Notice of Intent (NOI)

Encore M State Satellite
Prepared for
Breitburn Operating L.P.
(A Wholly Owned Subsidiary of Maverick Natural Resources, LLC)

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NATURAL RESOURCES

August 31, 2021

Introduction

Breitburn Operating L.P. (Breitburn), a wholly owned subsidiary of Maverick Natural Resources, LLC owns and operates the Encore M State Satellite facility (Satellite) located in Lea County, New Mexico. Breitburn is submitting a Notice of Intent (NOI 20.2.73 NMAC) application to permit the crude oil production facility. In addition, load-out emission estimates were updated, and MSS activities are being represented. The appropriate permitting fee was submitted.

Process Description

The facility consists of initial separation equipment, and oil/produced water tanks. The two (2) tanks on location gather water and oil. Any hydrocarbon liquids or produced water from the inlet stream are separated and routed to storage tanks before being transferred off site. Vapor from the production tanks are uncontrolled while vapors from the load-out when trucked are uncontrolled. The following additional sources are located at the facility: fugitive emissions from piping component leaks (EPN: FUG 1); and facility maintenance, startup, and shutdown activities (EPN: MSS). The flare is utilized to control emissions during upsets only.

A process flow diagram depicting the facility operation is provided in Section 3.

Summary of Emission Sources

Emission sources at the facility are listed and described in the following table. Emissions have been estimated using AP-42 emission factors, and EPA approved emissions calculation software.

Point Source ID No.	Point Source Description	Type of Emissions
TK-1	Oil Storage Tank, 500 bbl	VOC – flash, working and standing losses
TK-2	Oil Storage Tank, 500 bbl	VOC – flash, working and standing losses
LOAD1	Tank Truck Loading – Oil	VOC losses
LOAD2	Tank Truck Loading - Water	VOC Losses
FLARE	Upset Flare	Combustion Emissions
FUG1	Fugitive Emissions	VOC – fugitive component losses
MSS	Maintenance, Startup, Shutdown	Painting and sandblasting, tank degassing and tank cleaning, and other equipment maintenance

State and Federal Regulations

Section 8 of the application document, summarizes compliance with each applicable State and Federal regulation. There are no federal regulations (i.e. 40 CFR 60, 61, 63) that apply to this facility. Applicable state regulations are listed below.

NMAC 20.2.7 – Excess Emissions
All NOI sources are subject to Air Quality Control Regulations, as defined in

20.2.7.108 NMAC, therefore, the facility is subject to this regulation.

NMAC 20.2.73.200 – Notice of Intent
The facility has potential emission rate greater than 10 tons per year of volatile organic compounds. Therefore, Breitburn is filing a NOI application with the information required in Section 2.73.200.

NMAC 20.2.73.300 – Emission Inventory
The facility is required to submit an emission inventory upon request by the department.

Representative Analysis

The company used representative gas and oil analyses for all calculations.

Mail Application To:		For Department use only:
New Mexico Environment Department Air Quality Bureau Permits Section 525 Camino de los Marquez, Suite 1 Santa Fe, New Mexico, 87505 Phone: (505) 476-4300 Fax: (505) 476-4375 www.env.nm.gov/air-quality/		

NOI Oil and Gas Quick Application

Use this application only for oil and gas facilities registering under 20.2.73 NMAC
Submit the entire application on a single CD (no copies of the CD are needed). Hard copies of Page 1 and 2, and Section 7 of this application are required.

This application is being submitted as (check all that apply)**:**
☐ **Updating** an existing registered facility. Provide NOI (or NPR/Permit) number:
☐ **Updating** an application currently under NMED review. Include this page and all pages that are being updated (no fee required).
Construction Status: ☐ Not Constructed ☐ Existing Permitted (or NOI) Facility ☐ Existing Non-permitted (or NOI) Facility
☒ **Acknowledgement that facilities with the following equipment may not use this application form and should use the Universal Application form:** glycol dehydrators, non-NMED deration method, and applications using emission calculation tools other than the Air Emission Calculation Tool (AECT) for regulated equipment.
☒ **Acknowledgement that this application contains the required AECT, which is required to be used to determine emissions from equipment:** https://www.env.nm.gov/air-quality/air-quality-oil-and-gas-noi-application-form/

Acknowledgements: ☒ I acknowledge that a pre-application meeting is available to me upon request
☒ $500 NOI Filing Fee enclosed ☐ Check No.: 0001843376 in the amount of $500

Section 1 – Facility Information

Section 1-A: Company Information

		AI No. (if known):	Updating Permit/NOI/NPR No.:
1	Facility Name: Encore M State Satellite	Plant primary SIC Code (4 digits): 1311	
		Plant NAICS code (6 digits): 211120	
a	Facility Street Address (If no facility street address, provide directions from a prominent landmark): From Eunice, NM, travel south on Hwy for 3 miles. Turn right on country road and travel 2.3 miles and turn right into location.		
2	Plant Operator Company Name: Breitburn Operating L.P.	Phone/Fax: 877-437-8090	
a	Plant Operator Address: 207 N. Grimes St Hobbs NM 88240		
b	Plant Operator's New Mexico Corporate ID or Tax ID:		
3	Plant Owner(s) name(s): Maverick Natural Resources, LLC	Phone/Fax: 877-437-8090	
a	Plant Owner(s) Mailing Address(s): 1111 Bagby Street, Suite 1600 Houston, TX 77002		
b	Plant Owner(s) name(s):	Phone/Fax:	
c	Address:	E-mail:	
4	☐ Preparer: Ryan Donina ☐ Consultant: Maverick Natural Resources, LLC	Phone/Fax: 713-437-8033	

a	Mailing Address: 1111 Bagby Street, Suite 1600 Houston, TX 77002	E-mail: ryan.donina@mavresources.com
5	NOI Air Contact: Ryan Donina	Title: Environmental Specialist
a	E-mail: ryan.donina@mavresources.com	Phone/Fax: 713-437-8033
b	Mailing Address: 1111 Bagby Street, Suite 1600 Houston, TX 77002	

Section 1-B: Single Source Determination and Source Status

1	Is this facility a single source as defined in 20.2.73 NMAC? ☑ **Yes** ☐ **No**
2	Is this facility a Title V or PSD Source? Checking the "NO" box acknowledges and certifies that the Potential To Emit and the Potential Emission Rate of any regulated air contaminant is less than 100 tons per year. ☐ **Yes** ☑ **No**

Section 1-C: Facility Location Information

1	UTM Zone: ☐ 12 or ☒ 13	County: Lea
2	Datum: ☒NAD 27 ☐ NAD 83 ☐ WGS 84	Elevation (ft):
a	UTM E (in meters, to nearest 10 meters):	UTM N (in meters, to nearest 10 meters):
b	Latitude (deg., min., sec.): 32°22'47.0"N	Longitude (deg., min., sec.): 103°11'55.0"W
3	The facility is: 5 (distance) miles South (direction) of Eunice (nearest town), zip code of nearest town 88231	
4	Status of land (check one): ☐ Private ☐Indian/Pueblo ☒ Federal BLM ☐ Federal Forest Service ☐ State Land	
5	Will this facility operate in conjunction with other air regulated parties on the same property? ☐ **Yes** ☑ **No** If yes, what is the name and permit number (if known) of the other facility?	

Section 1-D: Other Facility Information

1	Are there any current Notice of Violations (NOV), compliance orders, or any other compliance or enforcement issues related to this facility? ☐ **Yes** ☑ **No** If yes, specify:		
a	If yes, NOV date or description of issue:		NOV Tracking No:
b	Is this application in response to any issue listed in this section? ☐ **Yes** ☒ **No** If Yes, provide the information below:		
c	Document Title:	Date:	Requirement # (or page # and paragraph #):

Section 1-E – Submittal Requirements

Each 20.2.73 NMAC (**NOI**) application package shall consist of the following:

Hard Copy Submittal Requirements:

1) Hard copies of Pages 1-2, and the signed Certification Page are required.
2) The entire NOI application should be submitted electronically on compact disk (CD).

Electronic Submittal Requirements [in addition to the required hard copy]:

1) A single Microsoft Office compatible file format (Word) and PDF document of this application.
2) A single version of the Air Emissions Calculation Tool (AECT).
3) The electronic file names shall be a maximum of 25 characters long (including spaces, if any). The format of the electronic Application shall be in the format: "NOI-Facility Name".

Section 2
Application Summary and Routine Operations

The **Application Summary** shall include a brief description of the application. In case of a revision or modification to a facility, please describe the proposed changes from the original NOI. If this facility is to be co-located with another facility, provide details of the other facility including permit or NOI number(s).

Routine or predictable emissions during Startup, Shutdown, and Maintenance (SSM): Check the appropriate SSM box below. SSM emissions expected from production sites is VOC venting of compressor blowdowns, pigging, or maintenance downtime of VRU, and site-specific combustion SSM emissions.

Application Summary:
The purpose of the application is to permit the production activities at the Encore M State Application. This facility consists of initial separation equipment and oil/water tanks. The two (2) tanks on location gather water and oil.

Facility Type:
A narrative is not required if the facility can be described by one of the check boxes below:
☐ The facility is an oil and gas production facility.
☒ The facility is a tank battery.
☐ The facility is a natural gas compressor station.
☐ Other (describe) _____

The operating schedule using this application to qualify under 20.2.73 NMAC is 24 hours per day and 8760 hours per year.

SSM Summary:
Check the applicable box below:
☐ No SSM emissions are expected from routine operations.
☐ Applicant requests up to 10 tpy of VOC SSM emissions.
☒ Applicant requests site specific VOC SSM and those emissions are included in Section 4.
☐ Applicant requests site specific combustion SSM and those emissions are included in Section 4.

Section 3
Process Flow Sheet

A **process flow sheet** including all equipment, emission points, and types of control applied to those points. All units should be labeled and the unit numbering system should be consistent throughout this application. Identify all sources of emissions with a vertical arrow. Label each of the different material streams (crude oil, gas, NGL, and produced water).

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Encore M State Satellite Facility

Plot Plan/Flow Diagram

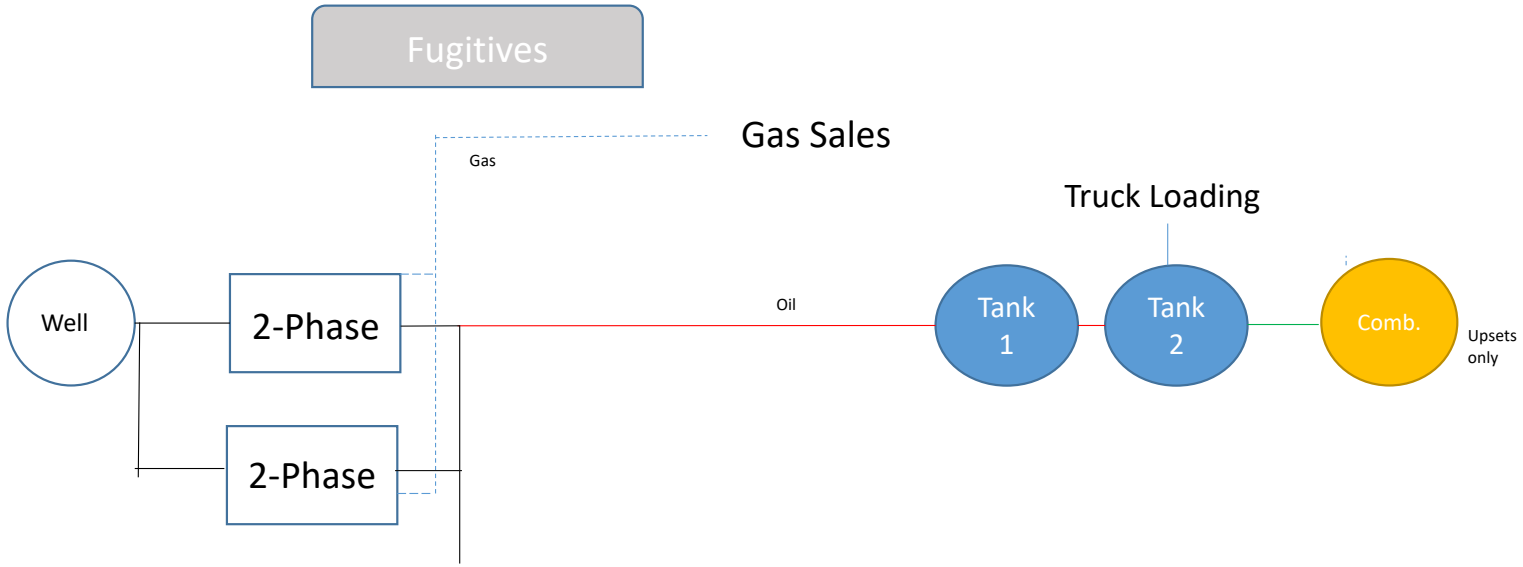

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Figure #1

Section 4
All Calculations and Emissions Summary

The Department has developed the Air Emission Calculation Tool Form (AECT), which is required to be used in the NOI Oil and Gas Quick Application. If the AECT for a piece of equipment is under development, provide calculations.

The AECT can be accessed at the following link:
https://www.env.nm.gov/air-quality/air-quality-oil-and-gas-noi-application-form/

Tank Emissions Calculations: The information provided to the AQB shall include a discussion of the method used to estimate tank-flashing emissions, accuracy of the model, the input and output summary from simulation models and software, all calculations, documentation of any assumptions used, descriptions of sampling methods and conditions, copies of any lab sample analysis. If Pro-Max or Hysis is used, all relevant input parameters shall be reported, including separator pressure, gas throughput, and all other relevant parameters necessary for flashing calculation. For each crude oil storage tank, identify if the tanks are in series or in parallel.

For tank and loading emission calculations, the annual throughput used for calculations is not required to be the daily throughput times 365 days. The annual throughput of the facility used for calculations must be consistent throughout the application, and a brief rationale should be included in the notes sections on the appropriate pages of the AECT.

For tanks subject to federal regulations that require controls (i.e., NSPS OOOO or NSPS OOOOa), applicants may represent tank controls as two scenarios to provide flexibility. Some facilities will have a vapor recovery unit (VRU) installed initially but may later replace the VRU with a flare due to changes in production levels. Representing **both** scenarios in the NOI application will allow the company to replace the VRU with a flare without submitting a revision to the NOI to the Department. To be eligible for this flexibility, both the VRU and flare must be compliant with the federal regulations that require the control of the tanks. Represent both scenarios using the AECT and include comments to explain the requested flexibility.

Heater Calculations: Heaters, heated separators, and heater treaters may be represented as a combined maximum heat input, provided that each individual unit is rated less than 100 MMBTU/hr each. This will allow applicants flexibility in the number and size of units installed, while still providing demonstration that the facility will comply with NOI limits. To utilize this flexibility, represent the requested total heat input for all these units in the AECT.

SSM Calculations: The applicant must select one of the boxes in Section 2: SSM Summary. If applicant is submitting site specific calculations, include in this section.

Control Devices: In accordance with 20.2.73.200.B(7) NMAC, report all control devices and list each pollutant controlled by the control device in the Potential Emission Rate Table.

Voluntary flaring of emissions that are not federally enforceable (such as maintenance or loading emissions) should be represented **both** as flared emissions, and as uncombusted emissions. This is necessary to demonstrate that the products of combustion from flaring the emissions do not exceed the applicability threshold for a permit under 20.2.72.200.A(1) NMAC; and that the VOC emissions (if they are not flared) will not cause the site to be defined as a Title V Major Source under 20.2.70.7.4.R NMAC.

Table 1: Check the equipment entered from the AECT Form Submitted in this Section:

Check box if present at facility	Equipment Type	Quantity
☐	Engine(s)	
☐	Heater(s)	
☐	Haul Road	
☒	Fugitives	
☒	Tanks	2
☒	Flare(s)	1
☒	Loading	2

Check box if present at facility	Equipment Type	Quantity
☐	ECD	
☐	Thermal Oxidizer	
☐	VRU	
☐	Other	

Information Used to Determine Emissions
Check the box for each type of information submitted:

☐ If manufacturer data are used, include specifications for emissions units and control equipment, including control efficiencies specifications and sufficient engineering data for verification of control equipment operation.
☐ For tank emissions, include a discussion of the method used to estimate tank-flashing emissions, accuracy of the model, the input and output summary from simulation models and software, all calculations, documentation of any assumptions used, descriptions of sampling methods and conditions, copies of any lab sample analysis.
☐ If requesting to use a representative gas sample, include a discussion of why the sample is representative for this facility and an explanation of how it is representative (e.g., same reservoir, same similar API gravity, similar composition).

Table 2: Potential Emission Rate

Enter the maximum lb/hr and ton/yr emission rate from each piece of regulated equipment. Only federally enforceable requirements may be used to reduce the PER of a source. For each unit number, include equipment type (e.g. ENG-1 for engine, HTR-1 for heater, and TANK-1, for storage tank). The basis for the federally enforceable reduction must be included in Section 6.

☐ The emissions in this table are identical to the *Total Allowable NOI Emissions From All Facility Equipment* table from the AECT and are not repeated below. (For any equipment using a federally enforceable control device to reduce the PER, list the unit number/description and control device in this table.)

Unit No./ Description	NOx		CO		VOC		SOx		TSP		PM10		PM2.5		H_2S		List Federally Enforceable Control Device
	lb/ hr	ton/ yr	lb/ hr	ton /yr	lb/ hr	ton/yr	lb/ hr	to n/ yr	lb/ hr	to n/ yr	lb/ hr	ton/y r	lb/ hr	ton/ yr	lb/ hr	ton/ yr	
TK-1 and TK-2					0.56	2.46											
LOAD1					11.77	0.23											
LOAD2					0.12	0.02											
FUG-1					0.41	1.8											
FLARE	0.87	3.8	3.95	17.31	8.41	36.86											
MSS					312.4	0.74					0.00	0.02					
Total	0.87	3.8	3.95	17.31	333.86	42.77					0.00	0.02					

Table 3: Potential Emission Rate of HAPs

For each HAP listed below with facility-wide emissions greater than 1 ton per year, enter the ton/year emission rate from each piece of regulated equipment. Only federally enforceable requirements may be used to reduce the PER of a source.

Unit No.	Formaldehyde	Acetaldehyde	n-Hexane	Benzene	Toluene	Xylene	Ethyl-benzene	Total HAP	List Federally Enforceability Control Device
MSS				0.0025	0.0025	0.0025	0.0025	0.01	
Total				0.0025	0.0025	0.0025	0.0025	0.01	

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MSS Detail Sheet
Equipment ID MSS Maintenance, Startup, & Shutdown (MSS) Summary and Totals

Planned MSS Activites	MSS Activities	TCEQ Default Value Used/Calculated	Estimated MSS VOC Emissions		Estimated MSS HAPs Emissions		Estimated MSS PM/PM10/PM2.5 Emissions	
			lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
Engine, compressor, turbine, and other combustion facilities maintenance	General maintenance; Includes compressor blowdowns	Default Value Used (based on equipment count)	0.00	0.00	0.00	0.00	NA	NA
Repair, adjustment, calibration, lubrication, and cleaning of site process equipment Replacement of piping components, pneumaticcontrollers, boiler refactories, wet and dry seals, meters, instruments, analyzers, screens, and filters	General facility maintenance	Default Value Used (based on equipment count)	0.00	0.01	NA	NA	NA	NA
Turbine or engine component swaps	NA	NA	0.00	0.00	NA	NA	NA	NA
Piping used to bypass a facility during maintenance	NA	NA	NA	NA	NA	NA	NA	NA
Planned MSS activities with the same character and quanitity of emissions as those listed in paragraphs (1) - (5) of this subsection	NA	Default Value Used (based on equipment count)	0.04	0.18	NA	NA	NA	NA
Pigging and purging of piping	NA	NA	NA	NA	NA	NA	NA	NA
Separator/Tank Degassing/Blowdowns	General facility maintenance	Calculated	204.38	0.16	NA	NA	NA	NA
Oil Tank Cleaning	General facility maintenance	Calculated	107.93	0.05	0.01	0.01	NA	NA
Water Tank Cleaning	General facility maintenance	Calculated	0.00	0.00	0.00	0.00	NA	NA
Abrasive blasting, surface preparation, and surface coating of facilities and structures used at the site in oil and gas handling and production	Assuming maintenance of equipment surfaces takes place throughout the year	Default Value Used	0.08	0.34	NA	NA	0.00	0.02
		Totals	312.44	0.74	0.01	0.01	0.00	0.02

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MSS Detail Sheet

Equipment ID	BD 1	
Equipment Description	Compressor Blowdowns	
Blowdown Frequency	30	Blowdowns/compressor/year
Blowdown Duration	0.167	Hour
Maximum Blowdowns per Hour	0	
Number of Compressors	0	
Blowdown Volume Estimate	0	Mscf/Blowdown
Ideal Volume per lb-mole	379	Scf/lb-mol
Emission Controls	None	
Control Efficiency	0%	
H2S Content	0	ppm

Pollutant	Mol%	MW (lb/lb-mol)	Uncontrolled Emissions lb/hr	tpy
VOC	12.32%	58.31	0.00	0.00
H2S	0.00%	34.08	0.00	0.00
Benzene (est.)	0.32%	78.11	0.00	0.00
Toluene (est.)	0.30%	92.13	0.00	0.00
Ethylbenzene (est.)	0.00%	106.17	0.00	0.00
Xylenes (est.)	0.45%	106.17	0.00	0.00
n-Hexane (est.)	0.87%	86.18	0.00	0.00
Total HAPs (est.)	1.94%	N/A	0.00	0.00

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MSS Detail Sheet

Equipment ID TDG 1
Equipment Description Tank Degassing

Calculation - VOC Emissions From Opening System:
Ideal Gas Law, PV = nRT
Oil vented to atmosphere (lb-mol), n = PV/RT = (13.28 psia) x (2246.0 ft3) / 10.73 (ft3)(psi)/(lb-mol)(°R)

Component	Vapor Pressure (psia)	MW of Gas (lb/lb-mol)	Weight Fraction of VOC
Oil Mixture (VOC)	6.03	40.12	0.56

*VP from AP-42 Table 7.1-2 MW from Tanks Program

Number of tanks:	2		Duration of Activity:	2	Hours
Max Tank capacity:	500	bbl	Number of Activities per Year:	1	per tank
Tank Volume:	2807.5	ft3	Control Efficiency (C4+):	0%	
Atm Pressure:	13.28	psia	Control Efficiency (C1-C3):	0%	
Max Tank Temperature:	90	° F			
Ideal Gas Constant:	10.73	(ft3)(psi)/(lb-mol)(°R)			

Oil Summary

Total vapors vented to atmosphere per activity (lb-mol), n =	5.050
Oil vapor to atmosphere per activity (lb) =	202.606
Rate of vapor vented to atmosphere (lb/hr) =	101.303
VOC vented to atmosphere per activity (lb) =	113.45936
Rate of VOC vented to atmosphere (lb/hr) =	56.72968
Total VOC vented to atmosphere (tpy/tank) =	0.05672968
Total VOC vented to atmosphere (tpy) =	**0.11345936**

Calculation Basis:
Emissions to the atmosphere after opening the emptied tank are calculated using the Ideal Gas Law and are based on the entire tank volume venting to the atmosphere at the opening concentration.
Only emissions from the oil tanks are represented, as produced water tanks would have negligible degassing emissions.

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Equipment ID SDG 1
Equipment Description Separator Degassing

Ideal Gas Law
PV=nRT

Equipment	Length (ft)	Diameter (ft)	Volume (ft3)	Pressure (psia)	Temperature (F^o)	Molecular Weight of Gas (lb/lb-mol)	Mass Vented (lb/event)
Separator	20	8	1005.3088	50	150	22.593	369.007374

Constants & Variables

Mass Vented	369.007374	
Perecent VOC	12.32%	
Number of Separators	2	
Duration of Activity	1	Hr
Number of Activities per Year	1	Per separator

	lb/hr	TPY
VOC Emissions	90.923	0.0455

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Equipment ID TNKC 1
Equipment Description Tank Cleaning

Material	Organic Constituent	Liquid Heel (% of tank)	Amount Loaded (gal)	S, Saturation Loss Factor	P, Vapor Pressure (psi)	M, Molecular Weight (lb/lb-mol)	T, Bulk Loading Temp (F)	SF, Safety Factor	L_L, (lb/1.000 gal)	VOC Concentraion (% weight)	VOC L_L, (lb/1,000 gal)	Max Loss (lb/hr)
Oil	Oil	10%	1680	0.6	10.7	102.4	50	2	32.12276	100%	32.12275953	53.96624
Produced Water	Oil	10%	1680	0.6	10.7	102.4	50	2	32.12276	2%	0.642455191	1.079325

Number of Trucks per tank	1	per event
Loading duration	1	hour(s)
Tank Volume	500	bbl
Number of Oil Tanks	2	
Number of Water Tanks	0	
Activities per year	1	
BTEX %	5%	mol %

Oil Tank Emissions	VOC	HAPs (BTEX)
Emissions per event, (lb/hr)	107.9325	5.5639
Annual emissions per tank (tpy/tank)	0.0270	0.0014
Total annual emission (tpy)	0.0540	0.0028

Water Tank Emissions	VOC	HAPs (BTEX)
Emissions per event, (lb/hr)	0.0000	0.0000
Annual emissions per tank (tpy/tank)	0.0005	0.0000
Total annual emission (tpy)	0.0000	0.0000

Calculation Basis

Emissions from vacuum trucks are estimated using the loading loss method of AP-42, Chapter 5.2: Transportation and Marketing of Petroleum Liquids, 1995. Calculations are performed based on the concentrations of the individual organic species since the wastes contain significant non-volatile content (i.e. water, solids).

L_L=12.46 SMP/T x (SF)

LL= Loading loss, lbs per 1,000 gallons loaded
S Saturation Factor
P True Vapor Pressure
M Molecular Weight (lb/lb-mol)
T Temperature Degrees R (F+460)
SF Safety Factor due to vacuum loading

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Equipment ID P&B
Equipment Description Painting and Blasting

Activity	Description / comments	Default parameters		Input Parameters		Annual Emissions	
(b)(2) Aerosol Cans Includes spray paints and primers, degreasers, cleaners and other solvents, rust inhibitors	90% VOC content is an average obtained from a survey of MSDS sheets (c)(d)(e) for spray paints and primers, degreasers, cleaners and other solvents, rust inhibitors. This does not include lubricants. VOC is propellant. 100% VOC evaporates.	Standard Industrial Size Cans (oz.)	16	Number of 16 oz cans used	200	0.09	VOC TPY
		VOC emissions (lb/can)	0.9				
(b)(2) Manual application of paints, primer Touch up paint	100% VOC evaporates - Survey of MSDS sheets (a) (b) indicates VOC content varies from 2 lb/gallon to 7 lb/gallon. As Chapter 115 limits VOC content to 3.5 lb/gal in nonattainment areas this was used as a conservative amount -Usage of paint based on technical expertise and NSR permit section reviews.	VOC content (lb/gal)	3.5	Paint used (gallons)	40	0.07	VOC TPY
(b)(2) Painting Tanks and Other Immovable Fixed Structures Spray Painting	100% VOC evaporates -Painting used on 1 tank or 1 vessel per year - Survey of MSDS sheets (a)(b) indicates VOC content varies from 2 lb/gallon to 7lb/gallon. As Chapter 115 limits VOC content to 3.5 lb/gal in nonattainment areas this was used as a conservative amount. -Input parameters based on TCEQ Surface Coating Guidance Document for Air Quality Permit Applications. -Per field research in 2012, company indicated that a large site uses around 100gallons to paint pipes and tanks in 6 month period.	VOC content (lb/gal)	3.5	Paint used (gallons)	100	0.175	VOC TPY
		PM10 & 2.5 content (lb/gal)	8				
		Transfer Efficiency PM10 & 2.5 (%)	65			0.0084	PM10 TPY
		Droplet factor for PM2.5 overspray (%)	99				
		Droplet factor for PM10 overspray (%)	94			0.0014	PM2.5 TPY
(b)(2) Sandblasting	An application rate of 2,000 lb/hr. -Per industry expertise and BMP, blasting occurs for 5 days per year and 8 hrs per day -Emission factors for PM10 based on TCEQ Abrasive Blast Cleaning technical guidance document. Emission factor for PM2.5 is based on 15% of PM10 emission factor.	Emission factor for PM10 (lb/lb of usage)	0.00034	Number of hours blasting operation occurs	50	0.0116	PM10 TPY
		Application rate (lb/hr)	2000				
		PM10 Emissions (lb/hr)	0.68				
		Emission factor for PM2.5 (lb/lb of usage)	0.00005			0.0003	PM2.5 TPY
		Application rate (lb/hr)	2000				
		PM2.5 Emissions (lb/hr)	0.1				

	TPY	lb/hr
VOC Emissions	0.335	0.076484
PM10 Emissions	0.0200	0.004557
PM2.5 Emissions	0.0017	0.000377

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*******************************************************************************
*******
*     Project Setup Information
     *
*******************************************************************************
*******
Project File              : C:\Users\BBEADMIN\Desktop\E&P Tank Runs\M-State
Satelite Oil.ept3
Flowsheet Selection       : Oil Tank with Separator
Calculation Method        : AP42
Control Efficiency        : 95.00%
Known Separator Stream    : High Pressure Oil
Entering Air Composition  : No
Component Group           : C10+

Filed Name                : Permian M. State Satelite
Well Name                 : M. State Satelite Oil
Date                      : 2021.08.16


*******************************************************************************
*******
*     Data Input
     *
*******************************************************************************
*******

Separator Pressure (psia)         : 30.00
Separator Temperature (F)         : 65.0
C10+ SG                           : 0.93
C10+ MW(lb/lbmol)                 : 231.40

-- High Pressure Oil
-------------------------------------------------------------------
No.   Component           Mole%    Wt%
1     H2S                    0.0000   0.0000
2     O2                     0.0000   0.0000
3     CO2                    0.0107   0.0049
4     N2                     0.1414   0.0412
5     C1                     0.0614   0.0103
6     C2                     0.9506   0.2974
7     C3                     4.1377   1.8985
8     i-C4                   1.4751   0.8920
9     n-C4                   7.3443   4.4410
10    i-C5                   4.6905   3.5210
11    n-C5                   7.7119   5.7890
12    C6                    11.6877  10.4772
13    C7                    22.6004  23.5609
14    C8                    13.8102  16.4130
```

15	C9	1.0734	1.4326
16	C10+	5.7815	13.9190
17	Benzene	2.0533	1.6686
18	Toluene	5.5689	5.3380
19	E-Benzene	2.1010	2.3208
20	Xylenes	0.4056	0.4480
21	n-C6	8.3943	7.5266
22	224Trimethylp	0.0000	0.0000

-- Sales Oil

Production Rate (bbl/day)	: 11.50
Days of Annual Operation	: 365
API Gravity	: 68.84
Reid Vapor Pressure (psia)	: 10.60
Bulk Temperature	: 60.0

-- Tank and Shell Data

Diameter (ft)	: 12.00
Shell Height (ft)	: 15.00
Cone Roof Slope	: 0.06
Average Liquid Height (ft)	: 10.00
Vent Pressure Range (psia)	: 0.06
Solar Absorbance	: 0.54

-- Meteorological Data

Page 1 E&P TANK

City	: Oklahoma City, OK
Min Ambient Temperature (F)	: 48.6
Max Ambient Temperature (F)	: 71.2
Total Solar Insolation (F)	: 1461.00
Ambient Pressure (psia)	: 14.70
Ambient Temperature (F)	: 60.0

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

-- Calculation Warning

********** WARNING **********
* AP-42 failed as Oil Vapor Pressure > Reference Pressure *
* RVP distillation method is recommended *

****

-- Emission Summary

	Uncontrolled ton	Controlled ton
Total HAPs	0.0530	0.0026
Total HC	1.5250	0.0763
VOCs, C2+	1.4950	0.0747
VOCs, C3+	1.2350	0.0617
CO2	0.0090	
CH4	0.0300	

Uncontrolled Recovery Information:

Vapor(mscfd):	0.0809
HC Vapor(mscfd):	0.0686
CO2(mscfd):	0.0000
CH4(mscfd):	0.0000
GOR(SCF/STB):	7.0322

-- Emission Composition

No	Component	Uncontrolled ton	Controlled ton
1	H2S	0.0000	0.0000
2	O2	0.0000	0.0000
3	CO2	0.0090	0.0090
4	N2	0.1600	0.1600
5	C1	0.0300	0.0015
6	C2	0.2600	0.0130
7	C3	0.4940	0.0247
8	i-C4	0.0940	0.0047
9	n-C4	0.3120	0.0156
10	i-C5	0.0890	0.0044
11	n-C5	0.1070	0.0054
12	C6	0.0550	0.0027
13	Benzene	0.0070	0.0003
14	Toluene	0.0060	0.0003
15	E-Benzene	0.0010	0.0000
16	Xylenes	0.0000	0.0000
17	n-C6	0.0390	0.0019
18	224Trimethylp	0.0000	0.0000
19	Pseudo Comp1	0.0250	0.0012
20	Pseudo Comp2	0.0070	0.0003
21	Pseudo Comp3	0.0000	0.0000
22	Pseudo Comp4	0.0000	0.0000
23	Pseudo Comp5	0.0000	0.0000
24	Total	1.6950	0.0847

-- Stream Data

NoComponent	MW	LP Oil	Flash Oil	Sales Oil	Flash Gas	W&S Gas	Total Emission
	lb/lbmol	mole %	mole %	mole %	mole %	mole %	mole %
1 H2S	34.80	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Page 2---------- E&P TANK							
2 O2	32.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3 CO2	44.01	0.0105	0.0071	0.0071	0.4976	0.0000	0.4976
4 N2	28.01	0.1213	0.0184	0.0184	14.7026	0.0000	14.7026
5 C1	16.04	0.0590	0.0252	0.0252	4.8493	0.0000	4.8493
6 C2	30.07	0.9451	0.7949	0.7949	22.2243	0.0000	22.2243
7 C3	44.10	4.1326	3.9588	3.9588	28.7529	0.0000	28.7529
8 i-C4	58.12	1.4748	1.4559	1.4559	4.1442	0.0000	4.1442
9 n-C4	58.12	7.3442	7.2987	7.2987	13.7877	0.0000	13.7877
10 i-C5	72.15	4.6917	4.7025	4.7025	3.1619	0.0000	3.1619
11 n-C5	72.15	7.7143	7.7420	7.7420	3.7921	0.0000	3.7921
12 C6	84.00	11.6922	11.7629	11.7629	1.6857	0.0000	1.6857
13 Benzene	78.11	2.0541	2.0670	2.0670	0.2225	0.0000	0.2225
14 Toluene	92.14	5.5712	5.6094	5.6094	0.1610	0.0000	0.1610
15 E-Benzene	106.17	2.1019	2.1166	2.1166	0.0193	0.0000	0.0193
16 Xylenes	106.17	0.4058	0.4086	0.4086	0.0031	0.0000	0.0031
17 n-C6	86.18	8.3976	8.4486	8.4486	1.1637	0.0000	1.1637
18 224Trimethylp	114.24	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
19 Pseudo Comp1	96.00	22.6098	22.7647	22.7647	0.6614	0.0000	0.6614
20 Pseudo Comp2	107.00	13.8160	13.9124	13.9124	0.1655	0.0000	0.1655
21 Pseudo Comp3	121.00	1.0739	1.0814	1.0814	0.0044	0.0000	0.0044

22 Pseudo Comp4	151.93	2.4297	2.4468	2.4468	0.0009	
0.0000	0.0009					
23 Pseudo Comp5	288.27	3.3543	3.3779	3.3779	0.0000	
0.0000	0.0000					

	LP Oil	Flash Oil	Sales Oil	Flash Gas	W&S Gas	Total Emission
MW (lb/lbmol):	93.84	94.19	94.19	43.50	0.00	43.50
Stream Mole Ratio:	1.0000	0.9930	0.9930	0.0070		0.0070
Stream Weight Ratio:	93.84	93.53	93.53	0.30		0.30
Total Emission (ton):				1.694		1.694
Heating Value (BTU/scf):				2220.47		2220.47
Gas Gravity (Gas/Air):				1.50		1.50
Bubble Pt. @100F (psia):	38.31	23.81	23.81			
RVP @100F (psia):	131.76	119.46	119.46			
Spec. Gravity @100F:	0.73	0.73	0.73			

```
*******************************************************************************
*******
*     Project Setup Information
     *
*******************************************************************************
*******
Project File              : C:\Users\BBEADMIN\Desktop\E&P Tank Runs\Jalmat Oil.ept3
Flowsheet Selection       : Oil Tank with Separator
Calculation Method        : AP42
Control Efficiency        : 95.00%
Known Separator Stream    : High Pressure Oil
Entering Air Composition  : No
Component Group           : C10+

Filed Name                : Maverick Permian
Well Name                 : M-Satelite Water
Date                      : 2021.08.16


*******************************************************************************
*******
*     Data Input
     *
*******************************************************************************
*******

Separator Pressure (psia)         : 30.00
Separator Temperature (F)         : 65.0
C10+ SG                           : 0.93
C10+ MW(lb/lbmol)                 : 231.40

-- High Pressure Oil
-----------------------------------------------------------------------
No.   Component           Mole%    Wt%
1     H2S                    0.0000   0.0000
2     O2                     0.0000   0.0000
3     CO2                    0.0107   0.0049
4     N2                     0.1414   0.0412
5     C1                     0.0614   0.0103
6     C2                     0.9506   0.2974
7     C3                     4.1377   1.8985
8     i-C4                   1.4751   0.8920
9     n-C4                   7.3443   4.4410
10    i-C5                   4.6905   3.5210
11    n-C5                   7.7119   5.7890
12    C6                    11.6877  10.4772
13    C7                    22.6004  23.5609
14    C8                    13.8102  16.4130
15    C9                     1.0734   1.4326
```

16	C10+	5.7815	13.9190
17	Benzene	2.0533	1.6686
18	Toluene	5.5689	5.3380
19	E-Benzene	2.1010	2.3208
20	Xylenes	0.4056	0.4480
21	n-C6	8.3943	7.5266
22	224Trimethylp	0.0000	0.0000

-- Sales Oil

Production Rate (bbl/day) : 1.50
Days of Annual Operation : 365
API Gravity : 68.84
Reid Vapor Pressure (psia) : 10.60
Bulk Temperature : 60.0

-- Tank and Shell Data

Diameter (ft) : 12.00
Shell Height (ft) : 15.00
Cone Roof Slope : 0.06
Average Liquid Height (ft) : 10.00
Vent Pressure Range (psia) : 0.06
Solar Absorbance : 0.54

-- Meteorological Data

Page 1---------- E&P TANK

City : Oklahoma City, OK
Min Ambient Temperature (F) : 48.6
Max Ambient Temperature (F) : 71.2
Total Solar Insolation (F) : 1461.00
Ambient Pressure (psia) : 14.70
Ambient Temperature (F) : 60.0

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

-- Calculation Warning

********** WARNING **********
* AP-42 failed as Oil Vapor Pressure > Reference Pressure *
* RVP distillation method is recommended *
****

-- Emission Summary

	Uncontrolled ton	Controlled ton
Total HAPs	0.0070	0.0003
Total HC	0.1990	0.0099
VOCs, C2+	0.1950	0.0098
VOCs, C3+	0.1610	0.0081
CO2	0.0010	
CH4	0.0040	

Uncontrolled Recovery Information:

Vapor(mscfd):	0.0106
HC Vapor(mscfd):	0.0089
CO2(mscfd):	0.0000
CH4(mscfd):	0.0000
GOR(SCF/STB):	7.0333

-- Emission Composition

NoComponent	Uncontrolled ton	Controlled ton
1 H2S	0.0000	0.0000
2 O2	0.0000	0.0000
3 CO2	0.0010	0.0010
4 N2	0.0210	0.0210
5 C1	0.0040	0.0002
6 C2	0.0340	0.0017
7 C3	0.0640	0.0032
8 i-C4	0.0120	0.0006
9 n-C4	0.0410	0.0021
10 i-C5	0.0120	0.0006
11 n-C5	0.0140	0.0007
12 C6	0.0070	0.0003
13 Benzene	0.0010	0.0000
14 Toluene	0.0010	0.0000
15 E-Benzene	0.0000	0.0000
16 Xylenes	0.0000	0.0000
17 n-C6	0.0050	0.0003
18 224Trimethylp	0.0000	0.0000
19 Pseudo Comp1	0.0030	0.0002
20 Pseudo Comp2	0.0010	0.0000
21 Pseudo Comp3	0.0000	0.0000
22 Pseudo Comp4	0.0000	0.0000
23 Pseudo Comp5	0.0000	0.0000
24 Total	0.2210	0.0110

-- Stream Data

NoComponent	MW	LP Oil	Flash Oil	Sales Oil	Flash Gas	W&S Gas	Total Emission
	lb/lbmol	mole %	mole %	mole %	mole %	mole %	mole %
1 H2S	34.80	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Page 2---------- E&P TANK							
2 O2	32.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3 CO2	44.01	0.0105	0.0071	0.0071	0.4976	0.0000	0.4976
4 N2	28.01	0.1213	0.0184	0.0184	14.7026	0.0000	14.7026
5 C1	16.04	0.0590	0.0252	0.0252	4.8493	0.0000	4.8493
6 C2	30.07	0.9451	0.7949	0.7949	22.2243	0.0000	22.2243
7 C3	44.10	4.1326	3.9588	3.9588	28.7529	0.0000	28.7529
8 i-C4	58.12	1.4748	1.4559	1.4559	4.1442	0.0000	4.1442
9 n-C4	58.12	7.3442	7.2987	7.2987	13.7877	0.0000	13.7877
10 i-C5	72.15	4.6917	4.7025	4.7025	3.1619	0.0000	3.1619
11 n-C5	72.15	7.7143	7.7420	7.7420	3.7921	0.0000	3.7921
12 C6	84.00	11.6922	11.7629	11.7629	1.6857	0.0000	1.6857
13 Benzene	78.11	2.0541	2.0670	2.0670	0.2225	0.0000	0.2225
14 Toluene	92.14	5.5712	5.6094	5.6094	0.1610	0.0000	0.1610
15 E-Benzene	106.17	2.1019	2.1166	2.1166	0.0193	0.0000	0.0193
16 Xylenes	106.17	0.4058	0.4086	0.4086	0.0031	0.0000	0.0031
17 n-C6	86.18	8.3976	8.4486	8.4486	1.1637	0.0000	1.1637
18 224Trimethylp	114.24	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
19 Pseudo Comp1	96.00	22.6098	22.7647	22.7647	0.6614	0.0000	0.6614
20 Pseudo Comp2	107.00	13.8160	13.9124	13.9124	0.1655	0.0000	0.1655
21 Pseudo Comp3	121.00	1.0739	1.0814	1.0814	0.0044	0.0000	0.0044
22 Pseudo Comp4	151.93	2.4297	2.4468	2.4468	0.0009		

0.0000	0.0009							
23	Pseudo Comp5	288.27	3.3543	3.3779	3.3779	0.0000		
0.0000	0.0000							

	LP Oil	Flash Oil	Sales Oil	Flash Gas	W&S	Gas	Total Emission
MW (lb/lbmol):	93.84	94.19	94.19	43.50	0.00	43.50	
Stream Mole Ratio:	1.0000	0.9930	0.9930	0.0070		0.0070	
Stream Weight Ratio:	93.84	93.53	93.53	0.30		0.30	
Total Emission (ton):				0.221		0.221	
Heating Value (BTU/scf):				2220.47		2220.47	
Gas Gravity (Gas/Air):				1.50		1.50	
Bubble Pt. @100F (psia):	38.31	23.81	23.81				
RVP @100F (psia):	131.76	119.46	119.46				
Spec. Gravity @100F:	0.73	0.73	0.73				

HOWARD
Athens, TX (903) 677-0700 . Beeville, TX (361) 354-5200 . Midland, TX (432) 704-5351

GAS EXTENDED ANALYSIS REPORT

LAB REPORT NUMBER: 210728-9999-07-072821-02

PHYSICAL CONSTANTS PER GPA 2145-09 & TP-17 (1998)

CUSTOMER :	MAVERICK	DATE ON:	07/14/2021
STATION:	M STATE SATELITE	DATE ANALYZED:	07/28/2021
PRODUCER:	MAVERICK	EFFECTIVE DATE:	07/01/2021
LEASE:	M STATE SATELITE SEPARATOR	DATE OFF:	

COMPONENT	MOLE %	GPM	WT. %
H2S	0.200		0.320
OXYGEN	0.005		0.008
NITROGEN	0.000		0.000
CARBON DIOXIDE	0.284		0.587
METHANE	79.839		60.179
ETHANE	10.559	2.818	14.918
PROPANE	5.022	1.381	10.406
I-BUTANE	0.520	0.170	1.420
N-BUTANE	1.789	0.563	4.886
I-PENTANE	0.419	0.153	1.420
N-PENTANE	0.221	0.080	0.749
HEXANES (C6's)	0.715	0.278	2.866
HEPTANES (C7+)	0.205	0.088	0.948
OCTANES (C8+)	0.095	0.043	0.500
NONANES (C9+)	0.056	0.027	0.329
DECANES (C10+)	0.070	0.039	0.464
TOTAL	100.000	5.640	100.000

REAL SP. GRAVITY	0.7373	REAL BTU DRY	1280.578
MOL. WT.	21.283	REAL BTU SAT	1258.168
Z FACTOR	0.9963	PRESS BASE	14.650
C2+ GPM	5.640	C4+ GPM	1.441
C3+ GPM	2.822	C5+ GPM	0.708
C6-C10+ MOL WT	103.946	C6-C10+ GRAVITY	3.599

SAMPLED BY	MH	SAMPLE PRESS:	
SAMPLE TYPE:	SPOT	SAMPLE TEMP:	
CYLINDER NO.:	284	COUNTY / STATE:	14.65
COMMENT:	SPOT	ANALYST	MIKE HOBGOOD

* SEE NEXT PAGE FOR C6+ COMPOSITIONAL BREAKDOWN

08-04-2021

HOWARD
Athens, TX (903) 677-0700 . Beeville, TX (361) 354-5200 . Midland, TX (432) 704-5351

STATION: M STATE SATELITE LEASE: M STATE SATELITE SEPARATOR

C6+ FRACTION COMPOSITION

HEXANE ISOMERS (C6'S)		MOLE %	GPM	WT. %
2,2-Dimethylbutane	P	0.006	0.002	0.024
2,3-Dimethylbutane	PN	0.000	0.000	0.000
2-Methylpentane	P	0.156	0.065	0.630
3-Methylpentane	P	0.106	0.043	0.430
Methylcyclopentane	N	0.100	0.035	0.396
Benzene	A	0.035	0.010	0.129
Cyclohexane	N	0.065	0.022	0.259
n-Hexane	P	0.246	0.101	0.998
HEPTANE ISOMERS (C7'S)				
3,3-Dimethylpentane	P	0.000	0.000	0.000
2,2-Dimethylpentane	P	0.002	0.001	0.008
2,4-Dimethylpentane	P	0.006	0.003	0.027
2 & 3-Methylhexane	P	0.030	0.014	0.143
2,3-Dimethylpentane	P	0.017	0.008	0.081
1,t-3-Dimethylcyclopentane	N	0.000	0.000	0.000
1,c-3-Dimethylcyclopentane	N	0.000	0.000	0.000
3-Ethlypentane	N	0.000	0.000	0.000
1,t-2-Dimethylcyclopentane	N	0.000	0.000	0.000
Toluene	A	0.031	0.010	0.132
Methylcyclohexane	N	0.054	0.022	0.250
Ethylcyclopentane	N	0.000	0.000	0.000
n-Heptane	P	0.065	0.030	0.307
OCTANE ISOMERS (C8'S)				
2,4 & 2,5-Dimethylhexane	P	0.009	0.005	0.050
2,2,4-Trimethylpentane	N	0.000	0.000	0.000
1,t-2,c-4-Trimethylcyclopentane	N	0.000	0.000	0.000
1,t-2,c-3-Trimethylcyclopentane	N	0.000	0.000	0.000
2-Methylheptane	P	0.000	0.000	0.000
1,c-2,t-4-Trimethylcyclopentane	N	0.000	0.000	0.000
3-Methylheptane	P	0.002	0.001	0.009
1,c-3-Dimethylcyclohexane	N	0.001	0.000	0.005
1,t-4-Dimethylcyclohexane	N	0.000	0.000	0.000
methyl-ethylcyclopentanes	N	0.000	0.000	0.000
1,t-3 & 1,c-4 Dimethylcyclohexane	N	0.001	0.001	0.006
1,c-2-Dimethylcyclohexane	N	0.006	0.003	0.000
Ethylcyclohexane	N	0.006	0.003	0.031
Ethylbenzene	A	0.003	0.001	0.017
m & p-Xylene	A	0.006	0.002	0.029
o-Xylene	A	0.002	0.001	0.011
Cyclooctane	P	0.041	0.017	0.216
n-Octane	P	0.018	0.009	0.095

HOWARD
Athens, TX (903) 677-0700 . Beeville, TX (361) 354-5200 . Midland, TX (432) 704-5351

STATION: M STATE SATELITE **LEASE:** M STATE SATELITE SEPARATOR

C6+ FRACTION COMPOSITION

NONANE ISOMERS (C9'S)		MOLE %	GPM	WT. %
Trimethylhexanes	P	0.000	0.000	0.000
Dimethylpentanes	P	0.000	0.000	0.000
Isopropylcyclopentane	N	0.000	0.000	0.000
n-Propylcyclopentane	N	0.000	0.000	0.000
3-Methyloctane	P	0.000	0.000	0.000
Trimethylcyclohexanes	N	0.000	0.000	0.000
Isopropylbenzene	A	0.002	0.001	0.014
Isopropylcyclohexane	N	0.000	0.000	0.000
n-Propylcyclohexane	N	0.031	0.015	0.184
n-Propyllbenzene	A	0.006	0.003	0.035
m-Ethyltoluene	A	0.000	0.000	0.000
p-Ethyltoluene	A	0.000	0.000	0.000
1,3,5-Trimethylbenzene	A	0.003	0.001	0.015
4 & 5-Methylnonane	P	0.000	0.000	0.000
o-Ethyltoluene & 3-Methylnonane	AP	0.000	0.000	0.000
1,2,3-Trimethylbenzene	A	0.000	0.000	0.000
1,2,4-Trimethylbenzene	A	0.008	0.004	0.047
n-Nonane	P	0.006	0.003	0.034
DECANE ISOMERS (C10'S)				
2-Methylnonane	P	0.000	0.000	0.000
tert-Butylbenzene	A	0.000	0.000	0.000
Isobutylcyclohexane & tert-Butylcyclohexane		0.004	0.002	0.026
Isobutylbenzene	A	0.006	0.003	0.040
sec-Butylbenzene	A	0.000	0.000	0.000
n-Butylcyclohexane	N	0.049	0.027	0.326
1,3-Diethylbenzene	A	0.000	0.000	0.000
1,2-Diethylbenzene & n-Butylbenzene	A	0.000	0.000	0.000
1,4-Diethylbenzene	A	0.000	0.000	0.000
n-Decane	P	0.011	0.007	0.072
UNDECANE ISOMERS (C11'S)				
n-Undecane	P	0.000	0.000	0.000
DODECANE ISOMERS (C12'S)				
n-Dodecane +	P	0.000	0.000	0.000

X Michael Holsomb

ANALYST

HOWARD
Athens, TX (903) 677-0700 . Beeville, TX (361) 354-5200 . Edmond, OK (405) 525-0579

LIQUID EXTENDED ANALYSIS REPORT

LABORATORY REPORT NUMBER 210728-9999-07-072821-01

PHYSICAL CONSTANTS PER GPA 2145-09 & TP-17 (1998)

CUSTOMER :	MAVERICK	DATE ON:	07/14/2021
STATION:	M STATE SATELITE	DATE ANALYZED:	07/28/2021
PRODUCER:	MAVERICK	EFFECTIVE DATE:	07/07/2021
LEASE:	M STATE SATELITE SEPERATOR	DATE OFF:	

COMPONENT	MOLE %	LIQUID VOL %	WT. %
H2S	0.000	0.000	0.000
OXYGEN	0.000	0.000	0.000
NITROGEN	0.145	0.040	0.045
CARBON DIOXIDE	0.011	0.005	0.005
METHANE	0.063	0.027	0.011
ETHANE	0.975	0.648	0.327
PROPANE	4.244	2.904	2.089
I-BUTANE	1.513	1.230	0.980
N-BUTANE	7.533	5.901	4.878
I-PENTANE	4.811	4.372	3.867
N-PENTANE	7.910	7.125	6.359
HEXANES (C6's)	22.707	21.653	21.502
HEPTANES (C7+)	28.893	29.890	31.523
OCTANES (C8+)	14.165	16.644	17.705
NONANES (C9+)	1.101	1.256	1.494
DECANES (C10+)	5.930	8.305	9.215
TOTAL	100.000	100.000	100.000

IDEAL SP. GRAVITY	0.7063	BTU / GAL	119444.57
MOL. WT.	89.750	VAPOR PRESS.	35.30
CUBIC FT / GAL	24.898	LBS / GAL	5.89
C1/C2 LV % RATIO	4.167	API GRAVITY	68.84
CO2/C2 LV % RATIO	0.772	SP GRAV AS VAPOR	3.10
C6-C10+ MOL WT	100.411	C6-C10+ GRAVITY	

SAMPLED BY	MH	SAMPLE PRESS:	
SAMPLE TYPE:	SPOT	SAMPLE TEMP:	
CYLINDER NO.:	2005	COUNTY / STATE:	0
COMMENT:	SPOT	ANALYST	MIKE HOBGOOD

* SEE NEXT PAGE FOR C6+ COMPOSITIONAL BREAKDOWN

08-04-2021

HOWARD
Athens, TX (903) 677-0700 . Beeville, TX (361) 354-5200 . Edmond, OK (405) 525-0579

STATION: M STATE SATELITE LEASE: M STATE SATELITE SEPERATOR

C6+ FRACTION COMPOSITION

HEXANE ISOMERS (C6'S)		MOLE %	LIQ VOL %	WT. %
2,2-Dimethylbutane	P	0.108	0.112	0.104
2,3-Dimethylbutane	PN	0.000	0.000	0.000
2-Methylpentane	P	4.122	4.248	3.958
3-Methylpentane	P	2.798	2.836	2.686
Methylcyclopentane	N	0.000	0.000	0.000
Benzene	A	2.109	1.466	1.836
Cyclohexane	N	4.960	4.193	4.651
n-Hexane	P	8.610	8.798	8.267
HEPTANE ISOMERS (C7'S)				
3,3-Dimethylpentane	P	0.057	0.065	0.064
2,3-Dimethylpentane	P	0.000	0.000	0.000
2,2-Dimethylpentane	P	0.107	0.124	0.119
2,4-Dimethylpentane	P	0.000	0.000	0.000
2 & 3-Methylhexane	P	4.785	5.507	5.342
1,t-3-Dimethylcyclopentane	N	0.000	0.000	0.000
1,c-3-Dimethylcyclopentane	N	0.000	0.000	0.000
1,t-2-Dimethylcyclopentane	N	0.000	0.000	0.000
3-Ethylpentane	N	0.000	0.000	0.000
Toluene	A	5.712	4.751	5.864
Methylcyclohexane	N	9.859	9.844	10.786
Ethylcyclopentane	N	0.000	0.000	0.000
n-Heptane	P	8.373	9.599	9.348
OCTANE ISOMERS (C8'S)				
2,4 & 2,5-Dimethylhexane	P	0.230	0.296	0.293
1,t-2,c-4-Trimethylcyclopentane	N	0.000	0.000	0.000
1,t-2,c-3-Trimethylcyclopentane	N	0.000	0.000	0.000
2-Methylheptane	P	0.217	0.277	0.276
1,c-2,t-4-Trimethylcyclopentane	N	0.000	0.000	0.000
3-Methylheptane	P	1.505	1.905	1.915
1,c-3-Dimethylcyclohexane	N	0.448	0.514	0.560
1,t-4-Dimethylcyclohexane	N	0.000	0.000	0.000
methyl-ethylcyclopentanes	N	0.000	0.000	0.000
1,t-3 & 1,c-4 Dimethylcyclohexane	N	1.170	1.310	1.463
1,c-2-Dimethylcyclohexane	N	0.489	0.539	0.611
Ethylcyclohexane	N	0.309	0.345	0.387
Ethylbenzene	A	2.155	2.066	2.549
m & p-Xylene	A	0.416	0.400	0.492
Cyclooctane		0.525	0.551	0.656
o-Xylene	A	0.271	0.256	0.320
n-Octane		6.429	8.185	8.183

HOWARD
Athens, TX (903) 677-0700 . Beeville, TX (361) 354-5200 . Edmond, OK (405) 525-0579

STATION: M STATE SATELITE **LEASE:** M STATE SATELITE SEPERATOR

C6+ FRACTION COMPOSITION

NONANE ISOMERS (C9'S)		MOLE %	LIQ VOL %	WT. %
Trimethylhexanes	P	0.000	0.000	0.000
Dimethylpentanes	P	0.000	0.000	0.000
Isopropylcyclopentane	N	0.000	0.000	0.000
n-Propylcyclopentane	N	0.000	0.000	0.000
3-Methyloctane	P	0.000	0.000	0.000
Trimethylcyclohexanes	N	0.000	0.000	0.000
Isopropylbenzene	A	0.114	0.125	0.153
Isopropylcyclohexane	N	0.000	0.000	0.000
n-Propylcyclohexane	N	0.065	0.080	0.091
n-Propyllbenzene	A	0.140	0.153	0.188
m-Ethyltoluene	A	0.000	0.000	0.000
p-Ethyltoluene	A	0.000	0.000	0.000
1,3,5-Trimethylbenzene	A	0.108	0.118	0.145
4 & 5-Methylnonane	P	0.000	0.000	0.000
o-Ethyltoluene & 3-Methylnonane	AP	0.000	0.000	0.000
1,2,3-Trimethylbenzene	A	0.000	0.000	0.000
1,2,4-Trimethylbenzene	A	0.499	0.537	0.669
n-Nonane	P	0.174	0.243	0.248
DECANE ISOMERS (C10'S)				
2-Methylnonane	P	0.000	0.000	0.000
tert-Butylbenzene	A	1.229	1.490	1.838
Isobutylcyclohexane & tert-Butylcyclohexane		0.842	1.137	1.315
Isobutylbenzene	A	0.000	0.000	0.000
sec-Butylbenzene	A	0.216	0.263	0.323
n-Butylcyclohexane	N	0.258	0.354	0.402
1,3-Diethylbenzene	A	0.000	0.000	0.000
1,2-Diethylbenzene & n-Butylbenzene	A	0.340	0.415	0.508
1,4-Diethylbenzene	A	0.000	0.000	0.000
n-Decane	P	3.046	4.646	4.829
UNDECANE ISOMERS (C11'S)				
n-Undecane	P	0.000	0.000	0.000
DODECANE ISOMERS (C12'S)				
n-Dodecane +	P	0.000	0.000	0.000

X Michael Holsomb
ANALYST

Section 5
Map(s)

A map such as a 7.5 minute topographic quadrangle showing the exact location of the source. The map shall also include the following:

The UTM or Longitudinal coordinate system on both axes	An indicator showing which direction is north
A minimum radius around the plant of 0.8km (0.5 miles)	Access and haul roads
Topographic features of the area	Facility property boundaries
The name of the map	The area which will be restricted to public access
A graphical scale	

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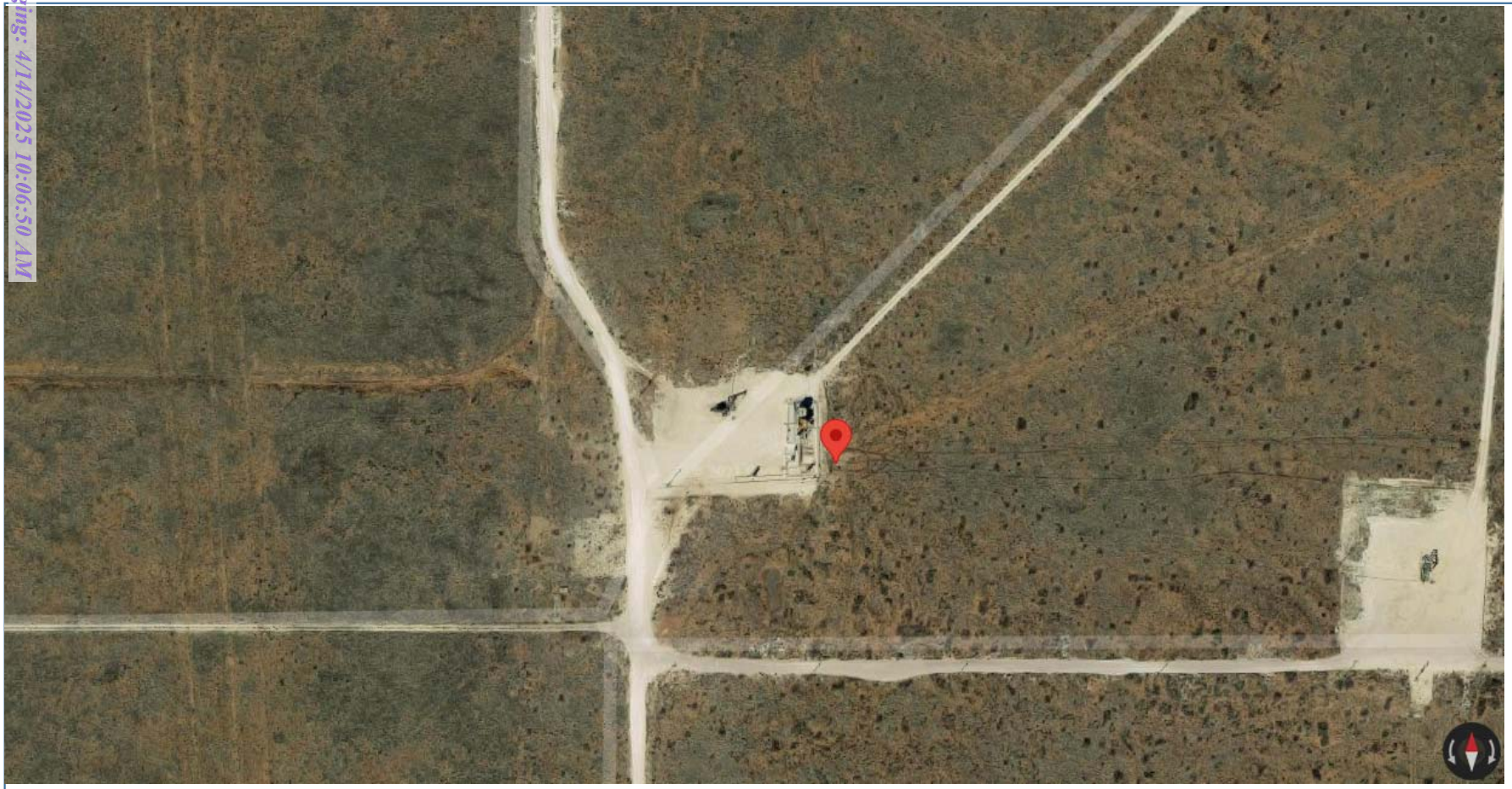

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Area Map Around Lea, New Mexico

Breitburn Operating L.P

Encore M State Satellite Facility

Site Map

Figure #1

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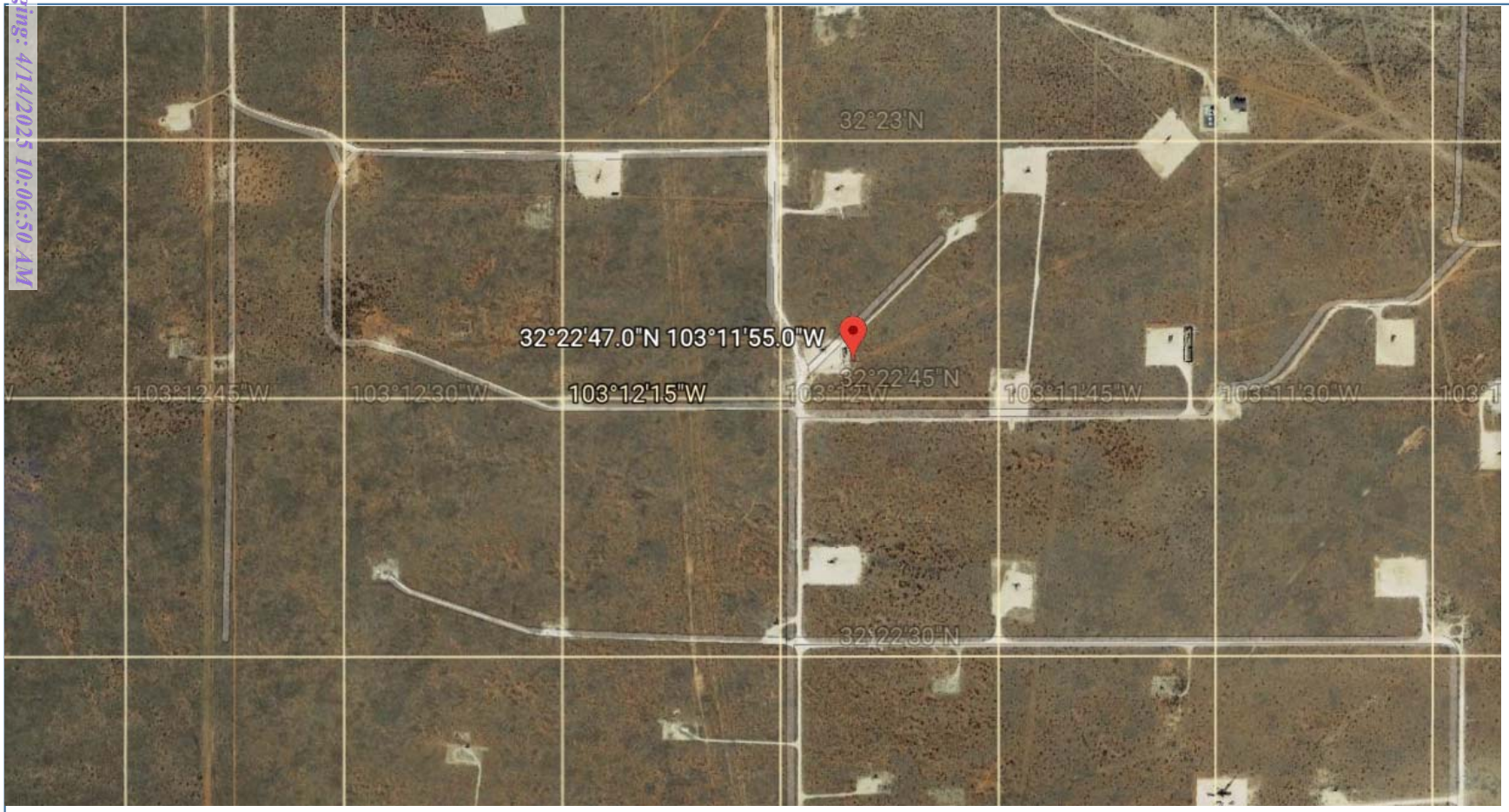

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Feet

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Breitburn Operating L.P

Encore M State Satellite Facility

Site Map

Area Map Around Lea, New Mexico

Figure #1

Section 6

Applicable State & Federal Regulations

Provide a discussion demonstrating compliance with applicable state & federal regulation. All input cells should be filled in, even if the response is 'No' or 'N/A'.

In the "Justification" column, identify the criteria that are critical to the applicability determination, numbering each. For each unit subject to a state or federal regulation, after each listed unit, include the lowest level citation of the applicable regulation. For each unit, list the information necessary to verify the applicability of the regulation, including date of manufacture, date of construction, size (hp), and combustion type. Doing so will provide the applicability criteria for each unit.

Example of a Table for Applicable State Regulations:

STATE REGU-LATIONS CITATION	Title	Federally Enforce-able	Applicability Information: Identify the applicability criteria, numbering each (i.e. 1. Post 7/23/84, 2. 75 m^3, 3. VOL)	Applicant's Justification of Applicability	Applicant Identifies if Applies to Entire Facility or Unit No(s)
20.2.38 NMAC	Hydrocarbon Storage Facility	No	**Use the regulation link (left) then cut & paste applicable sections.** Note: for 20.2.38.112 NMAC, 65,000 gallons is 1547.62 barrels.	No	Not affected
20.2.61.109 NMAC	Smoke & Visible Emissions	No	Engines and heaters are Stationary Combustion Equipment. Specify units subject to this regulation.	No	Not affected
20.2.73 NMAC	NOI & Emissions Inventory Requirements	No	**NOI:** 20.2.73.200 NMAC applies (requiring a NOI application)	Yes	**Facility emissions above 10 tpy**
20.2.77 NMAC	New Source Performance	Yes	This is a stationary source which is subject to the requirements of 40 CFR Part 60, as amended through 2017. Applies if any subpart applies.	No	Not affected
20.2.78 NMAC	Emission Standards for HAPS	Yes	This facility emits hazardous air pollutants which are subject to the requirements of 40 CFR Part 61, as amended through 2017. Applies in any subpart applies	No	Not affected

20.2.82 NMAC	MACT Standards for source categories of HAPS	Yes	This regulation applies to all sources emitting hazardous air polluta4nts, which are subject to the requirements of 40 CFR Part 63, as amended through 2017. Applies in any subpart applies	No	Not affected

Example of a Table for Applicable Federal Regulations (This is not an exhaustive list):

FEDERAL REGULATIONS CITATION	Title	JUSTIFICATION:	Applicant's Justification of Applicability	Identify if applies to Entire Facility or Unit No(s)
40 CFR 50	NAAQS	Defined as applicable at 20.2.70.7.E.11, Any national ambient air quality standard	No	Not affected
NSPS 40 CFR 60, Subpart A	General Provisions	Applies if any other NSPS subpart applies.	No	Not affected
NSPS 40 CFR Part 60 Subpart OOOO	Standards of Performance for Crude Oil and Natural Gas Production, Transmission, and Distribution	If there is a standard or other requirement, then the facility is an "affected facility." Currently there are standards for: gas wells (60.5375); centrifugal compressors (60.5380); reciprocating compressors (60.5385): controllers (60.5390); storage vessels (60.5395); equipment leaks (60.5400); sweetening units (60.5405). **If standards apply, list the unit number(s) and regulatory citation of the standard that applies to that unit (e.g. Centrifugal Compressors 1a-3a are subject to the standards at 60.5380(a)(1) and (2) since we use a control device to reduce emissions)**	☐ **Check this box if VRU is controlling Storage Vessel emissions and the facility is subject to the requirements under 60.5411(b) and (c)**	Not affected

FEDERAL REGULATIONS CITATION	Title	JUSTIFICATION:	Applicant's Justification of Applicability	Identify if applies to Entire Facility or Unit No(s)
NSPS 40 CFR Part 60 Subpart OOOOa	Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After September 18, 2015	If there is a standard or other requirement, then the facility is an "affected facility." Currently there are standards for: gas wells (60.5375a); centrifugal compressors (60.5380a); reciprocating compressors (60.5385a): controllers (60.5390a); storage vessels (60.5395a); fugitive emissions at well sites and compressor stations (60.5397a); equipment leaks at gas plants (60.5400a); sweetening units (60.5405a). **If standards apply, list the unit number(s) and regulatory citation of the standard that applies to that unit (e.g. Centrifugal Compressors 1a-3a are subject to the standards at 60.5380(a)(1) and (2) since we use a control device to reduce emissions)**	☐ **Check this box if VRU is controlling Storage Vessel emissions and the facility is subject to the requirements under 60.5411a(b) and (c)**	Not affected
NSPS 40 CFR Part 60 Subpart IIII		See 40 CFR 60.4200(a) 1 through 4 to determine applicable category and state engine size, fuel type, and date of manufacture.	☐ **Table 1 or Table 2 to Subpart IIII attached with emission standards applicable to each engine highlighted.**	Not affected
NSPS 40 CFR Part 60 Subpart JJJJ		See 40 CFR 60.4230(a), 1 through 5 to determine applicable category and state engine size, fuel type, and date of manufacture.	☐ **Table 1 to Subpart JJJJ is attached with emission standards applicable to each engine highlighted.**	Not affected
MACT 40 CFR 63, Subpart A	General Provisions	Applies if any other subpart applies.		Not affected
MACT 40 CFR 63 Subpart ZZZZ	National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (**RICE MACT**)	Facilities are subject to this subpart if they own or operate a stationary RICE, except if the stationary RICE is being tested at a stationary RICE test cell/stand.	☐ **Table 1, 2, 3, 4, 5, 6, and/or 7 to Subpart ZZZZ is attached with emission standards/requirements applicable to each engine highlighted.**	Not affected

Page 40 of 43

Section 7: Certification

Company Name: Breitburn Operating L.P.

I, Ryan Donina, hereby certify that the information and data submitted in this application are true and as accurate as possible, to the best of my knowledge and professional expertise and experience.

Signed this 31 day of August, 2021, upon my oath or affirmation, before a notary of the State of Texas.

*Signature

Date 1/31/21

Printed Name Ryan Donina

Title Environmental Specialist

Scribed and sworn before me on this 31 day of August, 2021.

My authorization as a notary of the State of Texas expires on the

03 day of 03, 2025.

Notary's Signature

Date 08/31/21

Notary's Printed Name Katharine Coulombe

Katharine Martha Coulombe
My Commission Expires
03/03/2025
ID No. 130907777

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MAVERICK NATURAL RESOURCES

BREITBURN OPERATING LP
1111 BAGBY STREET SUITE 1600
HOUSTON TX 77002
877-437-8090

JP MORGAN CHASE BANK NA 88-88 1113

Check No	Check Date	Check Amount
0001843376	09/01/2021	****$500.00

Five Hundred Dollars and Zero Cents

Void After 180 Days

PAY TO THE ORDER OF

NEW MEXICO ENVIRONMENT DEPT
AIR QUALITY BUREAU
525 CAMINO DE LOS MARQUEZ STE 1
SANTA FE NM 87505-1816

⑈0001843376⑈ ⑆111300880⑆ 351963969⑈

^PLEASE DETACH AT PERFORATION ABOVE^

^PLEASE DETACH AT PERFORATION ABOVE^

MAVERICK NATURAL RESOURCES

BREITBURN OPERATING LP
1111 BAGBY STREET SUITE 1600
HOUSTON TX 77002
877-437-8090

Check Number 0001843376

Invoice #	Inv. Date	Description	Amount	Discount	Net Amount
083121RD	08/31/2021		500.00	0.00	500.00

1157634	⇦ Vendor	Check Date: 09/01/2021	Check Amount ⇨	500.00

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Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

QUESTIONS

Operator: BREITBURN OPERATING LP 1000 Main Street, Suite 2900 Houston, TX 77002	OGRID: 370080
	Action Number: 451431
	Action Type: [UF-FAC] TB Registration (TB-REG)

QUESTIONS

Facility Details	
Please answer all the questions in this group.	
Name of the facility	Encore M State Satellite
Date the facility was opened	08/31/2021
Depth to ground water, if known	*Not answered.*

Verification	
Does the operator have other facilities with a matching name	No
Are there other facilites located within approximately 50 feet	No

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/contact-us

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

ACKNOWLEDGMENTS

Operator: BREITBURN OPERATING LP 1000 Main Street, Suite 2900 Houston, TX 77002	OGRID: 370080
	Action Number: 451431
	Action Type: [UF-FAC] TB Registration (TB-REG)

ACKNOWLEDGMENTS

☑	I certify that I am authorized to register a facility on behalf of the responsible operator.
☑	I certify that I will notify OCD of any changes of ownership for this facility.
☑	I certify that I will notify OCD when this facility is closed.