Total (TPY)	**10.22**	**41.28**	**106.10**	**3.63**	**2.90**	**0.03**	**0.00**

Engine ID/EPN									
Max Rating (Bhp)									
Unit Type									
Max Fuel Consumption (Btu/bhp-hr)									
Fuel Used									

Emissions Factors[1] - Manufacturer's Data & AP42, Chapter 3										
Engine ID	NO_x		CO		VOC		PM_{10}		SO_2	

1. NO_x, CO and VOC emission factors were obtain from the engine manufacturer. All other emission factors were obtained from the EPA's AP-42 emission factors from AP-42, Section 3.2, July 2000, Tables 3.2-1, 3.2-2, and 3.2-3.

Emissions Factors[1] - AP42, Chapter 3 (lb/MMBtu)						
Engine ID	Benzene	Toluene	Ethylbenzene	Xylene	n-Hexane	Formaldehyde

1. NO_x, CO and VOC emission factors were obtain from the engine manufacturer. All other emission factors were obtained from the EPA's AP-42 emission factors from AP-42, Section 3.2, July 2000, Tables 3.2-1, 3.2-2, and 3.2-3.

Engine ID	Run Time (Hrs)	Fuel Usage (MMBtu)[2]	Total Engine Emissions (Tons/year)				
			NO_x[3]	CO[3]	VOC[3]	PM_{10}[3]	SO_2[3]
		Total	-	-	-	-	-

(2) (Fuel Usage, MMBtu) = (Engine Horsepower, hp) x (Fuel Consumption, Btu/hp-hr) / (1,000,000 Btu/MMBtu)
(3) (Emissions, tons/year) = (Run Time, hours) X (Max Rating, bhp) X (Emission Factor, lb/bhp-hr) / (2000 lbs/ton)
(4) (Emissions, tons/year) = (Fuel Usage, MMBtu) X (Emissions Factor, lb/MMBtu) / (2000 lbs/ton)

Total Engine Emissions (Tons/year)[4]								
Engine ID	Run Time (Hrs)	Fuel Usage (MMBtu)	Benzene	Toluene	Ethylbenzene	Xylene	n-Hexane	Formaldehyde
		Total	0.00	0.00	0.00E+00	0.00	0.00E+00	0.00

(2) (Fuel Usage, MMBtu) = (Engine Horsepower, hp) x (Fuel Consumption, Btu/hp-hr) / (1,000,000 Btu/MMBtu)
(4) (Emissions, tons/year) = (Fuel Usage, MMBtu) X (Emissions Factor, lb/MMBtu) / (2000 lbs/ton)

Calculation Basis:
Internal combustion emissions were calculated in accordance with AP-42, according to fuel type and engine type, and vendor specific emission factors.

2022-08-23 Fisher 2021 Actuals.xlsx Heater Burners

Heater ID:	Treater 1			
Heater Rating (MMBtu/hr)	1.00			
Heater Fuel Source	High Pressure Gas			
Fuel Heat Value (Btu/scf)	1,020			
Operating Hours	8,760			
Fuel Usage (Mscf/year)[1]	8,588			

(1) Fuel Usage = (Heater Treater Rating, MMBtu/hr) x (8760 hours/year) / (Fuel Heat Value, Btu/scf) x (1,000 Mscf/MMscf)

Emissions Factors (lb/MMscf) - From AP42, Ch.1.4, Tables 1.4-1 & 1.4-2 dated July 1998				
NOx	CO	VOC	PM	SO_2
100	84	5.5	7.6	0.6

Note: If the actual maximum fuel usage is provided, the above emission factors are adjusted by the ratio of the actual fuel heat value to 1020 Btu/scf.

Heater/Boiler Emissions (Tons/year)[2]						
Heater ID:	Fuel Usage (Mscf/yr)	NOx	CO	VOC	PM	SO_2
Treater 1	8,588	0.43	0.36	0.02	0.03	2.58E-03
	Total	0.43	0.36	0.02	0.03	0.00

(2) Emissions in TPY = (Fuel Usage Mscf/year) x (Emission Factor lb/MMscf) / (2000 lb/ton) x (1000 Mscf/MMscf)
(3) All PM emissions were assumed to be PM10 based on footnote (c) to Table 1.4-2 of AP-42 (dated 7/98)

Calculation Basis:
Natural gas-fired single-burner heater treaters will be used to heat the oil/water/gas mixture to help promote three phase separation.
External combustion emissions were calculated in accordance with AP-42 Section 1.4 (July 1998), Natural Gas Combustion, Tables 1.4-1, 1.4-2, and 1.4-3., using emission factors for Small Boilers (less than 100 MMBtu/hr rating).
All heaters are assumed to run 8760 hours per year.
Emissions of HAPs are assumed to be deminimis.

Default Component Counts - Light Oil Service (per major piece of equipment)[1]				
Equipment	Valves	Flanges	Connectors	Other Components
Wellhead	5	10	4	1
Separators	6	12	10	0
Heater Treater	8	12	20	0
Header	5	10	4	0

(1) From MRR Subpart W Table W-1C.

Default Component Counts - Gas Service (per major piece of equipment)[1]				
Equipment	Valves	Connectors	Open-Ended Lines	Pressure Relief Valves
Wellhead	11	36	1	0
Separators	34	106	6	2
Meters/Piping	14	51	1	1
Compressors	73	179	3	4
In-Line heaters	14	65	2	1

(1) From MRR Subpart W Table W-1C.

Total Fugitive Emissions (Tons/year)		
VOC	HAPs	n-Hexane
[illegible]	0.[illegible]	0.08
[illegible]	8,760	hours

Major Equipment Counts[2]	
Wellhead	3
Header	1
Separator	2
Heater Treater	1
Meters	1
Compressors	0
In-Line Heaters	0
Pumps	5

(2) Actual count of major equipment at facility

Component Type	Number of Components in Gas Service[3]	Gas Emission Factor (lb/hr per Component)[4]	VOC Emissions (TPY) from Gas Components[5]	HAP Emissions (TPY) from Gas Components[5]	n-Hexane Emissions (TPY) from Gas Components[5]	Number of Components in Oil Service[3]	Oil Emission Factor (lb/hr per Component)[4]	VOC Emissions (TPY) from Oil Components[5]	HAP Emissions (TPY) from Oil Components[5]	n-Hexane Emissions (TPY) from Oil Components[5]
Valves	115	0.010	2.12	0.04	0.04	40	0.006	0.95	0.03	0.01
Pumps	0	0.01	0.00E+00	0.00E+00	0.00E+00	5	0.029	6.22E-01	1.74E-02	9.40E-03
Flanges	0	8.60E-04	0.00E+00	0.00E+00	0.00E+00	76	2.43E-04	0.08	2.24E-03	1.21E-03
Compressors	0	0.019	0.00E+00	0.00E+00	0.00E+00	0	0.017	0.00E+00	0.00E+00	0.00E+00
Relief Valves	5	0.019	0.18	3.74E-03	3.39E-03	0	0.017	0.00E+00	0.00E+00	0.00E+00
Open-ended Lines	16	4.41E-03	0.13	2.72E-03	2.47E-03	0	0.003	0.00E+00	0.00E+00	0.00E+00
Connectors	371	4.40E-04	0.30	6.30E-03	5.71E-03	56	4.63E-04	0.11	0.00	1.70E-03
Other	0	0.019	0.00E+00	0.00E+00	0.00E+00	3	0.017	0.21	0.01	0.00

(3) The number of components for a particular type of equipment were calculated as follows: (Number of Components) = (Equipment Count) x (Components per Equipment for service)

(4) Factors taken from EPA document EPA-453/R-95-017; November, 1995; pp. 2-15.

(5) Per Service Type and Per Component Type: (VOC or HAP Emissions, TPY) = (Component Count) x (Emission Factor, lb/hr/component) x (8760 hours per year) x (wt%VOC or HAP) x (1 ton per 2000 lb)

Calculation Basis:

Site specific component counts are not available so default component counts are used based on the approach provided in EPA's Mandatory Reporting Rule for Greenhouse Gases (GHG MRR), 40 CFR Part 98, Subpart W, Table W-1B. Actual counts were compiled for major equipment (i.e. wellheads, separators, in-line heaters, etc.), and default component counts were applied to each equipment type.

Oil produced at the site will have an API gravity of greater than 20° API; therefore, all hydrocarbon liquids are considered "light oil". There are no "heavy oil" components at this site.

Pneumatic Devices					
Type	Count	Bleed Rate (scf/hr/component)	VOC (TPY)	HAP (TPY)	n-Hexane
Valves	0	6	0.00	0.00	0.00
Pumps	0	0	0.00E+00	0.00E+00	0.00E+00

No venting pneumatic valves

Total Fugitive Emissions (Tons/year)		
VOC	HAPs	n-Hexane
0.00	0.00	0.00

Calculation Basis: Emissions are estimated using the estimated controller count (for those that vent to atmosphere), an emission factor for pneumatics that is the same as what would be considered a covered continuous venting pneumatic device, and a gas composition. Note: devices used are snap acting versus throttling. The gas composition used is that of the high pressure separator gas composition.
Where pneumatic pumps are used, the manufacturer specified bleed rate will be used.

Emissions (TPY) = Count of devices * Bleed Rate (scf/hr/controller) * Gas Molecular Weight (lb/lbmole) * Weight Percent VOC or HAP * 1/molar volume conversion (379.3 scf/lbmole) * 8760 hr/yr * 1 ton/2000 lb

Gas Composition (High Pressure Separator Gas)	
Date of Analysis:	9/27/2021
Component	wt%
Water	0.00E+00
H2S	0.00E+00
Nitrogen	2.69%
Carbon Dioxide	0.78%
Methane	30.32%
Ethane	23.86%
Propane	20.36%
Isobutane	2.96%
n-Butane	9.99%
Isopentane	2.28%
n-Pentane	3.38%
2-Methylpentane	0.00E+00
3-Methylpentane	0.00E+00
n-Hexane	0.80%
Cyclohexane	1.47%
Heptane	0.74%
Methylcyclohexane	0.10%
Benzene	0.05%
Toluene	0.02%
Ethylbenzene	1.91E-05
o-Xylene	0.01%
2,2,4-Trimethylpentane	0.00E+00
Octane	0.14%
Nonane	0.04%
Decane	0.00E+00
Decanes+	0.00E+00
Gas wt %VOC	**42.34%**
Gas wt %HAPs	**0.88%**
Molecular Weight	**27.79**

Flowsheet Information				
Tank Losses Stencil Name		Oil Tank Losses		
Tank Losses Stencil Reference Stream		Oil Tank Feed		
Separator Name		Oil Tank		
Separator Inlet Stream		Oil Tank Feed		
Separator Pressure [psia]	Inlet | Outlet	64.7	13.7	
Separator Temperature [°F]	Inlet | Outlet	151.0	113.1	

Tank Characteristics				
Tank Type		Vertical Cylinder		
Time Frame		Year		
Material Category		Light Organics		
Number of Tanks		4.0		
Shell Height	[ft]	25.000		
Diameter [ft]	[ft]	13.500		
Maximum Liquid Height	[%] | [ft]	90.000	22.500	
Average Liquid Height	[%] | [ft]	50.000	12.500	
Minimum Liquid Height	[%] | [ft]	10.000	2.500	
Sum of Increases in Liquid Level	[ft/yr]	-		
Tank Volume	[gal] | [bbl]	26768.817	637.353	
Insulation		Uninsulated		
Bolted or Riveted Construction		FALSE		
Vapor Balance Tank		FALSE		

Paint Characteristics		
Shell Color		Tan
Shell Paint Condition		Average
Roof Color		Tan
Roof Paint Condition		Average

Roof Characteristics		
Type		Cone
Diameter	[ft]	-
Slope	[ft/ft]	0.063

Breather Vent Settings		
Breather Vacuum Pressure	[psig]	-0.030
Breather Vent Pressure	[psig]	0.030

Loading Loss Parameters		
Cargo Carrier		
Land Based Mode of Operation		
Marine Based Mode of Operation		
Overall Reduction Efficiency	[%]	
Maximum Hourly Loading Rate	[bbl/h]	

Meteorological Data				
Location		Williston, ND		
Average Atmospheric Pressure	[psia]	13.720		
Maximum Average Temperature	[°F]	53.200		
Minimum Average Temperature	[°F]	29.900		
Solar Insolation	[BTU/ft^2*day]	1193.000		
Average Wind Speed	[mph]	8.900		
Tank Conditions				
Flashing Temperature	[°F]	113.059		
Maximum Liquid Surface Temperature	[°F]	113.059		
Average Liquid Surface Temperature	[°F]	105.809		
Set Bulk Temperature to Stream Temperature?		TRUE		
Bulk Liquid Temperature	[°F]	151.000		
Net Throughput	[bbl/day] | [bbl/yr]	2007.419	732707.762	
Net Throughput Per Tank	[bbl/day] | [bbl/yr]	501.855	183176.941	
Turnovers Per Tank	[per day]	359.216		
Residual Liquid	[bbl/day]	1958.062		
Residual Liquid Per Tank	[bbl/day]	489.515		
Raoult's Law Used for Vapor Pressure Calc?		FALSE		
VP @ Minimum Liquid Surface Temperature	[psia]	11.627		
VP @ Maximum Liquid Surface Temperature	[psia]	13.720		
True Vapor Pressure	[psia]	12.641		

2022-08-23 Fisher 2021 Actuals.xlsx Water Tanks

Produced Water Production	1,791	BWPD
Oil Production	1,965	BOPD
Percent Oil in Produced Water	1%	Percent
Number of Water Tanks	2	
Number of Oil Tanks	4	

	Uncontrolled Water Flash			Uncontrolled Water W&S		
Component	Oil Flash Mass Flow (lb/hr)	Ratioed Water Flash Mass Flow (lb/hr)	Water Flash Mass Flow 99% Reduction (lb/hr)	Oil W&B Mass Flow (lb/hr)	Ratioed Water W&S Mass Flow (lb/hr)	Water W&B Mass Flow 99% Reduction (lb/hr)
Water	6.82	6.21	0.06	0.67	0.34	3.35E-03
H2S	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nitrogen	0.23	0.21	2.13E-03	0.00	0.00	1.47E-05
Carbon Dioxide	1.13	1.03	1.03E-02	0.09	0.05	4.51E-04
Methane	12.63	11.51	0.12	0.42	0.21	0.00
Ethane	80.49	73.36	0.73	7.87	3.94	0.04
Propane	172.66	157.37	1.57	16.47	8.23	0.08
Isobutane	34.54	31.48	0.31	3.24	1.62	0.02
n-Butane	128.58	117.19	1.17	11.98	5.99	0.06
Isopentane	30.02	27.36	0.27	2.75	1.37	1.37E-02
n-Pentane	46.04	41.96	0.42	4.19	2.09	0.02
2-Methylpentane	5.49	5.01	0.05	0.49	0.25	2.46E-03
3-Methylpentane	4.30	3.92	3.92E-02	0.38	0.19	1.92E-03
n-Hexane	14.11	12.86	0.13	1.25	0.63	6.27E-03
Cyclohexane	6.37	5.81	5.81E-02	0.57	0.28	2.83E-03
Heptane	17.18	15.66	0.16	1.49	0.75	7.45E-03
Methylcyclohexane	0.14	1.27E-01	1.27E-03	1.22E-02	6.08E-03	6.08E-05
Benzene	1.97	1.80	1.80E-02	0.18	0.09	8.80E-04
Toluene	0.67	0.61	6.14E-03	0.06	0.03	2.93E-04
Ethylbenzene	0.19	0.17	1.69E-03	1.58E-02	7.89E-03	7.89E-05
o-Xylene	0.60	0.55	5.46E-03	0.05	2.54E-02	2.54E-04
2,2,4-Trimethylpentan	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Octane	5.10	4.65	4.65E-02	0.43	0.22	2.16E-03
Nonane	0.67	0.61	6.06E-03	0.06	0.03	2.75E-04
Decane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Oil 10+	2.37E-01	2.16E-01	2.16E-03	1.76E-02	8.79E-03	8.79E-05
Total	570.17	519.68	5.20	52.69	26.34	0.26
Total VOC	468.87	427.35	4.27	43.63	21.81	0.22
Total HAPs	17.55	15.99	0.16	1.55	0.78	7.77E-03

Maximum Annual Emission Rates and Composition to LP Flare										
ProMax Stream:	Pilot Gas	Propane Pilot	Oil Flash	Oil W&B	Water Flash	Water Tank W&B	Sweep Blanket Gas	Total to Flare	Destruction Efficiency	Flare Exhaust (controlled)
Component	(tpy)	(tpy)	(tpy)	(tpy)	(tpy)	(tpy)	(tpy)	(tpy)	(%)	(tpy)
Water	0.23	0.00E+00	29.86	2.94	0.27	0.01	46.80	80.11	0%	80.11
H2S	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00	0.00E+00	98%	0.00E+00
Nitrogen	0.29	0.00E+00	1.02	0.01	0.01	6.44E-05	59.59	60.92	0%	60.92
Carbon Dioxide	0.08	0.00E+00	4.96	0.39	0.05	0.00	17.17	22.66	0%	22.66
Methane	3.29	0.00E+00	55.31	1.86	0.50	0.01	677.24	738.21	98%	14.76
Ethane	2.63	0.00E+00	352.54	34.49	3.21	0.17	540.14	933.17	98%	18.66
Propane	2.23	0.00E+00	756.27	72.12	6.89	0.36	458.68	1296.56	98%	25.93
Isobutane	0.32	0.00E+00	151.30	14.19	1.38	0.07	66.35	233.61	98%	4.67
n-Butane	1.10	0.00E+00	563.16	52.46	5.13	0.26	227.15	849.27	98%	16.99
Isopentane	0.23	0.00E+00	131.48	12.04	1.20	0.06	48.27	193.29	98%	3.87
n-Pentane	0.36	0.00E+00	201.66	18.35	1.84	0.09	73.75	296.04	98%	5.92
2-Methylpentane	0.04	0.00E+00	24.07	2.16	0.22	1.08E-02	8.91	35.41	98%	0.71
3-Methylpentane	0.03	0.00E+00	18.82	1.68	0.17	8.42E-03	7.00	27.72	98%	0.55
n-Hexane	0.12	0.00E+00	61.82	5.49	0.56	0.03	23.72	91.74	98%	1.83
Cyclohexane	0.05	0.00E+00	27.92	2.48	0.25	1.24E-02	10.54	41.26	98%	0.83
Heptane	0.16	0.00E+00	75.25	6.53	0.69	0.03	32.50	115.16	98%	2.30
Methylcyclohexane	1.22E-03	0.00E+00	0.61	5.32E-02	5.55E-03	2.66E-04	0.25	0.92	98%	1.84E-02
Benzene	0.02	0.00E+00	8.64	0.77	0.08	3.85E-03	3.22	12.73	98%	0.25
Toluene	0.01	0.00E+00	2.95	0.26	2.69E-02	1.28E-03	1.23	4.47	98%	0.09
Ethylbenzene	1.89E-03	0.00E+00	0.81	0.07	7.40E-03	3.46E-04	0.39	1.28	98%	2.56E-02
o-Xylene	0.01	0.00E+00	2.62	0.22	2.39E-02	1.11E-03	1.28	4.16	98%	0.08
2,2,4-Trimethylpentane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00	0.00E+00	98%	0.00E+00
Octane	0.05	0.00E+00	22.34	1.89	0.20	9.47E-03	11.06	35.56	98%	0.71
Nonane	0.01	0.00E+00	2.91	0.24	2.66E-02	1.21E-03	1.67	4.86	98%	0.10
Oil 10+	5.96E-03	0.00E+00	1.04E+00	7.70E-02	9.46E-03	3.85E-04	1.23	2.36E+00	98%	4.71E-02
Total	11.27	0.00E+00	2497.36	230.78	22.76	1.15	2318.15	5,081.48	--	262.05
Total VOC	4.75	0.00E+00	2,053.67	191.09	18.72	0.96	977.21	3,246.40	--	64.93
Total HAP	0.15	0.00E+00	76.85	6.81	0.70	0.03	29.84	114.38	--	2.29
Annual Hours (Hrs)	8,760	0	8,760	8,760	8,760	8,760	8,760	--		
Heating Value HHV (Btu/scf)	1,551	2,557	2,598	2,643	2,598	2,643	1,551	1,985		
Heating Value LHV (Btu/scf)	1,415	2,557	2,392	2,434	2,392	2,434	1,415	1,820		
Molecular Weight	27.75	44.10	46.47	47.33	46.47	47.33	27.75	--		
Volumetric Flow (scf/hr)	35.20	0.00E+00	4,656	422.49	42.42	2.11	7237.50	12,396		
Volumetric Flow (MMscf/yr)	0.31	0.00E+00	40.79	3.70	0.37	0.02	63.40	108.28		
H2S PPM	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		

Oil Tank Flash GOR (scf/bbl)	56.87

Combustion Emissions from Flare								Totals
	(tpy)	(tpy)	(tpy)	(tpy)	(tpy)	(tpy)	(tpy)	(tpy)
Total NOx	0.02	0.00E+00	3.60	0.33	3.28E-02	1.66E-03	3.34	7.33
Total CO	0.07	0.00E+00	15.12	1.40	0.14	6.98E-03	13.91	30.64
Total SO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total PM_{10}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total $PM_{2.5}$	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Criteria Pollutant Emissions from Flare *		
Component	Emission Factor	Emission Factor Units
NO_x	0.068	lb/MMBtu
CO	0.31	lb/MMBtu
SO_2	--	--
PM_{10}		lb/MMscf
$PM_{2.5}$		lb/MMscf
H_2S	--	--

Constants	
H_2S Molecular Weight	34.08
SO_2 Molecular Weight	64.06
Gas Constant (scf/lb-mol)	379.30

Variables	
Flare Destruction Efficiency	98%
Number of Pilots	2
Volume of Gas/Tip (scf/hr)	35.20
Operating Hours	8,760

Footnotes:

* Flare CO and NOx emission factors from AP-42, Table 13.5-1 & 13.5-2, February 2018. PM_{10} and $PM_{2.5}$ emission factors from AP-42, Table 1.4-1 and 1.4-2, July 1998. SO_2 emissions assume 100% conversion of H_2S to SO_2.

HP Flare Annual Emissions

Maximum Annual Emission Rates and Composition to HP Flare							
ProMax Stream:	Pilot Gas	Propane Pilot	HP Flared Gas	Heater Treater Gas	Total to Flare	Destruction Efficiency	Flare Exhaust (controlled)
Component	(tpy)	(tpy)	(tpy)	(tpy)	(tpy)	(%)	(tpy)
Water	0.11	0.00E+00	8.95	39.27	48.34	0%	48.34
H2S	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	98%	0.00E+00
Nitrogen	0.14	0.00E+00	11.87	7.47	19.49	0%	19.49
Carbon Dioxide	0.04	0.00E+00	3.36	7.62	11.02	0%	11.02
Methane	1.65	0.00E+00	134.01	170.01	305.66	98%	6.11
Ethane	1.31	0.00E+00	105.06	297.32	403.69	98%	8.07
Propane	1.12	0.00E+00	88.35	328.96	418.43	98%	8.37
Isobutane	0.16	0.00E+00	12.74	51.35	64.25	98%	1.28
n-Butane	0.55	0.00E+00	43.57	179.41	223.53	98%	4.47
Isopentane	0.12	0.00E+00	9.25	38.92	48.28	98%	0.97
n-Pentane	0.18	0.00E+00	14.13	59.75	74.06	98%	1.48
2-Methylpentane	0.02	0.00E+00	1.71	7.24	8.96	98%	0.18
3-Methylpentane	0.02	0.00E+00	1.34	5.69	7.04	98%	0.14
n-Hexane	0.06	0.00E+00	4.54	19.20	23.80	98%	0.48
Cyclohexane	0.03	0.00E+00	2.02	8.57	10.61	98%	0.21
Heptane	0.08	0.00E+00	6.23	25.90	32.21	98%	0.64
Methylcyclohexane	6.11E-04	0.00E+00	0.05	0.20	0.25	98%	5.01E-03
Benzene	0.01	0.00E+00	0.62	2.63	3.25	98%	0.07
Toluene	0.00	0.00E+00	0.24	0.99	1.23	98%	0.02
Ethylbenzene	9.46E-04	0.00E+00	0.07	0.31	0.38	98%	0.01
o-Xylene	0.00	0.00E+00	0.25	1.01	1.26	98%	0.03
2,2,4-Trimethylpentane	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	98%	0.00E+00
Octane	0.03	0.00E+00	2.12	8.64	10.79	98%	0.22
Nonane	0.00	0.00E+00	0.32	1.28	1.60	98%	0.03
Decane	0.00E+00	0.00E+00	0.00	0.00E+00	0.00E+00	98%	0.00E+00
Oil 10+	2.98E-03	0.00E+00	0.24	0.84	1.08	98%	2.15E-02
Total	5.64	0.00E+00	451.03	1,263	1,719	--	111.65
Total VOC	2.38	0.00E+00	187.79	741	931	--	18.62
Total HAP	0.07	0.00E+00	5.72	24.14	29.92	--	0.60
Annual Hours (Hrs)	8,760	0	8,760	8,760	--		
Heating Value HHV (Btu/scf)	1,551	2,557	1,542	1,903	1,791		
Heating Value LHV (Btu/scf)	1,415	2,557	1,407	1,742	1,638		
Molecular Weight	27.75	44.10	27.58	34.32	--		
Volumetric Flow (scf/hr)	17.60	0.00E+00	1,417	3,187	4,621		
Volumetric Flow (MMscf/yr)	0.15	0.00E+00	12.41	27.92	40.48		
H2S PPM	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		

Combustion Emissions from Flare					Totals
	(tpy)	(tpy)	(tpy)	(tpy)	(tpy)
Total NOx	0.01	0.00E+00	0.65	1.81	2.46
Total CO	0.03	0.00E+00	2.71	7.54	10.28
Total SO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total PM_{10}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total $PM_{2.5}$	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Criteria Pollutant Emissions from Flare[a]		
Component	Emission Factor	Emission Factor Units
NO_X	0.068	lb/MMBtu
CO	0.31	lb/MMBtu
SO_2	--	--
PM_{10}		lb/MMscf
$PM_{2.5}$		lb/MMscf
H_2S	--	--

Constants	
H_2S Molecular Weight	34.08
SO_2 Molecular Weight	64.06
Gas Constant (scf/lb-mol)	379.30

Variables	
Flare Destruction Efficiency	98%
Number of Pilots	1
Volume of Gas/Tip (scf/hr)	17.60
HT Gas Op hours	8,760
HP Sep Gas Op Hours	8,760

Footnotes:

[a] Flare CO and NOx emission factors from AP-42, Table 13.5-1 & 13.5-2, February 2018. PM_{10} and $PM_{2.5}$ emission factors from AP-42, Table 1.4-1 and 1.4-2, July 1998. SO_2 emissions assume 100% conversion of H_2S to SO_2.

Truck Loading Losses Calculations

Promax Stream Speciation	32 - Oil Tool W&B	
Controlled/Uncontrolled	UNCONTROLLED	
Oil Loaded	**129,499**	**bbls / yr**

Promax Report Results		
LL= 12.46 * SPM/T * (1-EFF/100)		
Saturation Factor (S) =	0.6	
Average True Vapor Pressure of Liquid Loaded (P)=	12.64	psi
Average Surface Temperature of Liquid Loaded (T)[a]=	565.48	Rankin
Molecular Weight (M)[a]=	47.33	lb/lb-mole
Control Efficiency * Collection Efficiency (EFF)[e]=	0	%
Hydrocarbon Content[a]=	98.55	Weight %
VOC Content[a]=	82.80	Weight %
HAP Conent[a]=	2.95	Weight %
Average Uncontrolled LL[b] =	0.3322	lb/bbl
Average Uncontrolled LL[b] =	0.2751	lb VOC/bbl
Estimated Throughput=	129,499	bbl/Year

Total Hydrocarbon Emissions	TPY
	21.51
Total VOC Emissions	TPY
	17.81
Total HAP Emissions	TPY
	0.63

Component	Total Speciated Vapors Emitted During Loading (Fugitives)	
	Mass Fraction	ton / yr[d]
Water	1.27	0.27
H2S	0.00E+00	0.00E+00
Nitrogen	0.01	1.20E-03
Carbon Dioxide	0.17	0.04
Methane	0.81	0.17
Ethane	14.94	3.21
Propane	31.25	6.72
Isobutane	6.15	1.32
n-Butane	22.73	4.89
Isopentane	5.22	1.12
n-Pentane	7.95	1.71
2-Methylpentane	0.94	0.20
3-Methylpentane	0.73	0.16
n-Hexane	2.38	0.51
Cyclohexane	1.08	0.23
Heptane	2.83	0.61
Methylcyclohexane	2.31E-02	4.96E-03
Benzene	0.33	7.18E-02
Toluene	0.11	2.39E-02
Ethylbenzene	0.03	6.44E-03
o-Xylene	0.10	2.07E-02
2,2,4-Trimethylpentane	0.00E+00	0.00E+00
Octane	0.82	1.76E-01
Nonane	0.10	2.25E-02
Decane	0.00E+00	0.00E+00
Oil 10+	3.34E-02	7.18E-03
Total HC	98.55	21.20
Total VOC	82.80	17.81
Total HAP	2.95	0.63

Footnotes:

[a]Values were obtained from Promax.

[b]Loading emissions include total hydrocarbons as calculated using AP-42, Section 5.2.

[c]Oil tanks are only trucked out when transfer to pipeline is unavailable.

[d]The component speciation was obtained from Promax Stream 'Oil Tool Loading' and multiplied by the total hydrocarbon emissions.

[e]Loading emissions are uncontrolled.

Sampled Site	Fisher USA 21 CTB
Sampled Location	Gas Spot
Sample Date	9/27/2021

Gas Analysis

Component	Mol %	Wt. %	GPM (at 14.696 psia)
Hydrogen Sulfide	0.00E+00	0.00E+00	
Nitrogen	2.671	2.692	
Carbon Dioxide	0.490	0.776	
Methane	52.533	30.315	
Ethane	22.054	23.854	5.921
Propane	12.832	20.355	3.549
Iso-Butane	1.414	2.956	0.465
n-Butane	4.778	9.989	1.512
Iso-Pentane	0.879	2.282	0.323
n-Pentane	1.303	3.383	0.474
n-Hexane	0.258	0.799	0.106
Cyclohexane	0.046	0.139	0.016
Hexanes	0.439	1.361	0.181
Heptanes	0.206	0.742	0.095
Methylcyclohexane	0.028	0.098	0.011
Benzene	0.019	0.053	0.005
Toluene	0.006	0.019	0.002
Ethylbenzene	0.001	0.002	0.000
Xylenes	0.002	0.008	0.001
Octanes	0.034	0.141	0.018
Nonanes	0.008	0.038	0.005
Decanes Plus	0.00E+00	0.00	0.00E+00
2,2,4-Trimethylpentan	0.00E+00	0.00E+00	0.00E+00
	100.00	100.00	12.68

Pressure	120	psig
Temperature	153.0	F

ProMax Entry

Component	Mol %
Water	0.00E+00
H2S	0.00E+00
Nitrogen	2.6711
Carbon Dioxide	0.4902
Methane	52.5326
Ethane	22.0538
Propane	12.8323
Isobutane	1.4138
n-Butane	4.7779
Isopentane	0.8791
n-Pentane	1.3033
2-Methylpentane	0.0000
3-Methylpentane	0.0000
n-Hexane	0.2576
Cyclohexane	0.4849
Heptane	0.2059
Methylcyclohexane	0.0277
Benzene	0.0190
Toluene	0.0057
Ethylbenzene	0.0005
o-Xylene	0.0020
2,2,4-TMP	0.00E+00
Octane	0.0344
Nonane	0.0082
Decane	0.00E+00
Oil 10+	0.0000
	100.00

Sampled Site	**Fisher USA 21 CTB**
Sampled Stream	**2 Phase Bulk**
Sampled Date	**9/27/2021**

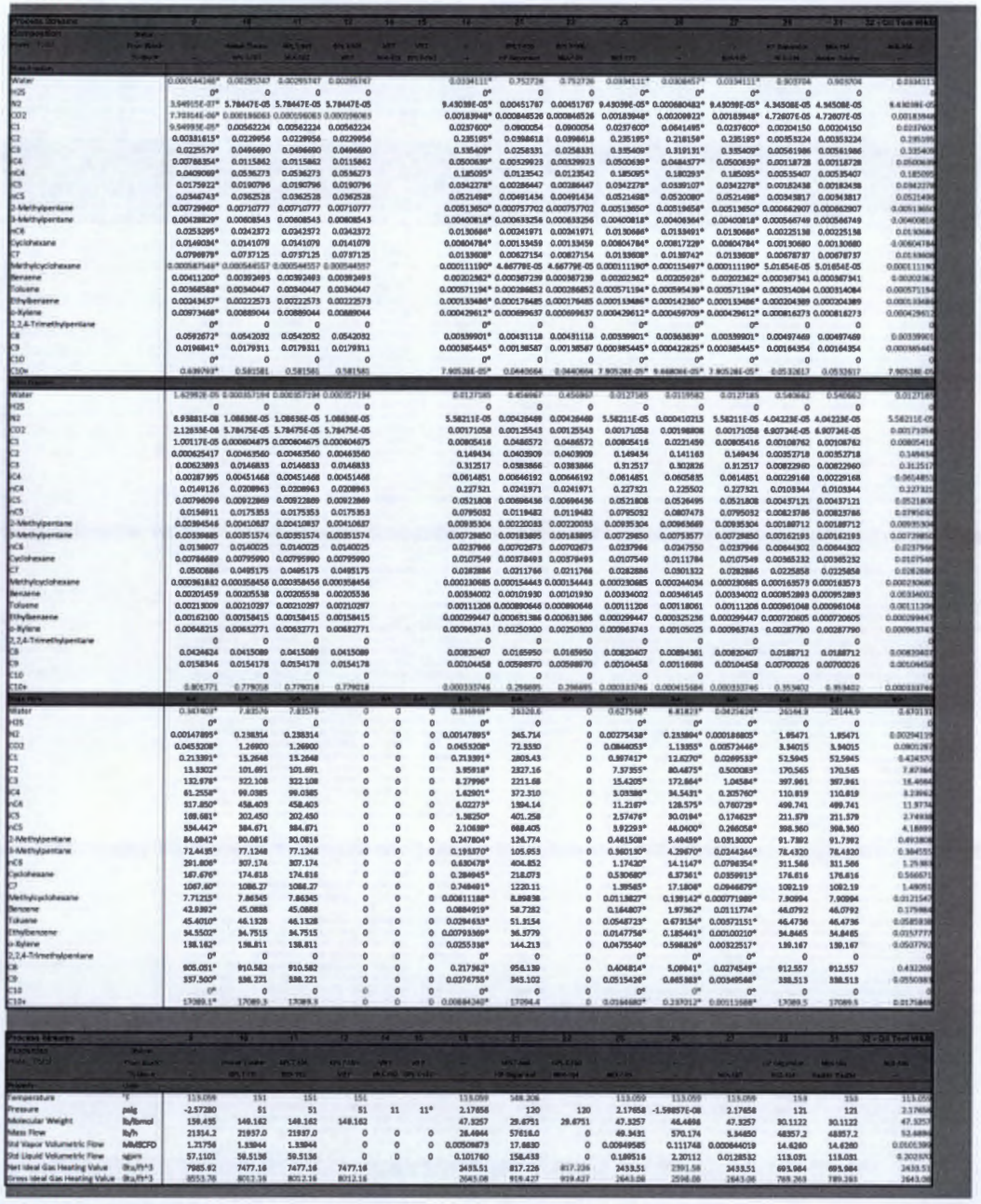
Liquid Analysis

Component	Mol %	Wt. %	Liq. Vol. %
Carbon Dioxide	0.026	0.01	0.007
Nitrogen	0.021	0.00	0.004
Methane	1.881	0.21	0.511
Ethane	3.426	0.72	1.469
Propane	5.344	1.64	2.361
iso-Butane	1.164	0.47	0.611
n-Butane	5.463	2.21	2.762
iso-Pentane	1.756	0.88	1.030
n-Pentane	3.451	1.73	2.006
2-Methylpentane	0.962	0.58	0.644
3-Methylpentane	0.804	0.48	0.526
Other Hexanes	0.657	0.39	0.440
Heptanes	7.522	5.01	5.219
Octanes	5.400	4.21	4.335
Nonanes	1.742	1.56	1.568
Decanes+	55.948	77.09	73.768
Benzene	0.451	0.25	0.202
Toluene	0.352	0.23	0.189
Ethylbenzene	0.223	0.17	0.138
m-Xylene	0.559	0.41	0.347
p-Xylene	0.090	0.07	0.056
o-Xylene	0.235	0.17	0.144
n-Hexane	2.521	1.51	1.663
2,2,4-Trimethylpentane	0.00E+00	0.00E+00	0.00E+00
	100.00	100.00	100.00

Component	Mol %
Water	0.00E+00
H2S	0.00E+00
Nitrogen	0.0210
Carbon Dioxide	0.0260
Methane	1.8810
Ethane	3.4260
Propane	5.3440
Isobutane	1.1640
n-Butane	5.4630
Isopentane	1.7560
n-Pentane	3.4510
2-Methylpentane	0.9620
3-Methylpentane	0.8040
n-Hexane	2.5210
Cyclohexane	0.6570
Heptane	7.5220
Methylcyclohexane	0.00E+00
Benzene	0.4510
Toluene	0.3520
Ethylbenzene	0.2230
o-Xylene	0.8840
2,2,4-TMP	0.00E+00
Octane	5.4000
Nonane	1.7420
Decane	0.00E+00
Oil 10+	55.9480
	100.00

Pressure	**120**	**psig**
Temperature	**153.0**	**F**

API Gravity (Oil C10+)	**53.3**
Molecular Weight (Oil C10+)	**199.8**



Federal Operating Permit Program (40 CFR Part 71)
EMISSION CALCULATIONS (EMISS)

Calculate potential to emit (PTE) for applicability purposes and actual emissions for fee purposes for each emissions unit, control device, or alternative operating scenario identified in section I of form GIS. If form FEE does not need to be submitted with the application, do not calculate actual emissions.

A. Emissions Unit ID HT

B. Identification and Quantification of Emissions

For each emissions unit identified above, list each regulated air pollutant or other pollutant for which the source is major, then list any other regulated pollutant (for fee calculation) not already listed. HAP may be simply listed as "HAP." Next, calculate PTE for applicability purposes and actual emissions for fee purposes for each pollutant. Do not calculate PTE for air pollutants listed solely for fee purposes. Include all fugitives for fee purposes. See instructions concerning GHGs. Values should be reported to the nearest tenth (0.1) of a ton for yearly values or tenth (0.1) of a pound for hourly values.

Air Pollutants	Emissions Rates			CAS No.
	Actual Annual Emissions (tons/yr)	Potential to Emit Hourly (lbs/hr)	Potential to Emit Annual (ton/yr)	
NOx	0.4	0.1	0.4	
CO	0.4	0.1	0.4	82083-46-5
VOC	0.0	0.0	0.0	
PM10	0.0	0.0	0.0	
SO2	0.0	0.0	0.0	

Federal Operating Permit Program (40 CFR Part 71)
EMISSION CALCULATIONS (EMISS)

Calculate potential to emit (PTE) for applicability purposes and actual emissions for fee purposes for each emissions unit, control device, or alternative operating scenario identified in section I of form GIS. If form FEE does not need to be submitted with the application, do not calculate actual emissions.

A. Emissions Unit ID FUG

B. Identification and Quantification of Emissions

For each emissions unit identified above, list each regulated air pollutant or other pollutant for which the source is major, then list any other regulated pollutant (for fee calculation) not already listed. HAP may be simply listed as "HAP." Next, calculate PTE for applicability purposes and actual emissions for fee purposes for each pollutant. Do not calculate PTE for air pollutants listed solely for fee purposes. Include all fugitives for fee purposes. See instructions concerning GHGs. Values should be reported to the nearest tenth (0.1) of a ton for yearly values or tenth (0.1) of a pound for hourly values.

Air Pollutants	Emissions Rates			CAS No.
	Actual Annual Emissions (tons/yr)	Potential to Emit		
		Hourly (lbs/hr)	Annual (ton/yr)	
VOC	4.7	1.1	4.7	
HAP	0.1	0.0	0.1	

United States Environmental Protection Agency

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Federal Operating Permit Program (40 CFR Part 71)
EMISSION CALCULATIONS (EMISS)

Calculate potential to emit (PTE) for applicability purposes and actual emissions for fee purposes for each emissions unit, control device, or alternative operating scenario identified in section I of form GIS. If form FEE does not need to be submitted with the application, do not calculate actual emissions.

A. Emissions Unit ID OT

B. Identification and Quantification of Emissions

For each emissions unit identified above, list each regulated air pollutant or other pollutant for which the source is major, then list any other regulated pollutant (for fee calculation) not already listed. HAP may be simply listed as "HAP." Next, calculate PTE for applicability purposes and actual emissions for fee purposes for each pollutant. Do not calculate PTE for air pollutants listed solely for fee purposes. Include all fugitives for fee purposes. See instructions concerning GHGs. Values should be reported to the nearest tenth (0.1) of a ton for yearly values or tenth (0.1) of a pound for hourly values.

Air Pollutants	Emissions Rates			CAS No.
		Potential to Emit		
	Actual Annual Emissions (tons/yr)	Hourly (lbs/hr)	Annual (ton/yr)	
VOC	Emissions now represented at LP Flare	23.6	103.4	
HAP	Emissions now represented at LP Flare	1.2	5.2	

* Please note that VOC and HAP emissions from the oil tank and water tank are now represented at the LP Flare instead of at the tanks themselves.

Federal Operating Permit Program (40 CFR Part 71)
EMISSION CALCULATIONS (EMISS)

Calculate potential to emit (PTE) for applicability purposes and actual emissions for fee purposes for each emissions unit, control device, or alternative operating scenario identified in section I of form GIS. If form FEE does not need to be submitted with the application, do not calculate actual emissions.

A. Emissions Unit ID WT

B. Identification and Quantification of Emissions

For each emissions unit identified above, list each regulated air pollutant or other pollutant for which the source is major, then list any other regulated pollutant (for fee calculation) not already listed. HAP may be simply listed as "HAP." Next, calculate PTE for applicability purposes and actual emissions for fee purposes for each pollutant. Do not calculate PTE for air pollutants listed solely for fee purposes. Include all fugitives for fee purposes. See instructions concerning GHGs. Values should be reported to the nearest tenth (0.1) of a ton for yearly values or tenth (0.1) of a pound for hourly values.

Air Pollutants	Emissions Rates			CAS No.
		Potential to Emit		
	Actual Annual Emissions (tons/yr)	Hourly (lbs/hr)	Annual (ton/yr)	
VOC	Emissions now represented at LP Flare	0.3	1.2	

* Please note that VOC and HAP emissions from the oil tank and water tank are now represented at the LP Flare instead of at the tanks themselves.

Federal Operating Permit Program (40 CFR Part 71)
EMISSION CALCULATIONS (EMISS)

Calculate potential to emit (PTE) for applicability purposes and actual emissions for fee purposes for each emissions unit, control device, or alternative operating scenario identified in section I of form GIS. If form FEE does not need to be submitted with the application, do not calculate actual emissions.

A. Emissions Unit ID HP Flare

B. Identification and Quantification of Emissions

For each emissions unit identified above, list each regulated air pollutant or other pollutant for which the source is major, then list any other regulated pollutant (for fee calculation) not already listed. HAP may be simply listed as "HAP." Next, calculate PTE for applicability purposes and actual emissions for fee purposes for each pollutant. Do not calculate PTE for air pollutants listed solely for fee purposes. Include all fugitives for fee purposes. See instructions concerning GHGs. Values should be reported to the nearest tenth (0.1) of a ton for yearly values or tenth (0.1) of a pound for hourly values.

Air Pollutants	Emissions Rates			CAS No.
	Actual Annual Emissions (tons/yr)	Potential to Emit Hourly (lbs/hr)	Potential to Emit Annual (ton/yr)	
NOx	2.5	1.8	7.8	
CO	10.3	7.4	32.5	82083-46-5
VOC	18.6	11.7	51.4	
HAP	0.6	0.3	1.2	

United States Environmental Protection Agency

OMB No. 2060-0336, Expires 11/30/2022

Federal Operating Permit Program (40 CFR Part 71)
EMISSION CALCULATIONS (EMISS)

Calculate potential to emit (PTE) for applicability purposes and actual emissions for fee purposes for each emissions unit, control device, or alternative operating scenario identified in section I of form GIS. If form FEE does not need to be submitted with the application, do not calculate actual emissions.

A. Emissions Unit ID LP Flare

B. Identification and Quantification of Emissions

For each emissions unit identified above, list each regulated air pollutant or other pollutant for which the source is major, then list any other regulated pollutant (for fee calculation) not already listed. HAP may be simply listed as "HAP." Next, calculate PTE for applicability purposes and actual emissions for fee purposes for each pollutant. Do not calculate PTE for air pollutants listed solely for fee purposes. Include all fugitives for fee purposes. See instructions concerning GHGs. Values should be reported to the nearest tenth (0.1) of a ton for yearly values or tenth (0.1) of a pound for hourly values.

Air Pollutants	Emissions Rates			CAS No.
	Actual Annual Emissions (tons/yr)	Potential to Emit Hourly (lbs/hr)	Potential to Emit Annual (ton/yr)	
NOx	7.3	2.7	12.0	
CO	30.6	11.5	50.4	82083-46-5
VOC	64.9	4.5	19.7	
HAP	2.3	0.1	0.4	

* Please note that VOC and HAP emissions from the oil tank and water tank are now represented at the LP Flare instead of at the tanks themselves.

Federal Operating Permit Program (40 CFR Part 71)
EMISSION CALCULATIONS (EMISS)

Calculate potential to emit (PTE) for applicability purposes and actual emissions for fee purposes for each emissions unit, control device, or alternative operating scenario identified in section I of form GIS. If form FEE does not need to be submitted with the application, do not calculate actual emissions.

A. Emissions Unit ID TRK

B. Identification and Quantification of Emissions

For each emissions unit identified above, list each regulated air pollutant or other pollutant for which the source is major, then list any other regulated pollutant (for fee calculation) not already listed. HAP may be simply listed as "HAP." Next, calculate PTE for applicability purposes and actual emissions for fee purposes for each pollutant. Do not calculate PTE for air pollutants listed solely for fee purposes. Include all fugitives for fee purposes. See instructions concerning GHGs. Values should be reported to the nearest tenth (0.1) of a ton for yearly values or tenth (0.1) of a pound for hourly values.

Air Pollutants	Emissions Rates			CAS No.
	Actual Annual Emissions (tons/yr)	Potential to Emit Hourly (lbs/hr)	Potential to Emit Annual (ton/yr)	
VOC	17.8	1.0	4.3	
HAP	0.6	0.0	0.1	

Fuel Combustion Sources

EPA United States Environmental Protection Agency

OMB No. 2060-0336, Expires 11/30/2022

Federal Operating Permit Program (40 CFR Part 71)
EMISSION UNIT DESCRIPTION FOR FUEL COMBUSTION SOURCES (EUD-1)

A. General Information

Emissions unit ID	HT	Description	Heater Treater
SIC Code (4-digit)	1311	SCC Code	31000128

B. Emissions Unit Description

Primary use	Oil Separation	Temporary Source (Y/N)	No
Manufacturer		Model Number	
Serial Number		Installation Date	8/4/2021

Boiler Type ____ Industrial Boiler X ____ Process Burner ____ Electric Utility Boiler ____

Other (Describe) ____

Boiler horsepower rating ____ Boiler Steam Flow (lb/hr) ____

Type of Fuel-Burning Equipment (coal burning only): ____ Hand Fired

____ Spreader Stoker ____ Underfeed Stoker ____ Overfeed Stoker

____ Traveling Grate ____ Shaking Grate ____ Dry Bed ____ Wet Bed

Actual Heat Input 1 MMBTU/hr Max Design Heat Input 1 MMBTU/hr

C. Fuel Data

Primary fuel type(s) Natural Gas Standby fuel type(s) None

Describe each fuel you expected to use during the term of the permit.

Fuel Type	Max. Sulfur Content %	Max. Ash Content %	BTU Value CF, gal., or lb
Natural Gas	Negligible	Negligible	1020 BTU/SCF

D. Fuel Usage Rates

Fuel Type	Annual Actual Usage	Maximum Usage	
		Hourly	Annual
Natural Gas	8588 MSCF	980 SCF	8588 MSCF

E. Associated Air Pollution Control Equipment

Emissions Unit ID		Device Type	
Air Pollutants Controlled		Manufacturer	
Model No.		Serial No.	
Installation Date		Control Efficiency (%)	
Efficiency estimation method			

F. Ambient Impact Assessment

Stack Height (ft)	.	Inside stack diameter (ft)	.
Stack Temp (^{0}F)	.	Design stack flow rate (ACFM)	.
Actual stack flow rate (ACFM)	.	Velocity (ft/sec)	.

United States Environmental Protection Agency

OMB No. 2060-0336, Expires 11/30/2022

Federal Operating Permit Program (40 CFR Part 71)
EMISSION UNIT DESCRIPTION FOR FUEL COMBUSTION SOURCES (EUD-1)

A. General Information

Emissions unit ID	HP Flare	Description	Treater Flare
SIC Code (4-digit)	1311	SCC Code	31000160

B. Emissions Unit Description

Primary use	Flare	Temporary Source (Y/N)	No
Manufacturer	Steffes	Model Number	SHC-6
Serial Number		Installation Date	8/4/2021

Boiler Type _____ Industrial Boiler _____ Process Burner _____ Electric Utility Boiler

Other (Describe) _____

Boiler horsepower rating _____ Boiler Steam Flow (lb/hr) _____

Type of Fuel-Burning Equipment (coal burning only): _____ Hand Fired

_____ Spreader Stoker _____ Underfeed Stoker _____ Overfeed Stoker

_____ Traveling Grate _____ Shaking Grate _____ Dry Bed _____ Wet Bed

Actual Heat Input _____ MMBTU/hr Max Design Heat Input _____ MMBTU/hr

C. Fuel Data

Primary fuel type(s) Natural Gas Standby fuel type(s) None

Describe each fuel you expected to use during the term of the permit.

Fuel Type	Max. Sulfur Content %	Max. Ash Content %	BTU Value CF, gal., or lb	
Natural Gas	Negligible	Negligible	1790.8	BTU/SCF

D. Fuel Usage Rates

Fuel Type	Annual Actual Usage	Maximum Usage	
		Hourly	Annual
Natural Gas	40,483 MSCF	15347 SCF	134,442 MSCF

E. Associated Air Pollution Control Equipment

Emissions Unit ID		Device Type	
Air Pollutants Controlled		Manufacturer	
Model No.		Serial No.	
Installation Date		Control Efficiency (%)	
Efficiency estimation method			

F. Ambient Impact Assessment

Stack Height (ft)	.	Inside stack diameter (ft)	.
Stack Temp (^{0}F)	.	Design stack flow rate (ACFM)	.
Actual stack flow rate (ACFM)	.	Velocity (ft/sec)	.

United States Environmental Protection Agency

OMB No. 2060-0336, Expires 11/30/2022

Federal Operating Permit Program (40 CFR Part 71)
EMISSION UNIT DESCRIPTION FOR FUEL COMBUSTION SOURCES (EUD-1)

A. General Information

Emissions unit ID	LP Flare	Description	Tank Flare
SIC Code (4-digit)	1311	SCC Code	2310021011

B. Emissions Unit Description

Primary use	Flare	Temporary Source (Y/N)	No
Manufacturer	Steffes	Model Number	SAA-4
Serial Number		Installation Date	8/4/2021

Boiler Type _____ Industrial Boiler _____ Process Burner _____ Electric Utility Boiler

Other (Describe) _____

Boiler horsepower rating _____ Boiler Steam Flow (lb/hr) _____

Type of Fuel-Burning Equipment (coal burning only): _____ Hand Fired

_____ Spreader Stoker _____ Underfeed Stoker _____ Overfeed Stoker

_____ Traveling Grate _____ Shaking Grate _____ Dry Bed _____ Wet Bed

Actual Heat Input _____ MMBTU/hr Max Design Heat Input _____ MMBTU/hr

C. Fuel Data

Primary fuel type(s) Tank Vapors Standby fuel type(s) None

Describe each fuel you expected to use during the term of the permit.

Fuel Type	Max. Sulfur Content %	Max. Ash Content %	BTU Value CF, gal., or lb	
Tank Vapors	Negligible	Negligible	1985.3	BTU/SCF

D. Fuel Usage Rates

Fuel Type	Annual Actual Usage	Maximum Usage	
		Hourly	Annual
Tank Vapors & Sweep Gas	108,280 MSCF	17141 SCF	150,159 MSCF

E. Associated Air Pollution Control Equipment

Emissions Unit ID		Device Type	
Air Pollutants Controlled		Manufacturer	
Model No.		Serial No.	
Installation Date		Control Efficiency (%)	
Efficiency estimation method			

F. Ambient Impact Assessment

Stack Height (ft)	.	Inside stack diameter (ft)	.
Stack Temp (^{0}F)	.	Design stack flow rate (ACFM)	.
Actual stack flow rate (ACFM)	.	Velocity (ft/sec)	.

VOC Emitting Sources

United States Environmental Protection Agency

OMB No. 2060-0336, Expires 11/30/2022

Federal Operating Permit Program (40 CFR Part 71)
EMISSION UNIT DESCRIPTION FOR VOC EMITTING SOURCES (EUD-2)

A. General Information

Emissions unit ID	FUG	Description	Fugitives
SIC Code (4-digit)	1311	SCC Code	

B. Emissions Unit Description

Equipment Type	Equipment Fugitives	Temporary Source (Y/N)	No
Manufacturer		Model Number	
Serial Number		Installation Date	8/4/2021
Articles being coated or degreased			
Application method			
Overspray (surface coating) (%)		Drying Method	
No. of dryers		Tank capacity (degreasers) (gal)	

C. Associated Air Pollution Control Equipment

Emissions unit ID		Device Types	
Manufacturer		Model Number	
Serial No.		Installation Date	/ /
Control efficiency (%)	.	Capture Efficiency (%)	.
Air pollutant(s) controlled		Efficiency estimation method	

D. Ambient Impact Assessment

This information must be completed by temporary sources or when ambient impact assessment is an applicable requirement for this emissions unit (this is not common).

Stack height (ft) _____ . _____ Inside stack diameter (ft) _____ . _____

Stack temp (F) _____ Design stack flow rate (ACFM) _____ . _____

Actual stack flow rate (ACFM) _____ . _____ Velocity (ft/sec) _____ . _____

E. VOC-containing Substance Data

List each VOC-containing substance consumed, processed or produced at the emissions unit that is emitted into the air. In the name column, if providing a brand name, include the name of the manufacture; if the substance contains HAP, list the constituent HAP.

Substance Name (Chemical, Brand Name)	**Substance Type**	**CAS No**	**VOC Content (lb/gal)**
Natural Gas	Natural Gas	8006-14-2	
Actual Annual Usage (gal/yr)	**Maximum Daily Usage (gal/day)**	**Maximum Annual Usage (gal/yr)**	

EPA United States Environmental Protection Agency

OMB No. 2060-0336, Expires 11/30/2022

Federal Operating Permit Program (40 CFR Part 71)
EMISSION UNIT DESCRIPTION FOR VOC EMITTING SOURCES (EUD-2)

A. General Information

Emissions unit ID	OT	Description	Oil Tanks
SIC Code (4-digit)	1311	SCC Code	23100210010

B. Emissions Unit Description

Equipment Type	Oil Tanks	Temporary Source (Y/N)	No
Manufacturer	Hess	Model Number	625
Serial Number		Installation Date	8/4/2021
Articles being coated or degreased			
Application method			
Overspray (surface coating) (%)		Drying Method	
No. of dryers		Tank capacity (degreasers) (gal)	

C. Associated Air Pollution Control Equipment

Emissions unit ID	LP Flare	Device Types	Flare
Manufacturer	Steffes	Model Number	SAA-4
Serial No.		Installation Date	8/4/2021
Control efficiency (%)	98	Capture Efficiency (%)	100
Air pollutant(s) controlled	VOC, HAP	Efficiency estimation method	Eng. Calc.

D. Ambient Impact Assessment

This information must be completed by temporary sources or when ambient impact assessment is an applicable requirement for this emissions unit (this is not common).			
Stack height (ft)	.	Inside stack diameter (ft)	.
Stack temp (F)		Design stack flow rate (ACFM)	.
Actual stack flow rate (ACFM)	.	Velocity (ft/sec)	.

E. VOC-containing Substance Data

List each VOC-containing substance consumed, processed or produced at the emissions unit that is emitted into the air. In the name column, if providing a brand name, include the name of the manufacture; if the substance contains HAP, list the constituent HAP.

Substance Name (Chemical, Brand Name)	**Substance Type**	**CAS No**	**VOC Content (lb/gal)**
Crude Oil	Crude Oil	N/A	
Actual Annual Usage (gal/yr)	**Maximum Daily Usage (gal/day)**	**Maximum Annual Usage (gal/yr)**	
30,123,450	126,672	46,235,280	

United States Environmental Protection Agency

OMB No. 2060-0336, Expires 11/30/2022

Federal Operating Permit Program (40 CFR Part 71)
EMISSION UNIT DESCRIPTION FOR VOC EMITTING SOURCES (EUD-2)

A. General Information

Emissions unit ID	WT	Description	Produced Water Tanks
SIC Code (4-digit)	1311	SCC Code	

B. Emissions Unit Description

Equipment Type	Tank	Temporary Source (Y/N)	No
Manufacturer	Hess	Model Number	625
Serial Number		Installation Date	8/4/2021
Articles being coated or degreased			
Application method			
Overspray (surface coating) (%)		Drying Method	
No. of dryers		Tank capacity (degreasers) (gal)	

C. Associated Air Pollution Control Equipment

Emissions unit ID	LP Flare	Device Types	Flare
Manufacturer	Steffes	Model Number	SAA-4
Serial No.		Installation Date	8/4/2021
Control efficiency (%)	98	Capture Efficiency (%)	100
Air pollutant(s) controlled	VOC, HAP	Efficiency estimation method	Eng. Calc.

D. Ambient Impact Assessment

This information must be completed by temporary sources or when ambient impact assessment is an applicable requirement for this emissions unit (this is not common).			
Stack height (ft)	.	Inside stack diameter (ft)	.
Stack temp (F)		Design stack flow rate (ACFM)	.
Actual stack flow rate (ACFM)	.	Velocity (ft/sec)	.

E. VOC-containing Substance Data

List each VOC-containing substance consumed, processed or produced at the emissions unit that is emitted into the air. In the name column, if providing a brand name, include the name of the manufacture; if the substance contains HAP, list the constituent HAP.

Substance Name (Chemical, Brand Name)	**Substance Type**	**CAS No**	**VOC Content (lb/gal)**
Produced water (1% crude)	Produced water (1% crude)	N/A	
Actual Annual Usage (gal/yr)	**Maximum Daily Usage (gal/day)**	**Maximum Annual Usage (gal/yr)**	
27,456,030	150,024	54,758,760	

United States Environmental Protection Agency

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Federal Operating Permit Program (40 CFR Part 71)
EMISSION UNIT DESCRIPTION FOR VOC EMITTING SOURCES (EUD-2)

A. General Information

Emissions unit ID	LOAD	Description	Truck Loading
SIC Code (4-digit)	1311	SCC Code	

B. Emissions Unit Description

Equipment Type	Truck Loading	Temporary Source (Y/N)	No
Manufacturer		Model Number	
Serial Number		Installation Date	8/4/2021
Articles being coated or degreased			
Application method			
Overspray (surface coating) (%)		Drying Method	
No. of dryers		Tank capacity (degreasers) (gal)	

C. Associated Air Pollution Control Equipment

Emissions unit ID		Device Types	Flare
Manufacturer		Model Number	
Serial No.		Installation Date	
Control efficiency (%)		Capture Efficiency (%)	
Air pollutant(s) controlled		Efficiency estimation method	

D. Ambient Impact Assessment

This information must be completed by temporary sources or when ambient impact assessment is an applicable requirement for this emissions unit (this is not common).	
Stack height (ft) _____ . _____	Inside stack diameter (ft) _____ . _____
Stack temp (F) _____	Design stack flow rate (ACFM) _____ .
Actual stack flow rate (ACFM) _____ . _____	Velocity (ft/sec) _____ . _____

E. VOC-containing Substance Data

List each VOC-containing substance consumed, processed or produced at the emissions unit that is emitted into the air. In the name column, if providing a brand name, include the name of the manufacture; if the substance contains HAP, list the constituent HAP.

Substance Name (Chemical, Brand Name)	Substance Type	CAS No	VOC Content (lb/gal)
Crude Oil	Crude Oil	N/A	
Actual Annual Usage (gal/yr)	**Maximum Daily Usage (gal/day)**	**Maximum Annual Usage (gal/yr)**	
5,438,958	12,668	4,623,804	

Compliance with Federal Requirements

Regulatory Applicability

PSD, 40 CFR Part 52 [Not Applicable]

Controlled potential facility-wide total emissions of VOC are less than the PSD threshold of 250 TPY of any single regulated pollutant.

NSPS, 40 CFR Part 60 [OOOOa Applicable]

Subpart Kb, VOL Storage Vessels. This subpart regulates hydrocarbon storage tanks larger than 19,813-gallons capacity and built after July 23, 1984. All storage tank capacities at this facility are smaller than the threshold level and are located prior to custody transfer.

Subpart KKK, Equipment Leaks of VOC from Onshore Natural Gas Processing Plants. This subpart sets standards natural gas processing plants. This facility is not a natural gas processing plant; therefore, the facility will not be subject to Subpart KKK.

Subpart JJJJ, Stationary Spark Ignition (SI) Internal Combustion Engines (ICE). This subpart establishes standards for Stationary Spark Ignition Internal Combustion Engines. There are not any current engines on site subject to Subpart JJJJ.

Subpart OOOO, Oil and Gas Operations. This subpart establishes standards for multiple process units in the crude oil and natural gas production, transmission, and distribution sectors. The applicability of this regulation is to "a gas wellhead affected facility" which is defined as "a single natural gas well." Since the facility is an oil well, it is not subject to the well completion requirements. Any pneumatic controllers used at the facility will be intermittent and not continuous bleed; therefore, the requirements for pneumatic controllers will not apply. Storage tanks subject to this rule are those with the potential to emit greater than six (6) tons per year of volatile organic compounds. The tanks at this facility were installed after September 18, 2015, and therefore, they are subject to this subpart.

Subpart OOOOa, Crude Oil and Natural Gas Facilities. This subpart applies to hydraulically fractured wells, centrifugal compressors, reciprocating compressors, pneumatic controllers and pumps, natural gas processing plants, storage vessels, equipment leaks, and natural gas sweetening units that commence construction, modification, or reconstruction after September 18, 2015. The storage vessels and equipment leaks at this facility were installed after this date and are therefore subject to this subpart.

NESHAP, 40 CFR Part 61 [Not Applicable]

There are no emissions of any of the regulated pollutants: arsenic, asbestos, benzene, beryllium, coke oven emissions, mercury, radionuclides or vinyl chloride except for trace amounts of benzene.

Subpart J, Equipment Leaks of Benzene, only affects process streams which contain more than 10% benzene by weight. All process streams at this facility are below this threshold.

Regulatory Applicability, Continued

NESHAP, 40 CFR Part 63 [Not Applicable]

Subpart HH, National Emission Standards for Hazardous Air Pollutants from Oil and Natural Gas Production Facilities. For area sources of HAP emissions, the rule sets standards for glycol dehydration units. There are no such units at this facility; therefore, this subpart does not apply.

Subpart ZZZZ Subpart ZZZZ establishes national emission limitations and operating limitations for hazardous air pollutants (HAP) emitted from stationary reciprocating internal combustion engines (RICE) located at major and area sources of HAP emissions. Each SI RICE is subject to the maintenance and recordkeeping requirements for SI RICE in 40 CFR 63, subpart ZZZZ effective October 19, 2013.

Compliance Assurance Monitoring, 40 CFR 64 [Not Applicable]

Compliance Assurance Monitoring, as published in the Federal Register on October 22, 1997, applies to any pollutant-specific emission unit at a major source that is required to obtain a Title V permit, if it meets all the following criteria:

- It is subject to an emission limit or standard for an applicable regulated air pollutant.
- It uses a control device to achieve compliance with the applicable emission limit or standard.
- It has potential emissions, prior to the control device, of the applicable regulated air pollutant of 100 TPY.

The storage tanks at the facility meet all three criteria for CAM applicability, but are exempt per §64.2(b) since the tanks are subject to NSPS OOOO, which was promulgated after 1990.

Chemical Accident Prevention Provisions, 40 CFR Part 68 [Not Applicable]

This facility does not process or store more than the threshold quantity of any regulated substance (Section 112r of the Clean Air Act 1990 Amendments). Naturally occurring hydrocarbon mixtures, prior to entry into a natural gas processing plant or a petroleum refining process unit, including: condensate, crude oil, field gas, and produced water, are exempt for the purpose of determining whether more than a threshold quantity of a regulated substance is present at the stationary source.

Stratospheric Ozone Protection, 40 CFR Part 82 [Not Applicable]

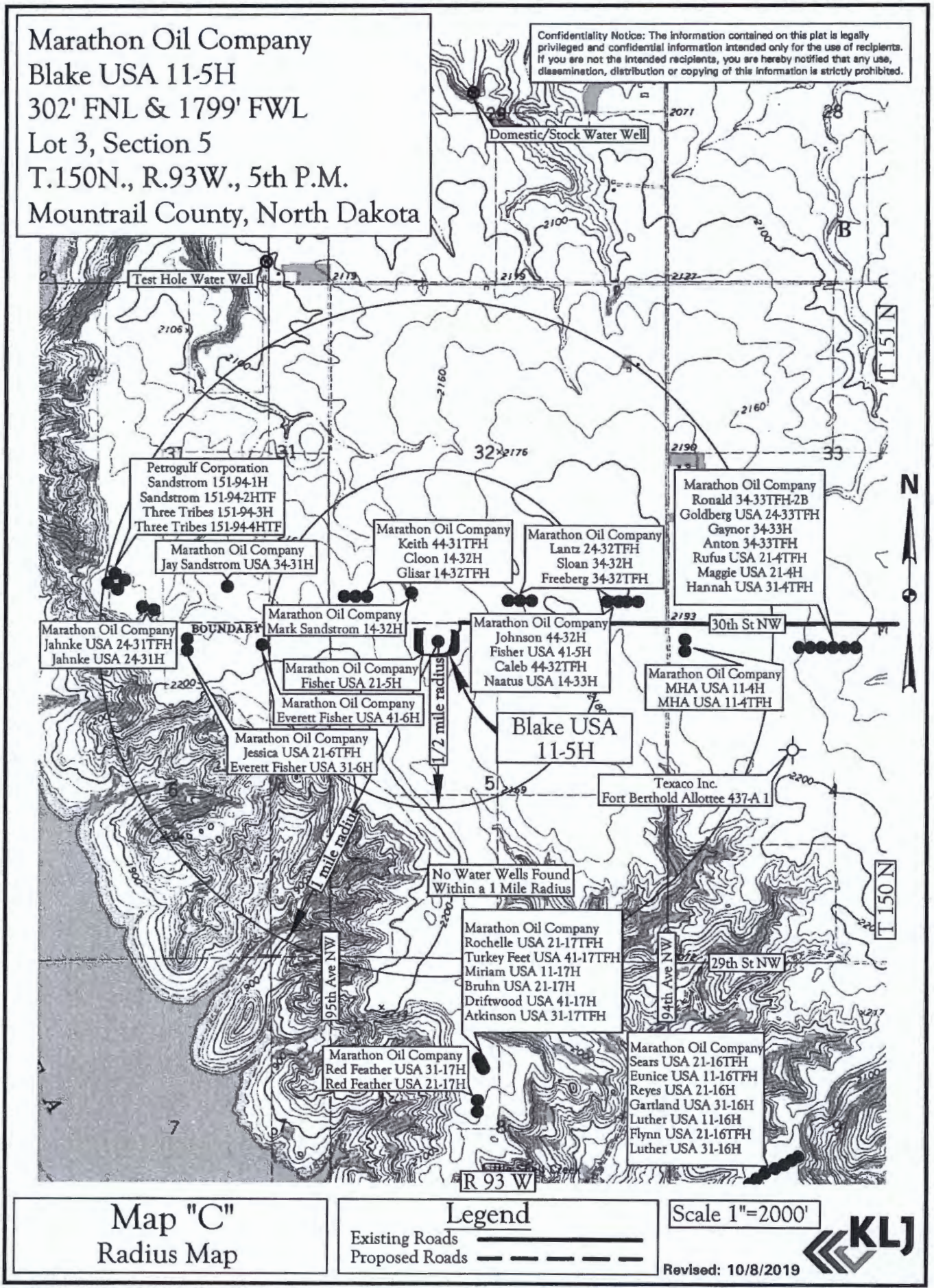
These standards require phase out of Class I & II substances, reductions of emissions of Class I & II substances to the lowest achievable level in all use sectors, and banning use of nonessential products containing ozone-depleting substances (Subparts A & C); control servicing of motor vehicle air conditioners (Subpart B); require Federal agencies to adopt procurement regulations which meet phase out requirements and which maximize the substitution of safe alternatives to Class I and Class II substances (Subpart D); require warning labels on products made with or containing Class I or II substances (Subpart E); maximize the use of recycling and recovery upon disposal (Subpart F); require producers to identify substitutes for ozone-depleting compounds under the Significant New Alternatives Program (Subpart G); and reduce the emissions of halons (Subpart H).

Regulatory Applicability, Continued

Subpart A identifies ozone-depleting substances and divides them into two classes. Class I controlled substances are divided into seven groups; the chemicals typically used by the manufacturing industry include carbon tetrachloride (Class I, Group IV) and methyl chloroform (Class I, Group V). A complete phase-out of production of Class I substances is required by January 1, 2000 (January 1, 2002, for methyl chloroform). Class II chemicals, which are hydrochlorofluorocarbons (HCFCs), are generally seen as interim substitutes for Class I CFCs. Class II substances consist of 33 HCFCs. A complete phase-out of Class II substances, scheduled in phases starting by 2002, is required by January 1, 2030. This facility does not utilize any Class I or II substances.

Subpart B outlines the requirements regarding the servicing of motor vehicle air conditions (MVACs) as well as implements section 608 of the Clean Air Act regarding certain servicing, maintenance, repair and disposal of air conditioners in MVACs and MVAC-like appliances. Subpart F requires that any persons servicing, maintaining, or repairing appliances except for motor vehicle air conditioners; persons disposing of appliances, including motor vehicle air conditioners; refrigerant reclaimers, appliance owners, and manufacturers of appliances and recycling and recovery equipment comply with the standards for recycling and emissions reduction.

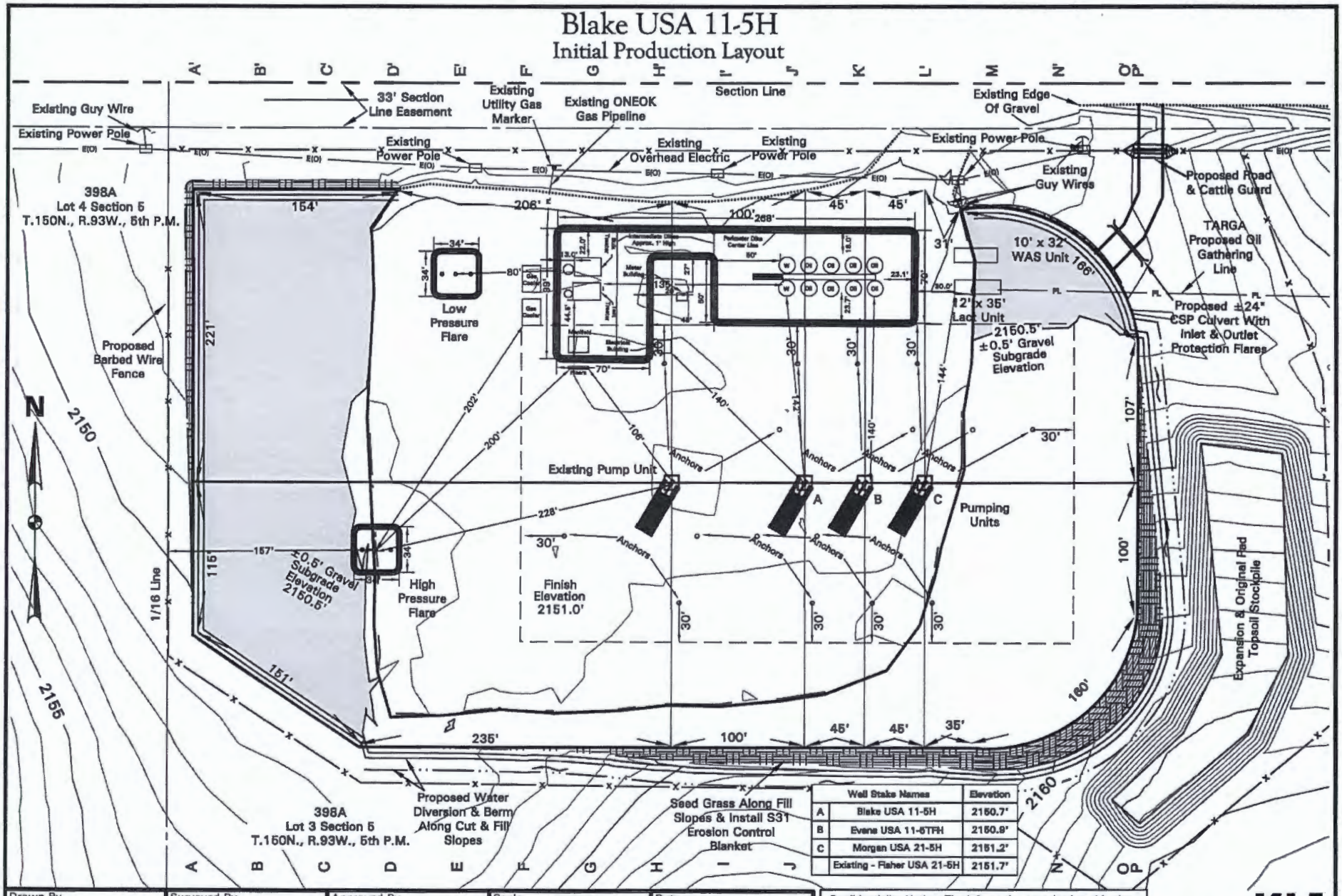
Site Area Map


Marathon Oil Company
Blake USA 11-5H
302' FNL & 1799' FWL
Lot 3, Section 5
T.150N., R.93W., 5th P.M.
Mountrail County, North Dakota
Confidentiality Notice: The information contained on this plat is legally privileged and confidential information intended only for the use of recipients. If you are not the intended recipients, you are hereby notified that any use, dissemination, distribution or copying of this information is strictly prohibited.
Domestic/Stock Water Well
Test Hole Water Well
Petrogulf Corporation
Sandstrom 151-94-1H
Sandstrom 151-94-2HTF
Three Tribes 151-94-3H
Three Tribes 151-94-4HTF
Marathon Oil Company
Jay Sandstrom USA 34-31H
Marathon Oil Company
Keith 44-31TFH
Cloon 14-32H
Glisar 14-32TFH
Marathon Oil Company
Lantz 24-32TFH
Sloan 34-32H
Freeberg 34-32TFH
Marathon Oil Company
Ronald 34-33TFH-2B
Goldberg USA 24-33TFH
Gaynor 34-33H
Anton 34-33TFH
Rufus USA 21-4TFH
Maggie USA 21-4H
Hannah USA 31-4TFH
Marathon Oil Company
Jahnke USA 24-31TFH
Jahnke USA 24-31H
BOUNDARY
Marathon Oil Company
Mark Sandstrom 14-32H
Marathon Oil Company
Fisher USA 21-5H
Marathon Oil Company
Everett Fisher USA 41-6H
Marathon Oil Company
Jessica USA 21-6TFH
Everett Fisher USA 31-6H
1/2 mile radius
Marathon Oil Company
Johnson 44-32H
Fisher USA 41-5H
Caleb 44-32TFH
Naatus USA 14-33H
Marathon Oil Company
MHA USA 11-4H
MHA USA 11-4TFH
Blake USA
11-5H
Texaco Inc.
Fort Berthold Allottee 437-A 1
1 mile radius
No Water Wells Found
Within a 1 Mile Radius
Marathon Oil Company
Rochelle USA 21-17TFH
Turkey Feet USA 41-17TFH
Miriam USA 11-17H
Bruhn USA 21-17H
Driftwood USA 41-17H
Arkinson USA 31-17TFH
Marathon Oil Company
Red Feather USA 31-17H
Red Feather USA 21-17H
Marathon Oil Company
Sears USA 21-16TFH
Eunice USA 11-16TFH
Reyes USA 21-16H
Gartland USA 31-16H
Luther USA 11-16H
Flynn USA 21-16TFH
Luther USA 31-16H
30th St NW
29th St NW
95th Ave NW
94th Ave NW
T 151 N
T 150 N
R 93 W
N
Map "C"
Radius Map
Legend
Existing Roads
Proposed Roads
Scale 1"=2000'
Revised: 10/8/2019
KLJ

Plot Plan

Blake USA 11-5H

Initial Production Layout



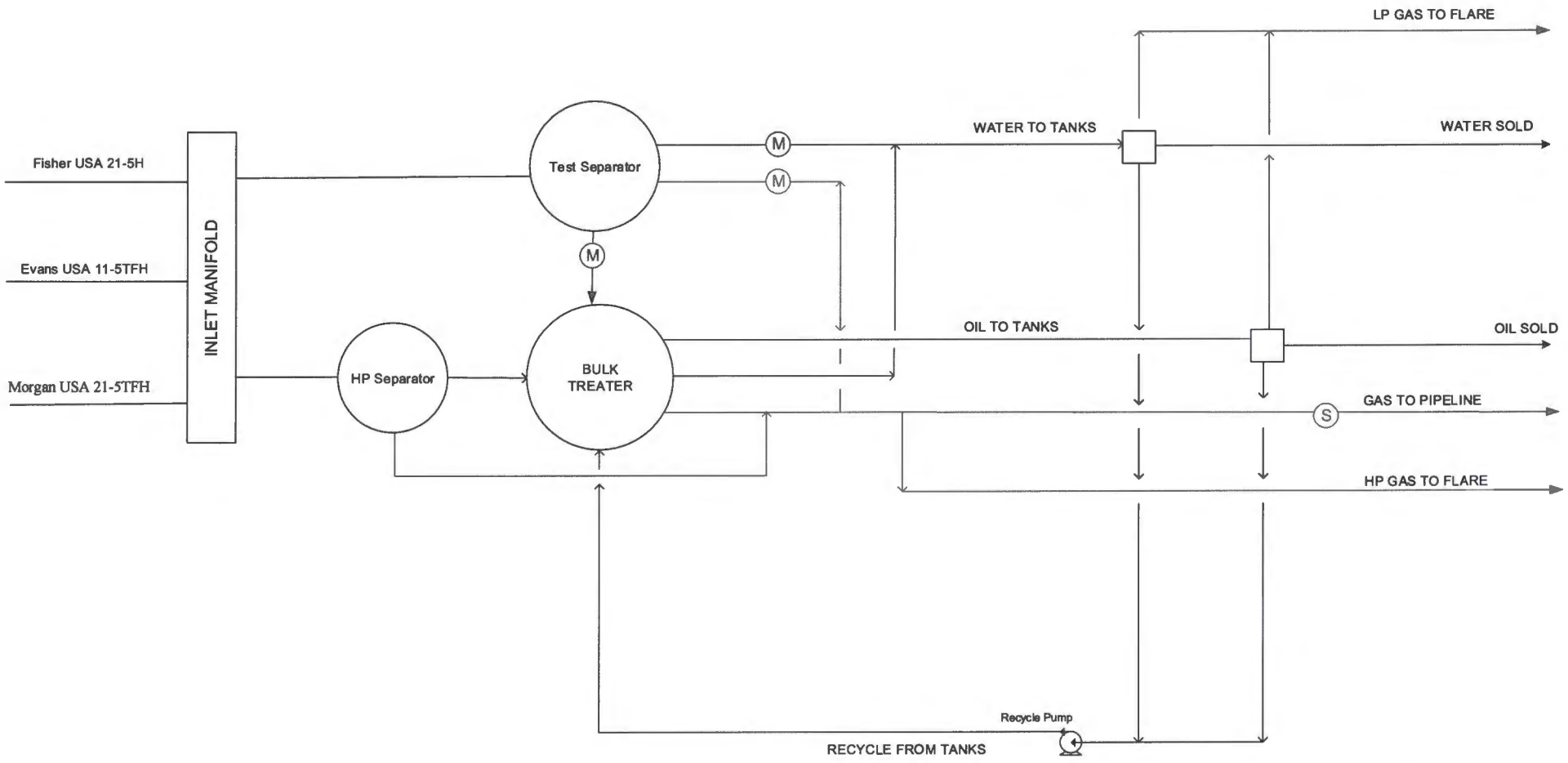
Well Stake Names		Elevation
A	Blake USA 11-5H	2150.7'
B	Evans USA 11-5TFH	2150.9'
C	Morgan USA 21-5H	2151.2'
	Existing - Fisher USA 21-5H	2151.7'

Drawn By	Surveyed By	Approved By	Scale	Date
A.S./B.C.	J.S./J.J.	R. Leach	1" = 100'	8/11/2015
Field Book	**Material**	**Revised**	**Project No.**	**Drawing No.**
OW-230/349/352	Prod Layout	11/13/2019	3708593.1	12

KLJ

Nov 13, 2019 - 10:49 AM - P:\Oil\MarathonOil\3708593.1\Task 6 Blake USA 11-5H (3715587)\3715587\CADD\3715587BAS02 Rev2.dwg

Process Flow Diagram (PFD)



REV A	Fisher USA 21 CTB			Marathon Oil
KZ	1 OF 1	SHEET	9/29/20	PROCESS FLOW DIAGRAM

Production Data

2021 FISHER PRODUCTION DATA

Row Labels	Sum of Oil	Sum of Water	Sum of Gas Prod-Emissions	Sum of HP Flare
2021	**399727.61**	**381207.27**	**481264.9**	**0**
3-Sep	3695.96	5436.93	3979.32	0
4-Sep	4306.14	5318.21	4295.42	0
5-Sep	3826.76	5125.45	4263.37	0
6-Sep	4772.05	5535.68	4808.5	0
7-Sep	4263.77	5335.64	4520.94	0
8-Sep	4450.56	5809.53	4706.65	0
9-Sep	4219.91	5057.28	4503.2	0
10-Sep	3942.38	3820.13	4395.87	0
11-Sep	4292.14	4434.61	4302.15	0
12-Sep	3969.18	4427.33	4258.93	0
13-Sep	3486.84	4510.87	3639.44	0
14-Sep	3869.57	4529.26	4277.05	0
15-Sep	4108.03	5113.75	3522.93	0
16-Sep	4810.26	6651.51	5202.19	0
17-Sep	4960.77	5736.26	5278.19	0
18-Sep	4915.83	5557.39	5065.25	0
19-Sep	4055.67	5236.47	4624.48	0
20-Sep	5092.93	5343.85	5346.05	0
21-Sep	4598.51	5220.37	5090.94	0
22-Sep	4704.02	5475.73	5221.17	0
23-Sep	3472.12	4036.4	3746.88	0
24-Sep	4478.4	4983.5	4851.92	0
25-Sep	4330.48	4759.95	4842.25	0
26-Sep	4148.14	4452.63	4608.05	0
27-Sep	4015.26	4781.44	4484.54	0
28-Sep	3637.38	4210.88	4368.31	0
29-Sep	3782.4	3814.48	4298.14	0
30-Sep	4172.85	4165.2	4248.97	0
1-Oct	3378.63	3959.37	4129.17	0
2-Oct	3541.4	3587.9	4009.92	0
3-Oct	3381.28	3801.6	3957.92	0
4-Oct	3511.73	3516.68	3819.67	0
5-Oct	3275.85	3616.77	3621.1	0
6-Oct	3199.26	3290.18	3560.45	0
7-Oct	3102.49	3419.4	3396.24	0
8-Oct	2730.29	3016.41	3239.53	0
9-Oct	3115.48	2954.37	3033.18	0
10-Oct	2243.13	2296.72	2518.88	0
11-Oct	1875.39	1878.4	2014.93	0
12-Oct	1297.13	1609.06	1381.51	0
13-Oct	1713.38	2117.77	1846.82	0
14-Oct	1826.23	1960.04	2022.87	0
15-Oct	1511.66	2049.98	1701.03	0

2021 FISHER PRODUCTION DATA

Row Labels	Sum of Oil	Sum of Water	Sum of Gas Prod-Emissions	Sum of HP Flare
16-Oct	1783.43	1888.57	2063.5	0
17-Oct	1869.5	2596.8	2111.43	0
18-Oct	1897.98	2230.07	2124.66	0
19-Oct	1995.12	2434.97	2187.68	0
20-Oct	2319.02	2930.46	2622.01	0
21-Oct	2495.35	3332.05	2923.02	0
22-Oct	2586.93	2982.82	2962.63	0
23-Oct	2538.02	3215.03	2873.74	0
24-Oct	3268.83	2998.46	3638.62	0
25-Oct	2785.22	2884.12	3050.06	0
26-Oct	3340.11	3261.64	3778.66	0
27-Oct	3026.25	2596.55	3308.05	0
28-Oct	3639.02	3502.65	4085.59	0
29-Oct	3603.2	3251.33	4145.51	0
30-Oct	3405.61	2915.09	3753.04	0
31-Oct	3893.55	3411.75	4098.96	0
1-Nov	3445.56	3185.61	4145.31	0
2-Nov	3443.57	3197.66	3989.84	0
3-Nov	3305.88	3146.85	4008.85	0
4-Nov	3893.13	3142.14	4287.54	0
5-Nov	3335.89	3044.45	3784.18	0
6-Nov	3946.16	3119.35	4408.92	0
7-Nov	3539.67	3128.94	4370.65	0
8-Nov	3525.96	3036.75	4363.88	0
9-Nov	3457.34	2845.77	3709.28	0
10-Nov	3312.69	2919.36	4177.13	0
11-Nov	3677.55	2730.22	4271.74	0
12-Nov	3532.77	2996.76	4125.07	0
13-Nov	3409.68	2724.95	4163.61	0
14-Nov	3352.07	2692.36	4134.81	0
15-Nov	2736.72	2526.1	3116.39	0
16-Nov	3349.8	2794.76	3991.08	0
17-Nov	3751.01	2741.3	4344.06	0
18-Nov	3473.37	2737.03	4434.93	0
19-Nov	3460.92	2757.31	4292.07	0
20-Nov	3926.61	2967.9	4704.52	0
21-Nov	3850.03	2967.26	4933.77	0
22-Nov	3053.92	2071.94	4150.82	0
23-Nov	2664.99	1759.63	3564.09	0
24-Nov	2998.05	2386.66	3855.21	0
25-Nov	3053.3	2667.52	4057.9	0
26-Nov	3561.29	2587.54	4127.05	0
27-Nov	3414.55	2583.66	4174.04	0
28-Nov	3398.52	2667.41	4307.62	0

2021 FISHER PRODUCTION DATA

Row Labels	Sum of Oil	Sum of Water	Sum of Gas Prod-Emissions	Sum of HP Flare
29-Nov	3547.04	2629.45	4674.97	0
30-Nov	3316.65	2663.71	4316.65	0
1-Dec	3376.5	2789.73	4588.84	0
2-Dec	3366.57	2568.47	4626.1	0
3-Dec	3349.88	2444.35	4587.54	0
4-Dec	3093.43	2176.31	3988.48	0
5-Dec	3248	2241.11	3273.45	0
6-Dec	3704.06	2615.39	4606.17	0
7-Dec	3589.02	2552.69	4583.26	0
8-Dec	2504.82	1906.67	3687.31	0
9-Dec	3583.34	2661.94	4626.01	0
10-Dec	3740.46	2585.59	5053.64	0
11-Dec	3854.24	2362.04	5193.56	0
12-Dec	3487.58	2847.86	4954.1	0
13-Dec	3440.25	2262.05	5126.53	0
14-Dec	2673.88	2156.76	3733.09	0
15-Dec	3360.42	2593.15	4141.75	0
16-Dec	3273.43	2117.75	3941.96	0
17-Dec	3001.95	2345.14	4267.9	0
18-Dec	2459.7	1664.74	3780.34	0
19-Dec	2522.22	1671.75	3463.38	0
20-Dec	2063.04	1852.25	2721.08	0
21-Dec	3082.39	2341.79	4231.16	0
22-Dec	3166.27	2356.93	4982.15	0
23-Dec	3080.65	2235.95	5018.6	0
24-Dec	2888.85	2044.83	4972.3	0
25-Dec	2346.41	1841.72	3642.62	0
26-Dec	2824.7	2113.72	4389.86	0
27-Dec	2402.69	1884.79	4218.63	0
28-Dec	2754.02	2057.13	4581.25	0
29-Dec	2828.15	2089.44	4818.49	0
30-Dec	2742.97	2032.83	4957.25	0
31-Dec	2654.25	1984.31	4790.64	0
2022	**291689**	**249067.81**	**594700.47**	**11737.64**
1-Jan	2642.75	1983.42	4871.71	0
2-Jan	2629.45	1956.25	4805.84	0
3-Jan	2573.71	1909.81	4712.42	0
4-Jan	2409.52	1836	4509.93	0
5-Jan	2587.39	1924.12	4501.05	0
6-Jan	2413.06	1804.09	4341.81	0
7-Jan	2518.22	1905.75	4599.45	0
8-Jan	2454.5	1867.52	4628.67	0
9-Jan	2414.96	1848.21	4541.3	0
10-Jan	2381.94	1815.86	4493.85	0

2021 FISHER PRODUCTION DATA

Row Labels	Sum of Oil	Sum of Water	Sum of Gas Prod-Emissions	Sum of HP Flare
11-Jan	2296.8	1882.8	4352.74	0
12-Jan	2295.23	1799.45	4266.42	0
13-Jan	2236.75	1754.49	4186.12	0
14-Jan	2297.74	1784.32	4324.01	0
15-Jan	2251.17	1746.46	4287.87	0
16-Jan	2243.85	1750.65	4180.29	0
17-Jan	2157	1700.65	4227.58	0
18-Jan	2191.63	1712.58	4216.64	0
19-Jan	2179.01	1694.22	4209.93	0
20-Jan	2124.64	1593.43	4176.13	0
21-Jan	2134.88	1658.15	3967.72	0
22-Jan	2117.06	1670.9	4098.98	0
23-Jan	2099.14	1655.24	4008.67	0
24-Jan	2074.33	1631.6	4007.97	0
25-Jan	2014.44	1597.58	3896.3	0
26-Jan	2064.03	1612.24	3889.14	0
27-Jan	2035.72	1601.72	3926.49	0
28-Jan	2005.68	1594.21	3895.77	0
29-Jan	1964.74	1525.29	3858.83	0
30-Jan	1968.53	1559	3845.51	0
31-Jan	1929.16	1540.85	3768.81	0
1-Feb	1910.68	1536.43	3843.39	0
2-Feb	1780.68	1443.35	3589.79	0
3-Feb	1904.7	1524.8	3690.12	0
4-Feb	1638.95	1349.51	3397.17	0
5-Feb	1707.57	1401.41	3284.15	0
6-Feb	1872.86	1512.82	3420.4	0
7-Feb	1848.63	1489.16	3527.83	0
8-Feb	1586.57	1255.6	2860.35	0
9-Feb	1891.45	1528.62	3510.67	0
10-Feb	1867.36	1482.25	3550.26	0
11-Feb	1836.47	1471.6	3527.32	0
12-Feb	1819.52	1439.95	3546.47	0
13-Feb	1792.17	1433.19	3529.23	0
14-Feb	1782.54	1421.01	3552.64	0
15-Feb	1705.59	1384.41	3416.07	0
16-Feb	1741.85	1394.21	3479.3	0
17-Feb	1710.11	1379.33	3477.44	0
18-Feb	1689.65	1359.35	3408.32	0
19-Feb	1639.61	1323.73	3302.97	0
20-Feb	1619.97	1335.06	3314.23	0
21-Feb	1610.77	1328.99	3267.01	0
22-Feb	1603.79	1317.8	3275.21	0
23-Feb	1509.54	1253.48	3088.38	0

2021 FISHER PRODUCTION DATA

Row Labels	Sum of Oil	Sum of Water	Sum of Gas Prod-Emissions	Sum of HP Flare
24-Feb	1469.28	1229.33	2908.31	0
25-Feb	1555.87	1291.83	3046.78	0
26-Feb	1532.2	1272.01	3015.56	0
27-Feb	1544.5	1283.62	3086.85	0
28-Feb	1519.63	1261.54	3041.39	0
1-Mar	1285.35	1083.2	2732.26	0
2-Mar	1069.11	974.88	2282.05	0
3-Mar	1077.77	948.92	2249.21	0
4-Mar	1058.82	966.03	2245.67	0
5-Mar	1052.93	879.79	2213.49	0
6-Mar	1089.85	857.51	2061.36	0
7-Mar	1230.17	1165.66	2285.37	0
8-Mar	1574.85	1567.58	2887.75	0
9-Mar	1680.95	1342.37	2890.52	0
10-Mar	1687.84	1436.48	2743.3	0
11-Mar	1678.18	1172.13	3119.45	0
12-Mar	1578.96	1241.72	2876.48	0
13-Mar	1682.05	1330.46	3215.21	0
14-Mar	1369.1	1317.73	2940.18	0
15-Mar	1344.83	1090.81	2476.33	0
16-Mar	1529.34	1236.09	2824.17	0
17-Mar	1177.25	996.7	2295.55	0
18-Mar	1489.15	1273.06	2733.48	0
19-Mar	1467.97	1239.98	2879.8	0
20-Mar	1618.12	1238.04	2951.72	0
21-Mar	1518.94	1193.92	2978.58	0
22-Mar	1448.81	1207.05	3040.9	0
23-Mar	1561.29	1206.82	3088.09	0
24-Mar	1405.5	1194.56	3041.75	0
25-Mar	1426.67	1156.81	2951.73	0
26-Mar	1555.79	1195.72	3111.17	0
27-Mar	1453.9	1185.72	3103.81	0
28-Mar	1342.74	1120.07	3088.09	0
29-Mar	1454.75	1143.3	3081.68	0
30-Mar	1347.05	1161.46	3085.57	0
31-Mar	1307.85	1115.27	2949.89	0
1-Apr	1352.34	1091.29	2900.48	0
2-Apr	1363.44	1156.79	3035	0
3-Apr	1331.91	1109.11	2915.9	0
4-Apr	1187.66	1052.52	2675.14	0
5-Apr	1208.06	1043.66	2587.6	0
6-Apr	1228.93	1030.3	2463.78	0
7-Apr	1243.71	1087.04	2593.93	0
8-Apr	1273.95	1078.65	2646.88	0

2021 FISHER PRODUCTION DATA

Row Labels	Sum of Oil	Sum of Water	Sum of Gas Prod-Emissions	Sum of HP Flare
9-Apr	1236.23	1062.76	2553.11	0
10-Apr	1296.29	1083.31	2683.98	0
11-Apr	1285.99	1080.56	2720.52	0
12-Apr	1240.39	1037.06	2610.14	0
13-Apr	1280.89	1071.93	3968.29	0
14-Apr	1219.94	976.39	2150.33	647.97
15-Apr	1137.05	1029.63	2004.21	1230.81
16-Apr	1169.96	1006.48	2470.2	0
17-Apr	1199.68	1022.45	2488.88	0
18-Apr	1232.77	1038.37	2546.27	0
19-Apr	1235.47	1047.19	2543.97	0
20-Apr	1162.29	985.77	2434.27	0
21-Apr	1235.55	1046.04	2575.08	0
22-Apr	1089.32	948.26	2335.74	0
23-Apr	879.76	762.35	1949.9	0
24-Apr	0.54	0.52	0	0
25-Apr	1031.75	960.27	1835	1379.38
26-Apr	1146.36	938.62	2024.92	2011.74
27-Apr	1321.3	1198.73	2335.95	1504.42
28-Apr	1224	1059.84	2227.88	0
29-Apr	1255.33	1079.77	2314.98	0
30-Apr	1224.11	1032.57	2330.79	0
1-May	1184.25	1005.58	2300.11	0
2-May	1176.79	1016.82	2310.25	0
3-May	1125.08	967.04	2241.89	0
4-May	917.46	1020.95	1585.82	351.02
5-May	1213.01	1082.34	2121.93	486.9
6-May	904.67	573.92	1581.32	940.11
7-May	1198.06	1221.85	2371.35	0
8-May	1099.59	956.1	2168.5	0
9-May	1205.17	991	2349.43	0
10-May	1261.45	821.01	2482.09	0
11-May	1139.02	951.25	2386.85	0
12-May	1212.49	1130.85	2438.82	0
13-May	1213.23	983.54	2542.04	0
14-May	646.7	660.64	1494.82	0
15-May	1180.91	1018.61	2356.66	0
16-May	1052.48	949.37	2243.19	0
17-May	1084.65	937.03	2237.41	0
18-May	1087.52	929.03	2295.04	0
19-May	1028.47	905.21	2167.97	0
20-May	1006.86	880.52	2099.98	0
21-May	1049.91	907.22	2187.44	0
22-May	1046.36	927.33	2190.12	0

2021 FISHER PRODUCTION DATA

Row Labels	Sum of Oil	Sum of Water	Sum of Gas Prod-Emissions	Sum of HP Flare
23-May	1040.39	904.29	2189.07	0
24-May	1025.49	882.94	2190.48	0
25-May	776.12	639.52	1751.72	0
26-May	1089.97	996.15	2286.05	0
27-May	1058.29	929.94	2240.59	0
28-May	998.29	866.1	2159.12	0
29-May	988.9	883.16	2151.27	0
30-May	1011.84	897.01	2194.43	0
31-May	988.55	859.41	2102.28	0
1-Jun	990.65	860.93	2198.65	0
2-Jun	952.1	855.24	2098.09	0
3-Jun	949.56	847.59	2095.91	0
4-Jun	950.15	821.73	2088.31	0
5-Jun	910.87	847.34	2000.96	0
6-Jun	932.33	823.36	2018.32	0
7-Jun	929.52	832.21	2055.16	0
8-Jun	948.64	817.92	2023.76	0
9-Jun	941.68	835.17	1896.03	0
10-Jun	970.47	853.97	2138.85	0
11-Jun	953.58	831.43	2067.71	0
12-Jun	947.11	857.46	2138.17	0
13-Jun	956.32	830.95	2123.21	0
14-Jun	959.81	825.09	2104.44	0
15-Jun	928.38	821.15	2082.19	0
16-Jun	927.99	821.27	2052.28	0
17-Jun	910.95	828.49	2091.97	0
18-Jun	941.29	798.65	2128.12	0
19-Jun	915.58	799.8	2057.97	0
20-Jun	869.05	797.17	1987.48	0
21-Jun	877.74	780.95	1971.79	0
22-Jun	872.53	806.41	1979.72	0
23-Jun	800.19	780.18	1836.82	0
24-Jun	763.77	775.31	1777.27	0
25-Jun	778.94	780	1792.15	0
26-Jun	916.01	933.72	2004.96	0
27-Jun	855.79	960.21	1493.09	533.27
28-Jun	782.72	724.48	1365.59	871.72
29-Jun	776.51	786.3	1738.32	0
30-Jun	922.56	848.32	1999.87	0
1-Jul	628.8	458.31	1538.08	0
2-Jul	620.94	690.44	1486.23	0
3-Jul	840.05	806.73	1740.88	0
4-Jul	914.02	759.14	1929.13	0
5-Jul	877.23	785.88	1838.45	0

2021 FISHER PRODUCTION DATA

Row Labels	Sum of Oil	Sum of Water	Sum of Gas Prod-Emissions	Sum of HP Flare
6-Jul	906.25	833.41	1924.02	0
7-Jul	898.63	827.31	1948.1	0
8-Jul	664.19	656.13	1563.49	0
9-Jul	630.8	638.72	1511.18	0
10-Jul	643.74	650.35	1562.55	0
11-Jul	642.21	635.26	1498.77	0
12-Jul	630.64	617.89	1567.75	0
13-Jul	645.1	629.43	1568.1	0
14-Jul	626.67	614.67	1565.1	0
15-Jul	623.69	475.66	1559.04	0
16-Jul	621.12	635.55	1554.54	0
17-Jul	632.67	517.29	1570.04	0
18-Jul	612.18	623.33	1571.99	0
19-Jul	617.94	603.86	1547.99	0
20-Jul	605.2	598.77	1554.66	0
21-Jul	604.12	615.91	1558.63	0
22-Jul	607.31	603.55	1551.93	0
23-Jul	570.57	582.75	1495.23	0
24-Jul	576.28	590.6	1483.98	0
25-Jul	495.79	506.45	1354.56	0
26-Jul	406.44	385.59	962.09	0
27-Jul	526.98	570.98	1292.1	0
28-Jul	553.61	602.85	1328.26	0
29-Jul	572.55	587.69	1349.38	0
30-Jul	550.76	578.13	1331.44	0
31-Jul	539.59	576.76	1328.83	0
1-Aug	559.08	576.46	1327.91	0
2-Aug	603.12	613.46	1414.29	0
3-Aug	605.04	615.03	1444.49	0
4-Aug	605.74	610.6	1457.98	0
5-Aug	602.65	609.67	1465.38	0
6-Aug	583.23	635.33	1444.14	0
7-Aug	586.96	645.61	1480.03	0
8-Aug	602.32	669.54	1507.72	0
9-Aug	579.8	1162.04	1519.33	0
10-Aug	832.96	1368.5	1773.19	0
11-Aug	913.54	1363.19	2025.1	0
12-Aug	919.41	1181.67	2041.28	0
13-Aug	919.06	1033.86	2039.71	0
14-Aug	929.58	989.38	2065.03	0
15-Aug	940.39	957.73	2100.45	0
16-Aug	936.67	909.7	2108.6	0
17-Aug	929.17	906.95	2113.24	0
18-Aug	924.48	865.91	2108.08	0

2021 FISHER PRODUCTION DATA

Row Labels	Sum of Oil	Sum of Water	Sum of Gas Prod-Emissions	Sum of HP Flare
19-Aug	918.34	848.01	2106.02	0
20-Aug	906.24	787.93	1793.49	1780.3
Grand Total	**691416.61**	**630275.08**	**1075965.37**	**11737.64**