GCP-Oil and Gas AQB ePermitting Portal Registration Form
Section 1- (ePermitting Portal submittals)

Portal submittals - delete all pages before this page.
Hardcopy submittals may delete this page.

☒ I understand that I must submit the hard copy check with the required Payment Form for all AQB ePermitting Portal submittals. The 30-day review period will not begin until the check is received. (Does not apply if you are converting from a GCP-1 or GCP-4.) Form available: www.env.nm.gov/air-quality/aqb-epermitting-portal/

☒ I will upload this form to submit via the Portal. I understand that certain pages may be deleted by following instructions on this form, to avoid repeating information I entered directly into the Portal or uploaded separately.

☒ Attach only the electronic copy of the permit with the Department response, do not mail a paper copy. (If box is not checked, a paper copy of the permit will be sent with your response letter.)

Facility Name or Facility Type Change for Modifications
Fill out this section if requesting a change to the facility name or facility type that appears in the ePermitting Portal. These items cannot be updated through the Portal and will be corrected as part of the review of your permit. Check the appropriate box(es) and provide complete information in the table.

☒ **Not applicable**

☐ 1. Changing facility name. (Punctuation and special characters not allowed. Use “No123” instead of #123)

☐ 2. Changing facility type.

1a	**Current Facility Name:**	1b	**New Facility Name:**
2a	**Current Facility Type:** ☐ Production Site ☐ Tank Battery ☐ Compressor Station ☐ Natural Gas Plant ☐ Reinjection facility ☐ Well head ☐ Misc Oil and Gas ☐ Amine Plant ☐ Energy Support Facility ☐ Other, please specify:_____	2b	**New Facility Type:** ☐ Production Site ☐ Tank Battery ☐ Compressor Station ☐ Natural Gas Plant ☐ Reinjection facility ☐ Well head ☐ Misc Oil and Gas ☐ Amine Plant ☐ Energy Support Facility

New Mexico Environment Department
Air Quality Bureau
Permitting Section
525 Camino de los Marquez, Suite 1
Santa Fe, NM 87505-1816

Phone: (505) 476-4300
Fax: (505) 476-4375
www.env.nm.gov/air-quality/

For Department use

Electronic Permitting Application

Use this application for NOI and GCP-Oil and Gas Permits.

Use this application for: the initial application, modifications, revisions and when converting from another permit type. Please fill out all sections so that they have check marks and attach all required documents for review. Coordination with AQB is e set up a walk through.

Section 1 - Facility Information

Section 1-A: Company Information -
Last modified by Watkins, Kaden on 07/24/24 at 13:07:25.

1	**Facility Name:** Wexler Tank Battery				AI # (if known): 40920		
a	SIC Code: 1311 - Crude petroleum and natural gas NAICS Code: 21112 - Crude Petroleum Extraction Facility Type: 146 - Oil & Gas		Secondary Facility Type: 272 - O&G-Production Facility		Reset Selecti		
2	**Company Name (Owns facility):** Steward Energy II LLC	Update	UPDATED				
a	Mailing Address: 777 Taylor St	Address 2: Suite 1050	City: Fort Worth	State: Texas	ZIP Code: 76102		
3	**Billing Party:** Steward Energy II LLC	New	Update	Remove	UPDATED		
a	Mailing Address: 777 Taylor St	Address 2: Suite 1050	City: Fort Worth	State: Texas	ZIP Code: 76102	Phone: 214-297-0500	
4	**Consultant Company:** Sphere 3 Environmental Inc	New	Update	Remove	EXISTING		
a	Mailing Address: 1501 Bill Owens Parkway	Address 2:	City: Longview	State: Texas	ZIP Code: 75604	Phone: 903-297-4673	
5	**Consultant / Preparer Contact:** Find Existing By Email Address:	Look Up	New	Update	Remove	EXISTING	
	First Name: Kaden	M.I.:	Last Name: Watkins	Title: Consultant			
a	Mailing Address: 1501 Bill Owens Parkway	Address 2:	City: Longview	State: Texas	ZIP Code: 75604		
6	**Plant Operator Company:** Steward Energy II LLC	Update	UPDATED				
a	Plant Operator Company Address: 777 Taylor St	Address 2: Suite 1050	City: Fort Worth	State: Texas	ZIP Code: 76102	Phone: 214-297-0500	
b	**Plant Operator Contact:** Find Existing By Email:	Look Up	New	Update	Remove	UPDATED	
	First Name: Nicholas	M.I.:	Last Name: White	Title: Environmental Analyst			
c	Mailing Address: 777 Taylor St	Address 2: Suite 1050	City: Fort Worth	State: Texas	ZIP Code: 76102		
7	**Air Permit Contact:** Find Existing By Email Address:	Look Up	New	Update	Remove	UPDATED	
a	First Name: Nicholas	M.I.:	Last Name: White	Title: Environmental Analyst	Phone: 214-297-0500	Email: nick.white@stewardenergy	
b	Mailing Address: 777 Taylor St	Address 2: Suite 1050	City: Fort Worth	State: Texas	ZIP Code: 76102		

Section 1-C: Facility Input Capacity & Production Rate - Wexler Tank Battery

Last modified by Watkins, Kaden on 07/24/24 at 13:09:50.

Enter the maximum hourly, daily, and annual throughput of oil, gas, natural gas liquids (NGL), and produced water.

1	**Oil**									
a	Current:	Hourly:		bbl/h	Daily:		bbl/d	Annually:		bbl/y
b	Proposed	Hourly:	19.75	bbl/h	Daily:	474	bbl/d	Annually:	173010	bbl/y
2	**Natural Gas**									
a	Current	Hourly:		M SCF/h	Daily:		M SCF/d	Annually:		M SCF/y
b	Proposed	Hourly:	20.25	M SCF/h	Daily:	486	M SCF/d	Annually:	177390	M SCF/y
3	**Natural Gas Liquids**									
a	Current	Hourly:	0		Daily:	0		Annually:	0	
b	Proposed	Hourly:	0		Daily:	0		Annually:	0	
4	**Produced Water**									
a	Current	Hourly:		bbl/h	Daily:		bbl/d	Annually:		bbl/y
b	Proposed	Hourly:	174.79	bbl/h	Daily:	4195	bbl/d	Annually:	1531175	bbl/y

Section 1-D: Facility Location Information - Wexler Tank Battery
Last modified by Watkins, Kaden on 07/24/24 at 13:30:01.

1	County: Lea	Elevation (ft): 3806
2	UTM Zone: ○ 12 or ◉ 13	Datum: ◉ NAD 83 ○ WGS 84
a	UTM E (in meters, to nearest 10 meters): 678,884	UTM N (in meters, to nearest 10 meters): 3,677,618
b	Latitude: 33.222737 dec deg. N	Longitude: -103.075884 dec deg. W
3	Facility/Plant Address: 13.9 miles SE of Tatum (If no facility street address, leave blank)	City: Tatum; State: New Mexico; ZIP Code: 88267; District: 004 - IV; Field Offi: Select ...
4	The facility is 13.9 miles SE of Tatum (nearest town).	
5	Detailed Driving Instructions from nearest NM town (attach a road map if necessary): From Tatum, NM go east on E Broadway St for 15 miles. Then turn right on State Line Road and go south for 2.9 miles. The go	
6	Status of land at facility: Private	
7	Select nearest Class I area: Class I - Carlsbad Caverns National Park	
8	Shortest distance (in km) from facility boundary to the boundary of the nearest Class I area (to the nearest 10 meters): 172.5 km	
9	Is this a portable stationary source as defined in 20.2.72.7.X NMAC? ○ Yes ◉ No	
10	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-E: Proposed Operating Schedule - Wexler Tank Battery

Last modified by Watkins, Kaden on 07/24/24 at 10:36:55.

1	Facility **maximum** operating (hours/day):	24	days/week:	7	weeks/year:	52	hours/year: 8760
2	Facility's maximum daily operating schedule (if less than 24 hours/day)? Start Time:		End Time:				
3	Month and year of anticipated start of construction (mm/yyyy):						
4	Month and year of anticipated construction completion (mm/yyyy):						
5	Month and year of anticipated startup of new or modified facility (mm/yyyy):						
6	Will this facility operate at this site for more than one year? (●) Yes ( ) No						

The 1-E.1 & 1-E.2 operating schedules may become conditions in the permit.

Steward Energy II LLC | Wexler Tank Battery | 12/19/2024

Table 2-F: Startup, Shutdown, and Routine Maintenance (SSM) Emissions

☐ **This table is intentionally left blank as all SSM emissions at this facility do not require an increase in Requested Allowables greater than those listed in Table 2-E.**

All applications for facilities that have emissions during routine our predictable startup, shutdown or scheduled maintenance (SSM)[2], including NOI applications, must include in this table the Maximum Emissions during routine or predictable startup, shutdown and scheduled maintenance (20.2.7 NMAC, 20.2.72.203.A.3 NMAC, 20.2.73.200.D.2 NMAC). Provide emissions calculations for all SSM emissions reported in this table. Refer to the guidance "Startup, Shutdown, Maintenance Emissions in Permits" (www.env.nm.gov/air-quality/permitting-section-procedures-and-guidance/) for more detailed instructions. Numbers shall be expressed to at least 2 decimal points (e.g. 0.41 or 1.41).

Unit No.	NOx		CO		VOC		SOx		PM10[1]		PM2.5[1]		H_2S		Lead	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
FUG-1																
HR-1																
HT-1																
HT-2																
HT-3																
OLOAD-1																
OT-1																
OT-2																
OT-3																
PWLOAD-1																
PWT-1																
PWT-2																
PWT-3																
SSM-1	-	-	-	-	-	10	-	-	-	-	-	-	-	-	-	-
FL-1A-HP																
FL-1A-LP																
FL-1A-LP-SSM	78.36	0.03	156.43	0.06	2.54	0.47	332.21	0.11	-	-	-	-	3.60	0.001	-	-
Totals	78.36	0.03	156.43	0.06	2.54	10.47	332.21	0.11	0.0	0.0	0.0	0.0	3.6	0.001	0.0	0.0

[1] Condensable Particulate Matter: Include condensable particulate matter emissions for PM10 and PM2.5 if the source is a combustion source.

[2]For instance, if the short term steady-state Table 2-E emissions are 5 lb/hr and the SSM rate is 12 lb/hr, enter 7 lb/hr in the table below. If the annual steady-state Table 2-E emissions are 21.9 TPY, and the number of scheduled SSM events result in annual emissions of 31.9 TPY, enter 10.0 TPY in the table below.

Comments (2000 character maximum)

Steward Energy II LLC Wexler Tank Battery 12/19/2024

Table 2-A: Regulated Emission Sources

Unit Number[1]	Source Description	Manufacturer	Model #	Serial #	Combustion Type	Rated Capacity[3]	Permitted Capacity[3]	Date[2] of Manufacture or Reconstruction Date[2] of Installation /Construction	Controlled by Unit # Emissions vented to Stack #	Source Classification Code (SCC)	Disposition	Applicable State & Federal Regulation(s) (i.3. 20.x.x, JJJJ, ...)
FL-1-LP	Flare 1 Low Pressure Tip	Messco	HTDR-2	TBD		8.49 MM SCF/d	8.49 MM SCF/d		N/A FL-1-LP	3-10-001-60	To Be Removed	NA
FL-1-HP	Flare 1 High Pressure Tip	Messco	HTDR-2	TBD		9.34 MM SCF/d	9.34 MM SCF/d		N/A FL-1-HP	3-10-001-60	To Be Removed	NA
FUG-1	Fugitives	N/A	N/A	N/A					FUG-1	3-10-888-11	To Be Revised	40 CFR 60 Subpart OOOOb
HR-1	Unpaved Haul Road	N/A	N/A	N/A					HR-1	3-10-888-11	To Be Revised	NA
HT-1	Heater Treater 1	TBD	TBD	TBD		0.50 MM BTU/h	0.50 MM BTU/h		VRU-S, FL-1A-LP-SSM HT-1	3-10-004-04	To Be Revised	NA
HT-2	Heater Treater 2	TBD	TBD	TBD		0.50 MM BTU/h	0.50 MM BTU/h		VRU-S, FL-1A-LP-SSM HT-2	3-10-004-04	To Be Revised	NA
HT-3	Heater Treater 3	TBD	TBD	TBD		0.50 MM BTU/h	0.50 MM BTU/h		VRU-S, FL-1A-LP-SSM HT-3	3-10-004-04	To Be Revised	NA
OLOAD-1	Oil Truck Loading	N/A	N/A	N/A		726642 gal/y	726642 gal/y		FL-1A-LP OLOAD-1	4-06-001-42	To Be Revised	NA
OT-1	Oil Tank 1	TBD	TBD	TBD		500.00 bbl	500.00 bbl		FL-1A-LP OT-1	4-04-003-12	To Be Revised	NA
OT-2	Oil Tank 2	TBD	TBD	TBD		500.00 bbl	500.00 bbl		FL-1A-LP OT-2	4-04-003-12	To Be Revised	NA
OT-3	Oil Tank 3	TBD	TBD	TBD		500.00 bbl	500.00 bbl		FL-1A-LP OT-3	4-04-003-12	To Be Revised	NA
PWLOAD-1	Produced Water Truck Loading	N/A	N/A	N/A		6430935 gal/y	6430935 gal/y		FL-1A-LP PWLOAD-1	4-04-002-50	To Be Revised	NA
PWT-1	Produced Water Tank 1	TBD	TBD	TBD		500.00 bbl	500 bbl		FL-1A-LP PWT-1	4-04-003-15	To Be Revised	NA
PWT-2	Produced Water Tank 2	TBD	TBD	TBD		500.00 bbl	500.00 bbl		FL-1A-LP PWT-2	4-04-003-15	To Be Revised	NA
PWT-3	Produced Water Tank 3	TBD	TBD	TBD		500.00 bbl	500.00 bbl		FL-1A-LP PWT-3	4-04-003-15	To Be Revised	NA
SSM-1	Startup, Shutdown, Maintenance	N/A	N/A	N/A					SSM-1	3-10-888-11	To Be Revised	NA
FL-1A-HP	Dual pressure process flare: FL-1A-HP	Messco	HTDR-2	TBD		9.34 MM SCF/d	9.34 MM SCF/d		FL-1A-HP	3-10-001-60	New/Additional	NA
FL-1A-LP	Dual pressure process flare: FL-1A-LP	Messco	HTDR-2	TBD		9.34 MM SCF/d	9.34 MM SCF/d		FL-1A-LP	3-10-001-60	New/Additional	NA
FL-1A-LP-SSM	Dual pressure process flare: FL-1A-LP-SSM	Messco	HTDR-2	TBD		8.49 MM SCF/d	8.49 MM SCF/d		FL-1A-LP-SSM	3-10-001-60	New/Additional	NA

Section 2- (ePermitting Portal submittals)

Hardcopy submittals - delete this page as this table is in the required excel portion of the hardcopy forms.

Table 2-B: Exempted Equipment (20.2.72 NMAC)

All 20.2.72 NMAC applications must list Exempted Equipment in this table. If equipment listed on this table is exempt under 20.2.72.202.B.5, include emissions calculations and emissions totals for 202.B.5 "similar functions" units, operations, and activities in Section 5, Calculations. Unit & stack numbering must be consistent throughout the application package.

Unit Number	Source Description	Manufacturer	Model No / Serial No	Max Capacity / Capacity Units	List Specific 20.2.72.202 NMAC Exemption (e.g. 20.2.72.202.B.5)	Date of Manufacture /Reconstruction1 / Date of Installation /Construction	For Each Piece of Equipment, Check One	
N/A	N/A	N/A	N/A	N/A	N/A	N/A	☐ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	☐ To be Removed ☐ Replacement Unit ☐ To be Replaced
							☐ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	☐ To be Removed ☐ Replacement Unit ☐ To be Replaced
							☐ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	☐ To be Removed ☐ Replacement Unit ☐ To be Replaced
							☐ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	☐ To be Removed ☐ Replacement Unit ☐ To be Replaced
							☐ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	☐ To be Removed ☐ Replacement Unit ☐ To be Replaced
							☐ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	☐ To be Removed ☐ Replacement Unit ☐ To be Replaced
							☐ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	☐ To be Removed ☐ Replacement Unit ☐ To be Replaced
							☐ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	☐ To be Removed ☐ Replacement Unit ☐ To be Replaced
							☐ Existing (unchanged) ☐ New/Additional ☐ To Be Modified	☐ To be Removed ☐ Replacement Unit ☐ To be Replaced

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Table 2C - Emissions Reduction Equipment

☐ **This Table was intentionally left blank.**

In accordance with 20.2.72.203.A(3) and (8) NMAC, 20.2.70.300.D(5)(b) and (e) NMAC, and 20.2.73.200.B(7) NMAC, the permittee shall report all control devices and list each pollutant controlled by the c device regardless if the applicant takes credit for the reduction in emissions. **Also include reductions from process equipment in this table. Entering process equipment in this table is for data entry pur only, the process vs control analysis will be used to determine process or control status for VRUs.** Only list control equipment for TAPs if the TAPs maximum uncontrolled emissions rate is over its respe threshold as listed in 20.2.72 NMAC, Subpart V, Tables A and B.

Reduction Equipment Unit No.	Reduction Equipment Description	Date Installed (mm/dd/yyyy).	Reduced Pollutants	Reducing Emissions for Unit Numbers	Efficiency (% Reduction by Weight)	Method used to estimate reduction	Reduction Type
FL-1A-LP-SSM	Flare		Volatile Organic Compounds (VOC)	HT-1	98	Manufacturer Specification	SECONDAR
FL-1A-LP-SSM	Flare		Hydrogen sulfide (NMAAQ)	HT-1	98	Manufacturer Specification	SECONDAR
VRU-S	Vapor Recovery System		Volatile Organic Compounds (VOC)	HT-1	90	Engineering judgment	PRIMARY
VRU-S	Vapor Recovery System		Hydrogen sulfide (NMAAQ)	HT-1	90	Engineering judgment	PRIMARY
FL-1A-LP-SSM	Flare		Volatile Organic Compounds (VOC)	HT-2	98	Manufacturer Specification	SECONDAR
FL-1A-LP-SSM	Flare		Hydrogen sulfide (NMAAQ)	HT-2	98	Manufacturer Specification	SECONDAR
VRU-S	Vapor Recovery System		Volatile Organic Compounds (VOC)	HT-2	90	Engineering judgment	PRIMARY
VRU-S	Vapor Recovery System		Hydrogen sulfide (NMAAQ)	HT-2	90	Engineering judgment	PRIMARY
FL-1A-LP-SSM	Flare		Volatile Organic Compounds (VOC)	HT-3	98	Manufacturer Specification	SECONDAR
VRU-S	Vapor Recovery System		Volatile Organic Compounds (VOC)	HT-3	90	Engineering judgment	PRIMARY
VRU-S	Vapor Recovery System		Hydrogen sulfide (NMAAQ)	HT-3	90	Engineering judgment	PRIMARY
FL-1A-LP-SSM	Flare		Hydrogen sulfide (NMAAQ)	HT-3	98	Manufacturer Specification	SECONDAR
FL-1A-LP	Flare		Volatile Organic Compounds (VOC)	OLOAD-1	98	Manufacturer Specification	PRIMARY
FL-1A-LP	Flare		Hydrogen sulfide (NMAAQ)	OLOAD-1	98	Manufacturer Specification	PRIMARY
FL-1A-LP	Flare		Volatile Organic Compounds (VOC)	OT-1	98	Manufacturer Specification	PRIMARY
FL-1A-LP	Flare		Hydrogen sulfide (NMAAQ)	OT-1	98	Manufacturer Specification	PRIMARY
FL-1A-LP	Flare		Volatile Organic Compounds (VOC)	OT-2	98	Manufacturer Specification	PRIMARY
FL-1A-LP	Flare		Hydrogen sulfide (NMAAQ)	OT-2	98	Manufacturer Specification	PRIMARY
FL-1A-LP	Flare		Volatile Organic Compounds (VOC)	OT-3	98	Manufacturer Specification	PRIMARY
FL-1A-LP	Flare		Hydrogen sulfide (NMAAQ)	OT-3	98	Manufacturer Specification	PRIMARY
FL-1A-LP	Flare		Volatile Organic Compounds (VOC)	PWLOAD-1	98	Manufacturer Specification	PRIMARY
FL-1A-LP	Flare		Hydrogen sulfide (NMAAQ)	PWLOAD-1	98	Manufacturer Specification	PRIMARY
FL-1A-LP	Flare		Volatile Organic Compounds (VOC)	PWT-1	98	Manufacturer Specification	PRIMARY
FL-1A-LP	Flare		Hydrogen sulfide (NMAAQ)	PWT-1	98	Manufacturer Specification	PRIMARY
FL-1A-LP	Flare		Volatile Organic Compounds (VOC)	PWT-2	98	Manufacturer Specification	PRIMARY
FL-1A-LP	Flare		Hydrogen sulfide (NMAAQ)	PWT-2	98	Manufacturer Specification	PRIMARY
FL-1A-LP	Flare		Volatile Organic Compounds (VOC)	PWT-3	98	Manufacturer Specification	PRIMARY
FL-1A-LP	Flare		Hydrogen sulfide (NMAAQ)	PWT-3	98	Manufacturer Specification	PRIMARY

How to complete the table: In the drop down, select regulated sources from Table 2A where emissions are reduced and click "Add." Then add reduced pollutants and associated reduction devices for each. If a has emissions reduced by more than one device please add a line for each device and label them as primary, secondary, tertiary. Click "Edit" to update reduced pollutants and devices for each regulated source.

Comments (4000 character maximum)

List each reduction device and all sources they serve, e.g. FL-1: Oil tanks 1-4, loading, VRU downtime. FL-2: compressor and sales downtime. For NOIs, indicate the enforceability behind each device or clarify if it is voluntary and no credit is being claimed for the reduction, e.g., FL-1: Oil tanks 1-8 (OOOOa). FL-1: Loading (voluntary, no emissions reduction credit claimed.)

VRU-S: HT 1-3
FL-1A-LP-SSM: VRU-S Downtime (HT 1-3)
FL-1A-LP: OT 1-3, PWT 1-3, OLOAD-1, PWLOAD-1
FL-1A-HP: Pipeline downtime

Steward Energy II LLC | Wexler Tank Battery | 12/19/2024

Table 2-D: Maximum Emissions (under normal operating conditions)

This Table was intentionally left blank because it would be identical to Table 2-E.

Maximum Emissions are the emissions at maximum capacity and prior to (in the absence of) pollution control, emission-reducing process equipment, or any other emission reduction. Calculate the hourly emissions using the worst case hourly emissions for each pollutant. For each pollutant, calculate the annual emissions as if the facility were operating at maximum plant capacity without pollution controls for 8760 hours per year, unless otherwise approved by the Department. List Hazardous Air Pollutants (HAP) & Toxic Air Pollutants (TAPs) in Table 2-I. Fill all cells in this table with the emission numbers or a "-" symbol. A "-" symbol indicates that emissions of this pollutant are not expected. Numbers shall be expressed to at least 2 decimal points (e.g. 0.41 or 1.41).

Unit No.	NOx		CO		VOC		SOx		PM10[1]		PM2.5[1]		H_2S		Lead	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
FUG-1	-	-	-	-	2.7	11.81	-	-	-	-	-	-	0.03	0.11	-	-
HR-1	-	-	-	-	-	-	-	-	0.79	0.15	0.08	0.02	-	-	-	-
HT-1	0.063	0.28	0.05	0.23	0.003	0.01	0.49	2.15	0.005	0.02	0.005	0.02	0.05	0.2	-	-
HT-2	0.063	0.28	0.05	0.23	0.003	0.01	0.49	2.15	0.005	0.02	0.005	0.02	0.05	0.2	-	-
HT-3	0.063	0.28	0.05	0.23	0.003	0.01	0.49	2.15	0.005	0.02	0.005	0.02	0.05	0.2	-	-
OLOAD-1	-	-	-	-	106.88	2.98	-	-	-	-	-	-	0.06	0.28	-	-
OT-1	-	-	-	-	13.29	58.22	-	-	-	-	-	-	0.13	0.59	-	-
OT-2	-	-	-	-	13.29	58.22	-	-	-	-	-	-	0.13	0.59	-	-
OT-3	-	-	-	-	13.29	58.22	-	-	-	-	-	-	0.13	0.59	-	-
PWLOAD-1	-	-	-	-	0.76	0.13	-	-	-	-	-	-	2.98	13.06	-	-
PWT-1	-	-	-	-	1.13	4.97	-	-	-	-	-	-	0.46	1.99	-	-
PWT-2	-	-	-	-	1.13	4.97	-	-	-	-	-	-	0.46	1.99	-	-
PWT-3	-	-	-	-	1.13	4.97	-	-	-	-	-	-	0.46	1.99	-	-
SSM-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FL-1A-HP	0.01	0.06	0.03	0.13	0.04	0.01	0.06	0.26	-	-	-	-	0.0006	0.003	-	-
FL-1A-LP	0	0	0	0	0	0	0	0	-	-	-	-	0	0	-	-
FL-1A-LP-SSM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Totals	0.2	0.9	0.18	0.82	153.65	204.53	1.53	6.71	0.81	0.21	0.1	0.08	4.99	21.79	0.0	0.0

[1]Condensable Particulate Matter: Include condensable particulate matter emissions for PM10 and PM2.5 if the source is a combustion source.

Comments (2000 character maximum)

Steward Energy II LLC Wexler Tank Battery 12/19/2024

Table 2-E: Requested Allowable Emissions

Fill all cells in this table with the emission numbers or a "-" symbol. A "-" symbol indicates that emissions of this pollutant are not expected. Numbers shall be expressed to at least 2 decimal points (e.g. 0.41 or 1.41). Facility totals are a summation of all the emissions entered for equipment in this table plus total tpy SSM emissions from Table 2F.
GCP-O&G: Combustion emissions from malfunction events are not allowed under this permit.

NOI: Malfunction emissions are not allowed under a Notice of Intent.

Unit No.	NOx		CO		VOC		SOx		PM10[1]		PM2.5[1]		H_2S		Lead	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
FUG-1	-	-	-	-	2.7	11.81	-	-	-	-	-	-	0.03	0.11	-	-
HR-1	-	-	-	-	-	-	-	-	0.79	0.15	0.08	0.02	-	-	-	-
HT-1	0.063	0.28	0.05	0.23	0.003	0.01	0.49	2.15	0.005	0.02	0.005	0.02	0.05	0.2	-	-
HT-2	0.063	0.28	0.05	0.23	0.003	0.01	0.49	2.15	0.005	0.02	0.005	0.02	0.05	0.2	-	-
HT-3	0.063	0.28	0.05	0.23	0.003	0.01	0.49	2.15	0.005	0.02	0.005	0.02	0.05	0.2	-	-
OLOAD-1	-	-	-	-	33.13	0.92	-	-	-	-	-	-	0.02	0.09	-	-
OT-1	-	-	-	-	0.13	0.58	-	-	-	-	-	-	0.0013	0.0059	-	-
OT-2	-	-	-	-	0.13	0.58	-	-	-	-	-	-	0.0013	0.0059	-	-
OT-3	-	-	-	-	0.13	0.58	-	-	-	-	-	-	0.0013	0.0059	-	-
PWLOAD-1	-	-	-	-	0.2	0.04	-	-	-	-	-	-	0.92	4.05	-	-
PWT-1	-	-	-	-	0.01	0.05	-	-	-	-	-	-	0.0046	0.02	-	-
PWT-2	-	-	-	-	0.01	0.05	-	-	-	-	-	-	0.0046	0.02	-	-
PWT-3	-	-	-	-	0.01	0.05	-	-	-	-	-	-	0.0046	0.02	-	-
SSM-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FL-1A-HP	70.82	20.88	141.38	41.69	187.52	55.13	277.11	81.71	-	-	-	-	3	0.88	-	-
FL-1A-LP	78.36	0.03	156.43	0.05	2.54	0.47	332.22	0.11	-	-	-	-	3.60	0.001	-	-
FL-1A-LP-SSM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SSM Totals	78.36	0.03	156.43	0.06	2.54	10.47	332.21	0.11	0.0	0.0	0.0	0.0	3.6	0.0	0.0	0.0
Totals	227.73	21.78	454.39	42.49	229.06	80.76	943.01	88.38	0.81	0.21	0.1	0.08	11.34	5.81	0.0	0.0

[1]Condensable Particulate Matter: Include condensable particulate matter emissions for PM10 and PM2.5 if the source is a combustion source.

Comments (2000 character maximum)

Steward Energy II LLC | Wexler Tank Battery | 12/19/2024

Table 2-F: Startup, Shutdown, and Routine Maintenance (SSM) Emissions

☐ **This table is intentionally left blank as all SSM emissions at this facility do not require an increase in Requested Allowables greater than those listed in Table 2-E.**

All applications for facilities that have emissions during routine our predictable startup, shutdown or scheduled maintenance (SSM)[2], including NOI applications, must include in this table the Maximum Emissions during routine or predictable startup, shutdown and scheduled maintenance (20.2.7 NMAC, 20.2.72.203.A.3 NMAC, 20.2.73.200.D.2 NMAC). Provide emissions calculations for all SSM emissions reported in this table. Refer to the guidance "Startup, Shutdown, Maintenance Emissions in Permits" (www.env.nm.gov/air-quality/permitting-section-procedures-and-guidance/) for more detailed instructions. Numbers shall be expressed to at least 2 decimal points (e.g. 0.41 or 1.41).

Unit No.	NOx		CO		VOC		SOx		PM10[1]		PM2.5[1]		H_2S		Lead	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
FUG-1																
HR-1																
HT-1																
HT-2																
HT-3																
OLOAD-1																
OT-1																
OT-2																
OT-3																
PWLOAD-1																
PWT-1																
PWT-2																
PWT-3																
SSM-1	-	-	-	-	-	10	-	-	-	-	-	-	-	-	-	-
FL-1A-HP																
FL-1A-LP																
FL-1A-LP-SSM	78.36	0.03	156.43	0.06	2.54	0.47	332.21	0.11	-	-	-	-	3.60	0.001	-	-
Totals	78.36	0.03	156.43	0.06	2.54	10.47	332.21	0.11	0.0	0.0	0.0	0.0	3.6	0.001	0.0	0.0

[1] Condensable Particulate Matter: Include condensable particulate matter emissions for PM10 and PM2.5 if the source is a combustion source.

[2]For instance, if the short term steady-state Table 2-E emissions are 5 lb/hr and the SSM rate is 12 lb/hr, enter 7 lb/hr in the table below. If the annual steady-state Table 2-E emissions are 21.9 TPY, and the number of scheduled SSM events result in annual emissions of 31.9 TPY, enter 10.0 TPY in the table below.

Comments (2000 character maximum)

Steward Energy II LLC | Wexler Tank Battery | 12/19/2024

Table 2-H: Stack Exit Conditions

Data may not be provided for subject items (SIs) that are not complete. Please edit the SI in Table 2-A before providing information here.

Please enter the stack information for the original source, not the control or reduction equipment.

For equipment that doesn't have an actual stack or fugitive stack please just list it as having a default fugitive stack with a height of 10 ft. This field is required by our database.

Stack Description	Unit number	Orientation (H=Horizontal V=Vertical)	Rain Caps (Yes or No)	Height Above Ground (ft)	Temp. (F)	Flow Rate		Moisture by Volume (%)	Velocity (ft/sec)	Inside Diameter (ft)
						(acfs)	(dscfs)			
FUG-1	FUG-1	Fugitive	No	10						
HR-1	HR-1	Fugitive	No	10						
HT-1	HT-1	Vertical	No	30	300	5.66			16.04	0.67
HT-2	HT-2	Vertical	No	30	300	5.66			16.04	0.67
HT-3	HT-3	Vertical	No	30	300	5.66			16.04	0.67
OLOAD-1	OLOAD-1	Fugitive	No	10						
OT-1	OT-1	Fugitive	No	10						
OT-2	OT-2	Fugitive	No	10						
OT-3	OT-3	Fugitive	No	10						
PWLOAD-1	PWLOAD-1	Fugitive	No	10						
PWT-1	PWT-1	Fugitive	No	10						
PWT-2	PWT-2	Fugitive	No	10						
PWT-3	PWT-3	Fugitive	No	10						
SSM-1	SSM-1	Fugitive	No	10						
FL-1A-HP	FL-1A-HP	Vertical	No	45	1100	108.1			399	0.33
FL-1A-LP	FL-1A-LP	Vertical	No	45	1100	108.1			399	0.33
FL-1A-LP-SSM	FL-1A-LP-SSM	Vertical	No	45	1100	108.1			399	0.33

Comments (2000 character maximum)

Steward Energy II LLC | Wexler Tank Battery | 12/19/2024

Table 2-I: Stack Exit and Fugitive Emission Rates for HAPs and TAPs

☐ **By marking this table as intentionally left blank, you certify that the Total and individual HAPs for this facility are less than 1 ton per year.**

Data may not be provided for subject items (SIs) that are not complete. Please edit the SI in Table 2-A before providing information here.

GCPs: Report the potential emission rate for each HAP from each HAP emitting emission unit listed in Table 2A. For each emission unit, HAPs shall be expressed to at least 2 decimal points (e.g. 0.41 or 1.41). Emissions less than 0.0001 lb/hr or 0.0001 tpy and emission units that do not emit HAPs shall be omitted from the table. Each facility-wide Individual HAP total and the facility-wide Total HAPs is the sum of all HAP sources entered in the Table. Use the HAP nomenclature as it appears in Section 112 (b) of the 1990 CAA. Include tank-flashing emission estimates of HAP in this table.

NOIs: Report the individual and/or Total HAPs for each piece of equipment in Table 2A, only if the facility total for that pollutant is greater than or equal to 1 tpy.

Unit No.	Total HAPs		Benzene HAP		Ethylbenzene HAP		Hexane HAP		Toluene; (Methyl benzene) HAP		Xylenes (total); (Xylol) HAP															
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
FUG-1	0.26	1.13	0.03	0.14																						
HT-1				.0002				.0001		.0001																
HT-2				.0002				.0001		.0001																
HT-3				.0002				.0001		.0001																
OLOAD-1	0.9	0.03	0.39	0.01	0.04	0.001	0.32	0.01	0.13	0.004	0.02	.0004														
OT-1		0.02	0.002	0.007	.0002	.0007	0.001	0.006	.0005	0.002	.0001	.0003														
OT-2		0.02	0.002	0.007	.0002	.0007	0.001	0.006	.0005	0.002	.0001	.0003														
OT-3		0.02	0.002	0.007	.0002	.0007	0.001	0.006	.0005	0.002	.0001	.0003														
PWLOAD-1	.0064	.0011	.0028	.0005	.0003	.0001	.0023	.0004	.0009	.0002	.0001															
PWT-1	.0003	0.001	.0001	.0006		.0001	.0001	.0005		.0002																
PWT-2	.0003	0.001	.0001	.0006		.0001	.0001	.0005		.0002																
PWT-3	.0003	0.001	.0001	.0006		.0001	.0001	.0005		.0002																
SSM-1		0.27		0.12		0.01		0.1		0.04		0.005														
FL-1A-HP	5.096	1.498	2.194	0.645	0.233	0.069	1.841	0.541	0.744	0.219	0.084	0.025														
FL-1A-LP	0.063	0.103	0.027	0.045	0.003	0.005	0.023	0.037	0.009	0.015	0.001	0.002														
FL-1A-LP-SSM	0.006	0.002	0.002	0.001	.0002	.0001	0.002	.0009	0.001	.0003	.0001															
Totals	6.33	3.1	2.65	0.98	0.28	0.09	2.19	0.71	0.89	0.29	0.11	0.03														

Comments (2000 character maximum)

Steward Energy II LLC | Wexler Tank Battery | 12/19/2024

Table 2-J: Fuel Usage

☐ **This Table was intentionally left blank.**

Data may not be provided for subject items (SIs) that are not complete. Please edit the SI in Table 2-A before providing information here.

Specify fuel characteristics and usage. This information should be for fuel used to operate the equipment (e.g. the pilot) not the amount of gas or fuel processed.

Unit No.	Fuel Type (No. 2 Diesel, Natural Gas, Coal, ...)	Specify Units				
		Lower Heating Value	Hourly Usage	Annual Usage (maximum)	% Sulfur	% Ash
HT-1	Natural Gas	1318 BTU/SCF		3.32 MM SCF/y		
HT-2	Natural Gas	1318 BTU/SCF		3.32 MM SCF/y		
HT-3	Natural Gas	1318 BTU/SCF		3.32 MM SCF/y		
FL-1A-HP	Natural Gas	1318 BTU/SCF		0.71 MM SCF/y		

Comments (2000 character maximum)

Table 2-L: Tank Data

Data may not be provided for subject items (SIs) that are not complete. Please edit the SI in Table 2-A before providing information here.

Include appropriate tank-flashing modeling input data. Note: 1.00 bbl = 10.159 M3 = 42.0 gal

Unit No.	Date Installed	Materials Stored	Seal Type (refer to Table 2-LR)	Roof Type (refer to Table 2-LR)	Capacity		Diameter (M)	Vapor Space (M)	Color (from Table VI-C)		Paint Condition (from Table VI-C)	Annual Throughput (gal/yr)	Turn-overs (per year)
					(bbl)	(M^3)			Roof	Shell			
OT-1		Crude Oil		Vertical - Fixed Roof	500.00 bbl		4.76					2422140	115.34
OT-2		Crude Oil		Vertical - Fixed Roof	500.00 bbl		4.76					2422140	115.34
OT-3		Crude Oil		Vertical - Fixed Roof	500.00 bbl		4.76					2422140	115.34
PWT-1		Produced Water		Vertical - Fixed Roof	500.00 bbl		4.76					21436450	1020.78
PWT-2		Produced Water		Vertical - Fixed Roof	500.00 bbl		4.76					21436450	1020.78
PWT-3		Produced Water		Vertical - Fixed Roof	500.00 bbl		4.76					21436450	1020.78

Comments (2000 character maximum)

Section 3
Registration Summary

Hardcopy and Portal Submittals – complete this section

Registration Summary: This registration is being submitted to update the Wexler Tank Battery with revised production rates, new analyses, and additional equipment – a vapor recovery unit (VRU).

Written description of the routine operations of the facility: Full production well streams enter the Wexler Tank Battery and pass through inlet separation where liquids and gas are separated by mechanical processes. Natural gas from the separators is sent to a sales pipeline. During periods of pipeline downtime, sales gas is routed to the flare (FL-1-HP) for destruction. Oil from the separators is sent to the heater treaters (HT 1-5) for additional emulsion separation. Vapors from the heater treaters are collected by a vapor recovery unit (VRU-1) and sent to the sales gas pipeline. When the VRU is down, these vapors are routed to the flare (FL-1-LP-SSM). After the heater treaters, oil is sent to storage tanks (OT 1-3). Produced water from the separators and heater treaters is sent to storage tanks (PWT 1-3). Oil and produced water are primarily removed by a LACT unit and a saltwater disposal line, respectively. During pipeline downtime (each stream represented as 10% annually), liquids are hauled off site via truck (OLOAD-1; PWLOAD-1; HR-1). Working, breathing, and flash emissions from the oil and produced water tanks and truck loading vapors are routed to the flare (FL-1-LP) for destruction. GCP allowable default SSM emissions (SSM-1) and site fugitives (FUG-1) are also included in this authorization.

Routine or predictable emissions during Startup, Shutdown and Maintenance (SSM):

☐ No SSM emissions are expected from routine operations.

☒ Applicant requests up to 10 tpy of VOC SSM emissions.

☐ No other activities (e.g. VRU downtime, stranded gas etc.) are considered SSM activities.

☐ Applicant requests site specific VOC SSM and those emission calculations are included in Section 5 and entered in Table 2F

Provide an overview:

☒ Applicant requests site specific combustion SSM and those emission calculations are included in Section 5 and entered in Table 2F.

Provide an overview: During periods of VRU system downtime, gas will be routed to the low-pressure side of the dual-tip flare (FL-1A-LP-SSM) for control of emissions.

Malfunction Emissions (M):

☒ No Malfunction emissions are requested for this permit.

Allowable Operations: Check the appropriate box below:

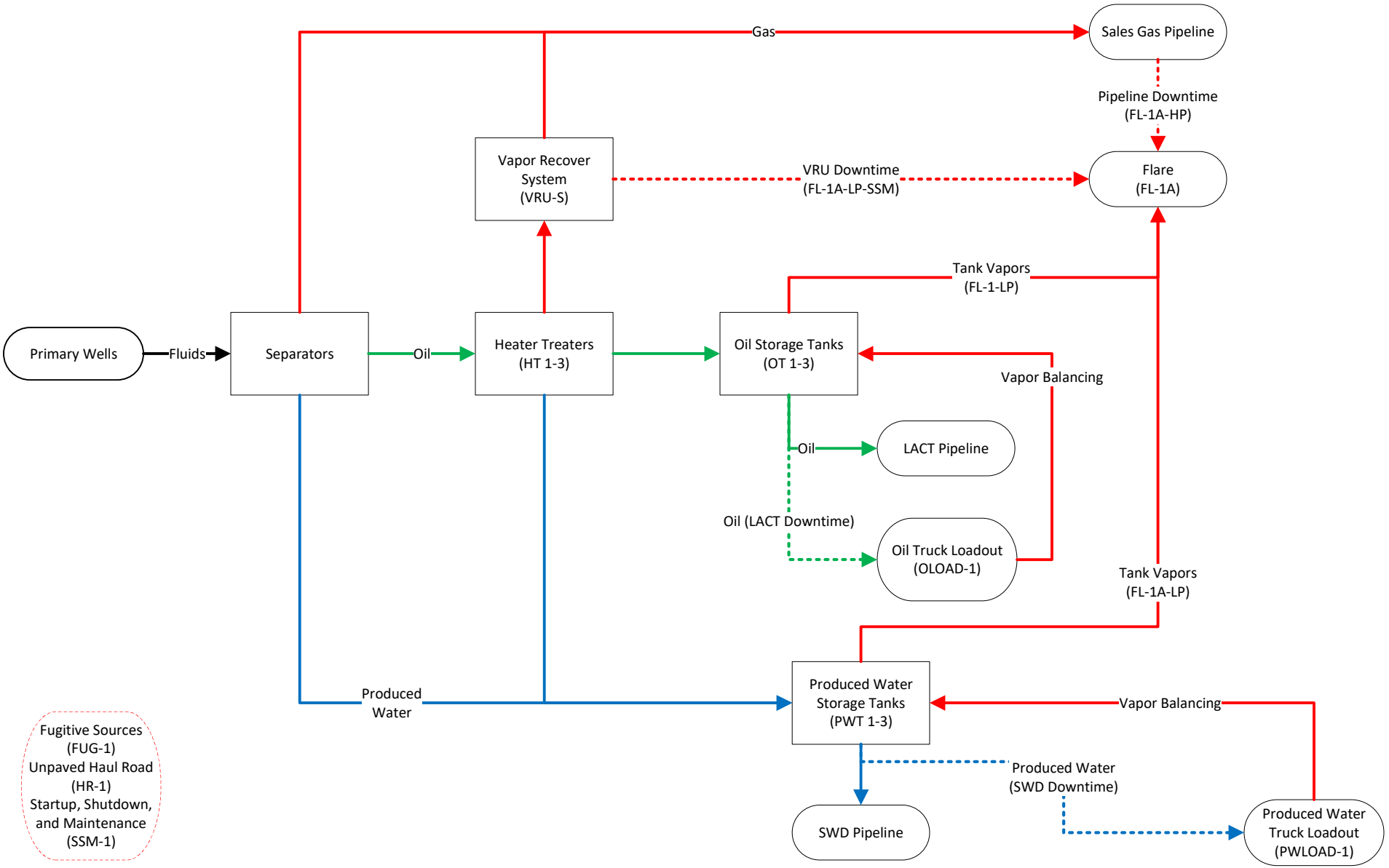
☒ Facility operates continuously (8760 hours per year)

☐ The following regulated equipment will operate less than 8760 hours per year. Add additional rows as necessary. These units are subject to Condition A108.C of the Permit.

Table A – Equipment Operating Less Than 8760 hours per year

☐ **Table is blank because I completed this information in the ePermitting Portal for each piece of equipment.**

Unit #	Requested Annual Operating Hours
N/A	N/A



Process Flow Diagram for the Wexler Tank Battery

Prepared for:		*Prepared by:*
Steward Energy II, LLC	**7/22/2024**	**Sphere 3 Environmental**

Verification of Compliance with Stack Parameter Requirements:

www.env.nm.gov/air-quality/air-quality-oil-and-gas-gcp-application-forms/

Portal Submittals: Applications submitted via the ePermitting Portal are required to use the Oil and Gas Stack Calculator.
Hardcopy submittals may voluntarily use the stack calculator.

Click "Print" in the stack calculator and attach the generated PDF results. If the stack calculator was completed and results attached, complete the information in this box and then go to Section 4. You may delete the items below this box until Section 4.

Check the box for each type of equipment at this facility & represented in the attached stack calculator results:
☐ Engine(s)
☐ Turbine(s)
☒ Flares(s)
☐ Enclosed Combustion Device (s)
☒ Heater(s)
☐ Reboiler(s)

☒ I attached the results from the current version of the Oil and Gas Stack Calculator from the AQB web page and the results indicate compliance with the stack parameters for all of my engines, turbines, flares, enclosed combustion devices, heaters or reboilers.

1. Does the flare gas contain 6% H_2S or less by volume (pre-combustion)?

☒ Yes (done with section 3)
☐ No.

2. Explain in detail how assist gas will be added to reduce the gas composition to 6%H_2S or less by volume:

GCP Oil & Gas Stack Calculator

Program version: April 6, 2023

NOX Total emission rate: 0.189

Equivalent Diameter (for facility NOX): 1.160474

Group 2 NOX emission rate:

Set Flare and TO NOX emission rate to 0. Only enter SO2 emission rate for Flares, ECDs, VCUs, and TOs.

SO2 total emission rate: 1103.78

Equipment

ID	Equipment Name	Equipment Type	NOX Rate (lb/hr)	SO2 Rate (lb/hr)		Height (ft)	Diameter (ft)	Velocity (ft/s)	Temperature (deg. F)	Group	Comments
FL-1a	Flare (Combined)	Flare	0	1103.78	Actual	45	0	0	0	1	
					Minimum	19.7	0	0	0		
HT-1	Heater Treater 1	Heater	0.063	0	Actual	30	0.67	18	300	3	Small heater, no minimum stack parameters.
					Minimum	0	0	0	0		
HT-2	Heater Treater 2	Heater	0.063	0	Actual	30	0.67	18	300	3	Small heater, no minimum stack parameters.
					Minimum	0	0	0	0		
HT-3	Heater Treater 3	Heater	0.063	0	Actual	30	0.67	18	300	3	Small heater, no minimum stack parameters.
					Minimum	0	0	0	0		

Section 5

Emissions Calculation Forms

Hardcopy and Portal Submittals – complete this section

The Department has developed the Air Emissions Calculation Tool (AECT), which is required to be used in the GCP-Oil and Gas Registration. If the AECT, for a piece of equipment is under development, provide alternate calculations. The AECT must be submitted as a "live" interactive PDF. **Do not include alternative calculations unless there is an issue being resolved with the AECT. This will delay review of the application.** The AECT and this Registration Form may be updated as needed.

Tank Emissions Calculations: Provide the method used to estimate tank-flashing emissions, 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. **The inputs must match the gas analyses information submitted. Inputs that don't match may be grounds for denial of the application submittal.**

SSM Calculations: In this Section, provide emissions calculations for Startup, Shutdown, and Routine Maintenance (SSM) emissions listed in the Table 2, and the rational for why the others are reported as zero (or left blank).

Control Devices: Report all control devices and list each pollutant controlled by the control device. Indicate in this section if you chose to not take credit for the reduction in emission rates. Only uncontrolled emission rates can be considered to determine applicability unless the state or federal acts require the control. This information is necessary to determine if federally enforceable conditions are necessary for the control device, and if the control device produces its own regulated pollutants or increases emission rates of other pollutants.

Calculation Details: The AECT is required for all emission calculations. If the AECT is not functioning, alternative calculations may be submitted only for the portions of the AECT with issues being resolved. Utilize this section to explain in detail, on an equipment-by-equipment basis, why alternative calculations are necessary.

Explain here: A supplemental HAPs calculator is included to calculate HAP emissions not found in the AECT and populate Table 2I.

Equipment Forms Submitted in this Section (add additional rows as necessary):

Equipment Type	Quantity	Check Box to Indicate Units that are Controlled	Enter Control Device Type and Pollutant Controlled
Engine		☐	
Turbine		☐	
Tanks	6	☒	Flare (FL-1A-LP); VOC, H2S
Generator		☐	
VRU	1	☒	Flare (FL-1A-LP-SSM); VOC, H2S
VRT		☐	
ULPS		☐	
Glycol Dehydrator		☐	
Flare	1	☐	*VRU-S Downtime (HT 1-3), Oil and Produced Water Tanks, Pipeline Downtime; VOC & H2S*
Amine Unit		☐	

Cryogenic Unit		☐	
Fugitive Emissions	**1**	☐	
Heater	**3**	☒	**VRU-S, FL-1A-LP-SSM; VOC, H2S**
Truck Loading	**2**	☒	**Vapor Balancing, FL-1A-LP; VOC & H2S**
Enclosed Combustion Device (ECD)		☐	
Thermal Oxidizer (TO)		☐	
Other		☐	
Other		☐	

For each scenario below, if there are more than one emissions unit, control device, or gas combustion scenario. Please copy and paste each applicable section and label the unit number(s) if the scenarios vary.

Vapor Recovery Tower, Ultra Low-Pressure Separator, or Flash Tower Located Upstream of Storage Vessels: If the facility contains one of the following units located upstream of the storage vessels and is used to flash and capture flashing emissions, check the appropriate box.
Unit number:
☐ Vapor Recovery Tower and VRU Compressor
☐ ULPS and VRU Compressor
☐ Flash Tower and VRU Compressor

Vapor Recovery Unit (VRU) located upstream of Storage Vessels: Check the box below if the facility is using a VRU to capture flashing emissions prior to any storage vessels to limit the PTE of the storage vessels to below applicability thresholds of NSPS OOOO,NSPS OOOOa, or OOOOb. A process vs control determination should be prepared for this type of VRU application.
Unit number: VRU-S
☒ VRU capturing emissions prior to any storage vessel and routing directly to the sales pipeline

Vapor Recovery Unit (VRU) attached to Storage Vessels: Check the box below if this facility is using a VRU to reduce storage vessel emissions to limit the PTE to below NSPS OOOO, NSPS OOOOa, or OOOOb applicability thresholds:
Unit number: VRU-S
☐ VRU controlling Storage Vessel emissions and the facility is subject to the requirements under NSPS OOOO, 40 CFR 60.5411
☐ VRU controlling Storage Vessel emissions and the facility is subject to the requirements under NSPS OOOOa, 40 CFR 60.5411a
☐ VRU controlling Storage Vessel emissions and the facility is subject to the requirements under NSPS OOOOb, 40 CRR 60.5411b – ***not controlling to below applicability thresholds.***

Gas Combustion Scenarios: Read through the scenarios below and check the boxes next to any appropriate facility operating scenarios. Flares shall assume a destruction efficiency of 95%, unless the facility is subject to requirements for flares under 40 CFR 60.18, or a higher destruction efficiency (up to 98%) is supported by a manufacturer specification sheet (MSS) for that unit. If so, include the MSS.

A flare, vapor combustion unit (VCU), enclosed combustion device (ECD), thermal oxidizer (TO):
Unit number: FL-1A-LP-SSM
☐ Controls storage vessels in accordance with 40 CFR 60, Subpart OOOO, OOOOa, or OOOOb.
☐ Provides a federally enforceable control for the storage vessels to limit the PTE to below applicability thresholds of 40 CFR 60, Subpart OOOO, OOOOa, or OOOOb.
☐ Controls the glycol dehydrator
☐ Controls the amine unit
☐ Controls truck loading
☒ Operates only during maintenance events, such as VRU downtime, check one below:
  ☐ The emissions during VRU downtime are represented as uncontrolled VOC emissions from the compressor

☒ The combustion emissions during VRU downtime are represented as controlled emissions from the combustion device

☐ Controls the facility during plant turnaround

A flare, vapor combustion unit (VCU), enclosed combustion device (ECD), thermal oxidizer (TO):
Unit number: FL-1A-LP
☐ Controls storage vessels in accordance with 40 CFR 60, Subpart OOOO, OOOOa, or OOOOb.
☒ Provides a federally enforceable control for the storage vessels to limit the PTE to below applicability thresholds of 40 CFR 60, Subpart OOOO, OOOOa, OOOOb.
☐ Controls the glycol dehydrator
☐ Controls the amine unit
☒ Controls truck loading
☐ Operates only during maintenance events, such as VRU downtime, check one below:
☐ The emissions during VRU downtime are represented as uncontrolled VOC emissions from the compressor
☐ The combustion emissions during VRU downtime are represented as controlled emissions from the combustion device

☐ Controls the facility during plant turnaround

Amine Unit: Provide the following information for each amine unit.

Design Capacity in MMscf/day	**N/A**
Rich Amine Flowrate in gal/min	
Lean Amine Flowrate in gal/min	
Mole Loading H_2S	
Sour Gas Input in MMscf/day	

Glycol Dehydration Unit(s): Provide the following information for each glycol dehydration unit:
Please include an extended gas analysis in Section 6 of this application.

Unit #	Glycol Pump Circulation Rate
N/A	

Voluntary Monitoring in Accordance with §40 CFR 60.5416(a): Check the box(s) to implement a program that meets the requirements of 40 CFR 60.5416(a). This monitoring program will be conducted in lieu of the monitoring requirements established in the GCP-Oil and Gas for individual equipment. Ceasing to implement this alternative monitoring must be reported in an updated Registration Form to the Department.

☒ Condition A205.B Control Device Options, Requirements, and Inspections for Tanks
☐ Condition A206.B Truck Loading Control Device Inspection
☒ Condition A206.C Vapor Balancing During Truck Loading
☐ Condition A209.A Vapor Recovery Unit or Department-approved Equivalent
☐ Condition A210.B Amine Unit Control Device Inspection

Fugitive H_2S Screening Threshold and Monitoring in accordance with Condition A212: Check the box that applies.

☐ Condition A212.A does not apply because the facility is below the fugitive H_2S screening threshold in Condition A212, or

☒ Condition A212.A applies. Because the facility is above the fugitive H_2S screening threshold in Condition A212, or the facility is voluntarily complying with Condition A212.A, and Condition A212.A applies

AIR EMISSIONS CALCULATION TOOL

Instructions for Completing the Equipment Calculation Forms

1. Click the **Start Button** below to reset the form to begin data entry.

2. The ***Air Emissions Calculation Tool*** initially loads with the **Core Data Information Form.** Once all information is entered on this form, the necessary equipment calculation pages will be created based on the information entered on the Core Data Information Form. The customized ***Air Emissions Calculation Tool*** should now be saved to your computer before entering any other information on the equipment calculation pages. **Warning,** every time you click on the **Start Button b**elow, the ***Air Emissions Calculation Tool*** will reset and all data entered will be lost.

3. Green/Blue colored information boxes require users to enter the required information for the subject facility. Default values may be changed if not appropriate for the facility.

4. Yellow colored boxes represent calculated values based on user information entered and may not be changed.

5. Yellow boxes with green/blue cross-hatching represent calculated values based on user information entered, however users may input data in these boxes, if necessary.

Start

Core Data Information

Mandatory - All appropriate Data Must Be Entered For All Boxes Below. This Data Will Automatically Create All Required Equipment Forms And Populate This Data In All Emissions Calculation Forms.

Date Field				Permit/NOI/NPR Number	9888
Company Name:	Steward Energy II, LLC			Select Application Type	GCP-O&G
Facility Name:	Wexler Tank Battery			AI# if Known	40920
Max. Facility Gas Production	486	(Mscf/d)	20.25 (Mscf/h)	Elevation (ft.)	3,806
Max. Facility Oil Production	474	(BOPD)	19.75 (BOPH)		
Max. Facility Produced Water	4,195	(BWPD)	174.8 (BWPH)	Sour Gas Streams at This Site?	YES

Enter The Quantity Of All Air Emissions Sources Located At The Facility
(Leave Blank For Each Equipment Type That Is Not Present)

Equipment	Quantity	Equipment	Quantity
Amine Unit(s)		Compressor Engine (s)	
Dehydrator(s)		Enclosed Combustion Device(s) (ECD)	
Equipment Fugitives	✓	Flare(s)	1
Flash Tower/Ultra-Low Pressure Separator(s)^		Generator Engine (s)	
Gunbarrel Separator(s)/Tank(s)		Heater(s), Heater Treaters	3
Number of Paved Haul Roads Segments		Number of Unpaved Haul Road Segments	1
Low Pressure Compressor(s)* & Compressor(s)*		Oil/Condensate Storage Tank(s)	3
Oil/Condensate Truck Loading	✓	Produced Water Storage Tank(s)	3
Produced Water Truck Loading	✓	Pumpjack Engine(s)	
Reboilers(s) (Amine Units)		Placeholder for Future Use	
Reboilers(s) (Glycol, others)		Startup, Shutdown & Maintenance and Malfunction	✓
Skim Oil or Slop Oil Tank(s)		Thermal Oxidizer(s) (TO)	
Vapor Combustion Device(s) (VCU)		Vapor Recovery Unit(s) (VRU)^	1

Click Here to Generate Required Forms & Save to Your Computer

Complete all required forms that follow, for the equipment at the subject facility, based on the selections made above. Items with an * indicate an air emissions calculation form currently not required at this time and those with ^ indicate forms under construction at this time.

New Mexico Environment Department Air Quality Bureau Emissions Calculation Forms

Date:
Company Name: Steward Energy II, LLC
Facility Name: Wexler Tank Battery

Permit Number: 9888
AI# if Known: 40920
Elevation (ft.): 3,806

Heaters, Heated Separators & Heater Treaters (Only for units rated <100 MMBTU/Hr)

Enter appropriate information in green boxes below changing default values as appropriate and adding additional rows for each heater unit.

Enter the Sulfur Content of Gas or use default value (grains/10^6 scf). **2,590,493**

SO_2 emissions based on AP-42 EF and assumes 100% conversion of fuel sulfur to SO2 and assumes sulfur content in natural gas of 2,000 grains/1000000 scf. Change default value of 2000 as needed based on gas analysis submitted with application.

Enter the Site Fuel Heat Value of Gas or use default value (Btu/scf). **1,318.4**

Emissions From All Heaters, Heated Separators & Heater Treaters

Add/Remove Rows	Unit ID	Heat Input	NO_x		CO		VOC		SO_2		$PM/PM_{10}/PM_{2.5}$	
		MMBtu/hr	pph	tpy	pph	tpy	pph	tpy	pph	tpy	pph	tpy
+ -	HT-1	0.5	0.063	0.276	0.053	0.232	0.003	0.013	0.49	2.15	0.005	0.022
+ -	HT-2	0.5	0.063	0.276	0.053	0.232	0.003	0.013	0.49	2.15	0.005	0.022
+ -	HT-3	0.5	0.063	0.276	0.053	0.232	0.003	0.013	0.49	2.15	0.005	0.022
	Totals		0.189	0.828	0.159	0.696	0.009	0.039	1.47	6.45	0.015	0.066

Calculation Tool for Heaters, Heated Separators & Heater Treater Emissions (Uncontrolled) for Oil & Gas Production Sites (Only for units rated <100 MMBTU/Hr)

All emission factors based on AP-42, Table 1.4-1, Table 1.4-2 and Table 1.4-3 (July 1998)
https://www3.epa.gov/ttn/chief/ap42/ch01/final/c01s04.pdf

Emission factors for natural gas combustion in boilers and furnaces are presented in AP42, Tables 1.4-1, 1.4-2, 1.4-3, and 1.4-4. The Tables present emission factors on a volume basis (lb/10^6 scf). To convert to an energy basis (lb/MMBtu), divide by a heating value of 1,020 MMBtu/10^6 scf. The emission factors may be converted to other natural gas heating values by multiplying the given emission factor by the ratio of the specified heating value to this average heating value.

NOx Sample Calculation

pph = AP 42 NOx Emission Factor (EF) * site fuel heat value Btu/scf/1020 Btu/scf * Maximum Heat Input (MMBtu/hr) * 1/site fuel heat Value Btu/scf * 1000000/1Btu/MMBtu
= 100 lb/1000000 scf * 2000 Btu/scf/1020 Btu/scf * 0.5 MMBtu/hr * 1/2000 Btu/scf * 1000000/1Btu/MMBtu
=0.096 lb/hr

tpy = AP 42 NOx Emission Factor (EF) * site fuel heat value Btu/scf/1020 Btu/scf * Maximum Heat Input (MMBtu/hr) * 1/site fuel heat value Btu/scf * 1000000/1 Btu/MMBtu * 8760 hrs/yr * 1ton/2000 lbs
= 100 lb/1000000 scf * 2000 Btu/scf/1020 Btu/scf * 0.5 MMBtu/hr * 1/2000 Btu/scf * 1000000/1 Btu/MMBtu * 8760 hrs/yr * 1ton/2000lbs
= 0.42 tpy

SO_2 emissions based on 100% conversion of fuel sulfur to SO_2 and assumes sulfur content in natural gas of 2,000 grains/10^6 scf. The SO_2 emission factor is converted to other natural gas sulfur contents by multiplying the SO_2 emission factor by the ratio of the site-specific sulfur content (grains/10^6 scf) to 2,000 grains/10^6 scf.

Technical Disclaimer
This document is intended to help you accurately determine heaters, heated separators & heater treaters emissions. It does not supersede or replace any state or federal law, rule, or regulation. This guidance reflects the current understanding of how these combustion units work and how they generate emissions, how they are monitored or tested, and what data are available for emissions determination, may change over time as the AQB continue scientific studies and as new information becomes available. The AQB welcome any data, information, or feedback that may improve our understanding of heaters, heated separators & heater treaters emissions and thereby further improve determinations within the emissions inventory. The calculation methods represented are intended as an emissions calculation aid; alternate calculation methods may be equally acceptable if they are based upon, and adequately demonstrate, sound engineering assumptions or data. If you have a question regarding the acceptability of a given emissions determination method, contact the Permitting Section at 505-476-4300.

Date:		**Permit Number:**	GCP-O&G-9888
Company Name:	Steward Energy II, LLC	**AI# if Known:**	40920
Facility Name:	Wexler Tank Battery	**Elevation (ft.):**	3,806

Vapor Recovery Unit
Air Emissions Calculations Form
Under Development

Please submit all required calculations and supporting documentation for all vapor recovery unit emissions.

New Mexico Environment Department Air Quality Bureau Equipment Emissions Calculation Form

Date:		**Permit Number:**	GCP-O&G-9888
Company Name:	Steward Energy II, LLC	**AI# if Known:**	40920
Facility Name:	Wexler Tank Battery	**Elevation (ft.):**	3,806

Vapor Recovery Unit (VRU) Process vs Control Determination

Please complete the Process vs. Control determination below for the VRT/ULPS, which addresses the three criteria referenced in the EPA Nov. 27, 1995 Process Guidance memo and enter appropriate Information in all green boxes.

1. *Is the primary purpose of the equipment to control air pollution? (Check appropriate box)*

☐ No, the primary purpose of the VRU equipment is to recover flash gas vapors and route them into an available gas sales line.

☐ Yes, the primary purpose of the VRULPS equipment is to control air pollution.

2. *Where the equipment is recovering product, how do the cost savings from the product recovery compare to the cost of the equipment? (Check appropriate box)*

☐ Yes, the benefit-cost analysis below demonstrates a positive return on investment. The benefit-cost analysis of the VRU equipment compared to the product recovered is shown below:

☐ No, the benefit- cost analysis below demonstrates a negative return on investment.

VRU-1		VRU-1 Benefit-Cost Analysis*	
Capital Cost of VRT/ULPS ($)		Oil Production (BOPD)	474
VRT/ULPS/LPC/VRU Rental Costs ($/mo)	$0.00	VRT/ULPS Vapor Production (Mcf/d)	
Capital Cost of LPC/VRU ($)	NA	Heating Value of Vapors (Btu/scf)	
Annual Maintenance & Service Costs ($/yr)		Natural Gas Price ($/MMBtu)	
Annual Electricity or Fuel Costs ($/yr)		VRT/ULPS/LPC/VRU Life Expectancy (Yrs)	5
VRT/ULPS/LPC/VRU Lifetime Costs ($)	$0.00	Lifetime VRT/ULPS/LPC/VRU Profit (Revenues-Costs) ($/yr)	$0.00
Annual VRT/ULPS/LPC/VRU Revenue ($/yr)	$0.00	Payback Period (Yrs)	
VRT/ULPS/LPC/VRU Lifetime Revenue ($)	$0.00	Lifetime Benefit-Cost Ratio	

3. *Would the equipment be installed if no air quality regulations are in place? (Check appropriate box)*

☐ Yes, the VRU equipment would still be installed regardless of air quality regulations, due to the significant cost benefits of product recovery.

☐ No, the VRU equipment would not be installed if there were no air quality regulations in place.

Notes:

Footnote: All estimates based on current dollars unless specified otherwise; Tank vapor estimates based on flash calculation method noted in Tanks form based on oil throughput noted in p2 of AECT (this can be changed by user); Gas price based on EIA Natural Gas Weekly Update. * The time value of money is not taken into account.

Date:		**Permit Number:**	GCP-O&G-9888
Company Name:	Steward Energy II, LLC	**AI# if Known:**	40920
Facility Name:	Wexler Tank Battery	**Elevation (ft.):**	3,806

Vertical Fixed Roof (VFR) Oil/Condensate VOC Flash Emissions Calculations Form

Select Tanks Flash Emission Calculation Method

GOR	E & P Tanks	ProMax
Vasquez-Beggs	HYSYS	VMGSim

ProMax Oil Tanks Emission Calculations

Please attach the ProMAX printout with all input data provided along with the calculated emissions. Enter the uncontrolled VOC emissions below. If the tank vapors are routed to a flare, enclosed combustion device, vapor combustion unit, vapor recovery unit or thermal oxidizer select the appropriate VOC destruction method below along with selected VOC destruction efficiency supported by manufacturer specifications submitted with the application.

Tanks VOC Control Method			
Capture Efficiency	99	Represent Uncaptured/Uncollected VOC's at Tanks	YES
VOC Control Method[1]	Flare (FL)	Represent VRU/ULPC Downtime Emissions at Tanks	NA
VOC Destruction Efficiency[2]	98	Represent VOC Controlled Emissions at Tanks*	NO
Notes			

Total VOC Flash Emissions From Oil/Condensate Storage Tanks Calculated with ProMax

Add/Remove Rows	Tank ID	VOC Uncontrolled Emissions		VOC Emissions after Control		VOC Emissions at the Tanks	
Up To 10 Units		pph	tpy	pph*	tpy*	pph	tpy
+ -	OT-1	10.79	47.27	0.22	0.95	0.11	0.47
+ -	OT-2	10.79	47.27	0.22	0.95	0.11	0.47
+ -	OT-3	10.79	47.27	0.22	0.95	0.11	0.47
	Totals	32.37	141.81	0.66	2.85	0.33	1.41

Calculation Tool for Tanks Flashing & Working & Standing Emissions for Oil & Gas Production Sites

All flash emissions based on flash calculation methodology selected;

1) The appropriate ECD, flare, TO, VCU or VRU form must also be completed.
2) Manufacturer documentation required to support % control selected. If using a VRU/LPC, calculations assume VRU/ULPC with a 100% control efficiency, but with 5% downtime;
3) Information included in calculation tool must be based on representative oil and gas analysis which must be submitted with application;
4) GOR and Vasquez-Beggs sample calculations outlined below; E & P Tanks, ProMax, HYSYS & VMG Sim flash emissions require submittal of computer simulation model emissions calculations print-outs;
5) Working & Standing emissions based on AP-42 Chpt. 7, tanks 4.09d computer simulation or ProMax, or VMG computer simulation models.

Sample Calculations

GOR Methodology

VOC pph = GOR (scf/bbl) * Facility Oil Throughput (BOPD) * 1/24 (Hours/Day * 1/Universal Gas Constant 385 scf/lb-mole @ 70^{O}F, 1 atm) * Molecular Weight of Tank Vapors (lb/lb-mol)
= 40 (scf/bbl) * 1000 (BOPD)*1/24 (hrs/day) *1/385 scf/lb-mol * 50 lb/lb-mol
= 216.45 lbs/hr

VOC tpy = GOR (scf/bbl) * Facility Oil Throughput (BOPD) * 1/24 (Hours/Day * 1/Universal Gas Constant 385 scf/lb-mole @ 70^{O}F, 1 atm) * Molecular Weight of Tank Vapors (lb/lb-mol) * 8760 hr/yr * 1/2000 lbs/ton
= 40 (scf/bbl) * 1000 (BOPD)*1/24 (hrs/day) *1/385 scf/lb-mol * 50 lb/lb-mol * 8760 hr/yr * 1/2000 lbs/ton
= 948.05 tpy

Vasquez-Beggs Methodology

INPUTS			Constraints			
API Gravity		API	16	<API>	58	^{0}API
Separator Pressure (psig)		P	50	<P+Patm>	5250	psia
Separator Temp. (^{0}F)		Ti	70	<Ti>	295	^{0}F
Separator Gas Gravity at Initial Condition		SGi	0.56	<SGi>	1.18	MW/28.97
Barrels of Oil/Day (BOPD)	158	Q	None	<Q>	None	BOPD
Tank Gas MW		MW	18	<MW>	125	lb/lb-mole
VOC Fraction of Tank Gas		VOC	0.5	<VOC>	1.00	Fraction
Atmospheric Pressure (psia)		Patm	20	<Rs>	2070	scf/bbl

Constants			
	^{0}API Gravity		
^{0}APTI	<30	≥30	Given ^{0}API
C1	0.0362	0.0178	
C2	1.0937	1.187	
C3	25.724	23.931	

SGx = Dissolved gas gravity at Separator pressure = SGi [1.0+0.00005912*API*Ti*Log(Pi/114.7)]

Rs = (C1 * SGx * Pi^C2) exp ((C3 * API) / (Ti + 460)) for P + Patm

THC = Rs * Q * MW * 1/385 scf/lb-mole * 365 D/Yr * 1 ton/2000 lbs

VOC = THC * Frac. of C3+ in the Stock Tank Vapor

Technical Disclaimer
This document is intended to help you accurately determine oil/condensate storage tank flash, working and standing emissions. It does not supersede or replace any state or federal law, rule, or regulation. This guidance reflects the current understanding of how these units work and how they generate emissions, how they are monitored or tested, and what data are available for emissions determination, may change over time as the AQB continue scientific studies and as new information becomes available. The AQB welcome any data, information, or feedback that may improve our understanding of oil/condensate storage tank flash, working and standing emissions and thereby further improve determinations within the emissions inventory. The calculation methods represented are intended as an emissions calculation aid; alternate calculation methods may be equally acceptable if they are based upon, and adequately demonstrate, sound engineering assumptions or data. If you have a question regarding the acceptability of a given emissions determination method, contact the Permitting Section at 505-476-4300.

New Mexico Environment Department Air Quality Bureau Equipment Emissions Calculation Form

Date:		**Permit Number:**	GCP-O&G-9888
Company Name:	Steward Energy II, LLC	**AI# if Known:**	40920
Facility Name:	Wexler Tank Battery	**Elevation (ft.):**	3,806

Vertical Fixed Roof (VFR) Oil/Condensate VOC Working & Standing Emissions Calculations Form

Select Tanks W & S Emission Calculation Method

AP-42 Chpt. 7	EPA Tanks 4.09d	ProMax	E & P Tanks

ProMax Oil Tanks W & S Emission Calculations

Please attach the ProMAX printout with all input data provided along with the calculated emissions. Enter the uncontrolled VOC emissions below. If the tank vapors are routed to a flare, enclosed combustion device, vapor combustion unit, vapor recovery unit or thermal oxidizer select the appropriate VOC destruction method below along with selected VOC destruction efficiency supported by manufacturer specifications submitted with the application.

Tanks VOC Control Method			
Capture Efficiency	99	Represent Uncaptured and/or Controlled VOC's at Tanks	YES
VOC Control Method	Flare (FL)	Represent VRU/ULPC Downtime Emissions at Tanks	NA
VOC Destruction Efficiency	98	Represent VOC Controlled Emissions at Tanks*	NO
Notes			

Total VOC W & S Emissions From Oil/Condensate Storage Tanks Calculated with ProMax

Add/Remove Rows Up To 10 Units	Tank ID	VOC Uncontrolled Emissions		VOC Emissions after Control		VOC Emissions at the Tanks	
		pph	tpy	pph*	tpy*	pph	tpy
+ -	OT-1	2.5	10.94	0.05	0.22	0.03	0.11
+ -	OT-2	2.5	10.94	0.05	0.22	0.03	0.11
+ -	OT-3	2.5	10.94	0.05	0.22	0.03	0.11
	Totals	7.5	32.82	0.15	0.66	0.09	0.33

New Mexico Environment Department Air Quality Bureau Equipment Emissions Calculation Form

Date:		**Permit Number:**	GCP-O&G-9888
Company Name:	Steward Energy II, LLC	**AI# if Known:**	40920
Facility Name:	Wexler Tank Battery	**Elevation (ft.):**	3,806

Emissions From Loading Petroleum Liquid

Select Appropriate AP-42 Petroleum Liquid Loading Methodology & Enter appropriate information in the green boxes below changing default values as appropriate.

Emission Unit ID: OLOAD-1

Facility Oil Throughput (gal/yr)	726,642	Max. Hourly Loading Rate (gal/hr)	8,000

*Select Appropriate AP-42 Petroleum Liquid Loading Methodology Below**

(●) AP-42, 5.2-4 Equation 1 ( ) AP-42, Table 5.2-5

S - Saturation Factor (From AP-42 Table 5.2-1)	1.0	**M** - Molecular Weight of Vapors (lb/lb-mole)	68
P_{annual} - Avg. Annual True Vapor Pressure of Liquid Loaded (psia)	5.13	**P_{hourly}** - Max Hourly True Vapor Pressure of Liquid Loaded (psia)	8.83
T_{annual} - Average Annual Temperature ^{o}F of Bulk Liquid Loaded	70	**T_{hourly}** - Maximum Hourly Temperature ^{o}F of Bulk Liquid Loaded	100

Select Emission Source - From AP-42 Table 5.2-5

( ) Submerged Loading Dedicated Normal Service
(●) Submerged Loading Vapor Balance Service
( ) Splash Loading Dedicated Normal Service
( ) Splash Loading Vapor Balance Service

Truck Loading VOC Control Method

Capture Efficiency	69	Represent Uncaptured/Uncollected VOC's at Loading Rack	YES
VOC Control Method[1]	Flare (FL)	Represent VRU/ULPC Downtime Emissions at Loading Rack	NA
VOC Destruction Efficiency[2]	98	Represent VOC Controlled Emissions at Loading Rack	NO

Notes: Oil truck loading occurs 10% of the year.
7,266,420 gal/year * 10% = 726,642 gal/year

Total VOC Emissions From Loading Petroleum Liquids

Pollutant	VOC Uncontrolled Emissions		VOC Emissions after Control		VOC Emissions at the Loading Rack	
	pph*	tpy*	pph*	tpy*	pph*	tpy*
VOC	106.88	2.98	34.61	0.99	33.13	0.92

Footnote: * All emission factors based on AP-42, 5.2-4 Equation 1 or AP-42 Table 5.2-5 (July 2008); See next page for calculation notes. You may elect to represent the controlled emissions at the loading rack or at the control device or tanks by selecting the appropriate drop-down options under *Truck Loading VOC Control Method*.

Calculation Tool for Emissions From Loading Petroleum Liquid

Emissions based on AP-42, 5.2-4 Equation 1 (July 2008) or AP-42, Table 5.2-5

https://www3.epa.gov/ttn/chief/ap42/ch05/final/c05s02.pdf

AP-42 5.2-4 Equation 1

Emissions from loading petroleum liquid can be estimated (with a probable error of ±30 percent)[4] using the following expression:

Equation 1 $L_L = 12.46 * SPM/T$

where:

L_L = loading loss, pounds per 1000 gallons (lb/10^3 gal) of liquid loaded;

S = a saturation factor (see Table 5.2-1 reproduced below))

P = true vapor pressure of liquid loaded, pounds per square inch absolute (psia) (see Section 7.1, "Organic Liquid Storage Tanks")

M = molecular weight of vapors, pounds per pound-mole (lb/lb-mole) (see Section 7.1, "Organic Liquid Storage Tanks")

T = temperature of bulk liquid loaded, °R (°F + 460)

VOC pph = (12.46*0.6*7.0 (psia)*50 (lb/lb-mole)/550°R)/1000 (gal) * 8400 (gal/hr)
= 39.96 lb/hr

VOC tpy = (12.46*0.6*4.5 (psia)*50 (lb/lb-mole)/525°R)/1000 * 1533000 (gal/yr) * 1/2000 (ton/lbs)
= 2.46 tpy

Table 5.2-1. SATURATION (S) FACTORS FOR CALCULATING PETROLEUM LIQUID LOADING LOSSES

Cargo Carrier	Mode of Operation	S Factor
Tank trucks and rail tank cars	Submerged loading of a clean cargo tank	0.5
	Submerged loading: dedicated normal service	0.6
	Submerged loading: dedicated vapor balance service	1.0
	Splash loading of a clean cargo tank	1.45
	Splash loading: dedicated normal service	1.45
	Splash loading: dedicated vapor balance service	1.0
Marine vessels[a]	Submerged loading: ships	0.2
	Submerged loading: barges	0.5

[a] For products other than gasoline and crude oil. For marine loading of gasoline, use factors from Table 5.2-2. For marine Loading of crude oil, use Equations 2 and 3 and Table 5.2-3.

AP-42 Table 5.2-5

VOC pph = (2lb/1000 (gal) * ((100-15)/100) * 8400 (gal/hr) = 16.8 pph

VOC tpy = (2lb/1000 (gal) * ((100-15)/100) * 100 (BOPD) * 42 (gal/bbl) * 365 (days/yr) * 1/2000 (ton/lb) = 1.53 tpy

Table 5.2-5 TOTAL UNCONTROLLED ORGANIC EMISSION FACTORS FOR PETROLEUM LIQUID RAIL TANK CARS AND TANK TRUCKS

Emission Source	Mode of Operation	Crude Oil (lb/1000 gal transferred)[b]
Loading Operations[c]		
	Submerged loading: dedicated normal service	2
	Submerged loading: dedicated vapor balance service	3
	Splash loading: dedicated normal service	5
	Splash loading: dedicated vapor balance service	3

a Reference 2. ……VOC factors for crude oil can be assumed to be 15% lower than the total organic factors, to account for the methane and ethane content of crude oil evaporative emissions. All other products should be assumed to have VOC factors equal to total organics; b The example crude oil has an RVP of 34 kPa (5 psia); c Loading emission factors are calculated using Equation 1 for a dispensed product temperature of 16°C (60°F). In the absence of specific inputs for Equations 1 , the typical evaporative emission factors presented in Tables 5.2-5 should be used. It should be noted that, although the crude oil used to calculate the emission values presented in this tables has an RVP of 5, the RVP of crude oils can range from less than 1 up to 10. In areas where loading and transportation sources are major factors affecting air quality, it is advisable to obtain the necessary parameters and to calculate emission estimates using Equations 1.

1) The appropriate ECD, flare, TO, VCU or VRU form must also be completed.
2) Manufacturer documentation required to support % control selected. If using a VRU/LPC, calculations assume VRU/ULPC with a 100% control efficiency, but with 5% downtime;
3) Information included in calculation tool must be based on representative oil and gas analysis which must be submitted with application;
^) Vapor balancing emissions to tanks must be represented at the tanks;

Technical Disclaimer

This document is intended to help you accurately determine truck loading petroleum emissions. It does not supersede or replace any state or federal law, rule, or regulation. This guidance reflects the current understanding of how truck loading operations work and how it generates emissions, how it is monitored or tested, and what data are available for emissions determination, may change over time as the AQB continue scientific studies and as new information becomes available. The AQB welcome any data, information, or feedback that may improve our understanding of truck loading petroleum emissions and thereby further improve determinations within the emissions inventory. The calculation methods represented are intended as an emissions calculation aid; alternate calculation methods may be equally acceptable if they are based upon, and adequately demonstrate, sound engineering assumptions or data. If you have a question regarding the acceptability of a given emissions determination method, contact the Permitting Section at 505-476-4300.

New Mexico Environment Department Air Quality Bureau Equipment Emissions Calculation Form

Date:		**Permit Number:**	GCP-O&G-9888
Company Name:	Steward Energy II, LLC	**AI# if Known:**	40920
Facility Name:	Wexler Tank Battery	**Elevation (ft.):**	3,806

Startup, Shutdown & Maintenance and Malfunction

- ○ No SSM emissions are expected from routine operations.
- ◉ Request up to 10 tpy of VOC SSM emissions.
- ○ Request site specific VOC & H2S SSM and enter information below.
- ○ Request site specific VOC & H2S SSM plus 10 tpy VOC and enter information below.
- ○ Request site specific combustion SSM and those emissions are included in Section 4 (attach calculations.)
- ○ Request 10 tpy VOC Malfunction emissions for GCP-O&G, GCP-6 or NSR permitting actions only.

	Blowdowns			Engine Startups		
Unit Numbers						
Quantity of Like-kind Blowdown Units or Engines	1					
Total Volume of Each Blowdown or Engine Startup Vent (acf)						
Duration of Event (Minutes)						
Maximum Blowdowns or Startups/hr	1					
Frequency of Blowdowns or Engine Startups (Events/yr)						
Total Actual Volume of Gas Vented (acf/yr)	0					
Pressure of Gas Inside Unit Before Venting (psig)						
Final Pressure (psia)	14.7					
Gas Temperature Prior to Venting (°F)						
Vented Gas Molecular Weight (lb/lb-mol						
Vented Gas VOC wt %						
Vented Total HAP wt %						
Vented Gas Benzene wt %						
Vented Gas H_2S wt %						

Startup, Shutdown and Maintenance Emissions (SSM) and Malfunction Emissions

SSM	VOC		Total HAP		Benzene		H_2S	
	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY
SSM Blowdowns								
SSM Startups								
SSM Other (Attach Calculations)								
SSM Totals		**10**						
Malfunction Total								

Notes

Planned SSM Emissions

The venting emissions calculations herein should only be used when only gas (no liquids) is present in the unit. The calculation of the vented gas is based on the volume of the unit and assumes the unit is saturated with vapor at the pressure and temperature of the unit before venting occurs. If liquids are also present in the gas, please enter the calculated amounts in the SSM Other row only and submit separate calculations, since the calculations on this form do not account for the evaporation of liquids that may be present in the unit.

Calculations are based on the Ideal gas law: P(V) = n(R)(T)

VOC result = (((Pressure of Gas Inside the Unit Before Venting) * (Actual Volume of the Vented Unit)) / (Frequency of events) * (Molecular Weight) * VOC wt%)/(Ideal Gas Constant) * (Temperature of Gas Inside the Unit Before Venting)

Where the Ideal Gas Constant = 10.73159 (ft^3*psia)/R*lb-mol

For SSM combustion emissions, attach separate calculations.

Date:		**Permit Number:**	GCP-O&G-9888
Company Name:	Steward Energy II, LLC	**AI# if Known:**	40920
Facility Name:	Wexler Tank Battery	**Elevation (ft.):**	3,806

Vertical Fixed Roof (VFR) Produced Water VOC Flash Emissions Calculations Form

Select Tanks Flash Emission Calculation Method

GWR	E & P Tanks	ProMax
Vasquez-Beggs	HYSIS	VMGSim

ProMax Produced Water Tanks Emission Calculations

Please attach the ProMAX printout with all input data provided along with the calculated emissions. Enter the uncontrolled VOC emissions below. If the tank vapors are routed to a flare, enclosed combustion device, vapor combustion unit, vapor recovery unit or thermal oxidizer select the appropriate VOC destruction method below along with selected VOC destruction efficiency supported by manufacturer specifications submitted with the application.

Tanks VOC Control Method			
Select % Oil in Water	1	VOC Uncontrolled emissions entered includes this percentage.	
Capture Efficiency	99	Represent Uncaptured and/or Controlled VOC's at Tanks	YES
VOC Control Method	Flare (FL)	Represent VRU/ULPC Downtime Emissions at Tanks	NA
VOC Destruction Efficiency	98	Represent VOC Controlled Emissions at Tanks*	NO
Notes			

Total VOC Emissions From Produced Water Storage Tanks Calculated with ProMax

Add/Remove Rows Up To 10 Units	Tank ID	VOC Uncontrolled Emissions		VOC Emissions after Control		VOC Emissions at the Tanks	
		pph	tpy	pph*	tpy*	pph	tpy
+ -	PWT- 1	0.76	3.32	0.02	0.07	0.01	0.03
+ -	PWT- 2	0.76	3.32	0.02	0.07	0.01	0.03
+ -	PWT- 3	0.76	3.32	0.02	0.07	0.01	0.03
	Totals	2.28	9.96	0.06	0.21	0.03	0.09

Calculation Tool for Tanks Flashing & Working & Standing Emissions for Oil & Gas Production Sites

All flash emissions based on flash calculation methodology selected ;

1) The appropriate ECD, flare, TO, VCU or VRU form must also be completed.
2) Manufacturer documentation required to support % control selected. Assumes VRU/ULPC with a 100% control efficieny, but with 5% downtime;
3) Information included in calculation tool must be based on representative oil and gas analysis which must be submitted with application;
4) GOR and Vasquez-Beggs sample calculations outlined below; E & P Tanks, ProMax, HYSYS & VMG Sim flash emissions require submittal of computer simulation model emissions calculations print-outs;
5) Working & Standing emissions based on AP-42 Chpt. 7, tanks 4.09d computer simulation or ProMax, or VMG computer simulation models.

Sample Calculations

GWR Methodology

VOC pph = GWR (scf/bbl) * Facility Water Throughput (BOPD) * 1/24 (Hours/Day * 1/Universal Gas Constant 385 scf/lb-mole @ 70^{O}F, 1 atm) * Molecular Weight of Tank Vapors (lb/lb-mol) * Percent Oil in Water
= 40 (scf/bbl) * 1000 (BOPD)*1/24 (hrs/day) *1/385 scf/lb-mol * 50 lb/lb-mol * 1/100
= 2.16 lbs/hr

VOC tpy = GWR (scf/bbl) * Facility Water Throughput (BOPD) * 1/24 (Hours/Day * 1/Universal Gas Constant 385 scf/lb-mole @ 70^{O}F, 1 atm) * Molecular Weight of Tank Vapors (lb/lb-mol) * 8760 hr/yr * 1/2000 lbs/ton * Percent Oil in Water
= 40 (scf/bbl) * 1000 (BOPD)*1/24 (hrs/day) *1/385 scf/lb-mol * 50 lb/lb-mol * 8760 hr/yr * 1/2000 lbs/ton * 1/100
= 9.48 tpy

Vasquez-Beggs Methodology

INPUTS			Constraints			
API Gravity		API	16	<API>	58	^{0}API
Separator Pressure (psig)		P	50	<P+Patm>	5250	psia
Separator Temp. (^{0}F)		Ti	70	<Ti>	295	^{0}F
Separator Gas Gravity at Initial Condition		SGi	0.56	<SGi>	1.18	MW/28.97
Barrels of Water/Day (BOPD)	1,398.33	Q	None	<Q>	None	BOPD
Tank Gas MW		MW	18	<MW>	125	lb/lb-mole
VOC Fraction of Tank Gas		VOC	0.5	<VOC>	1.00	Fraction
Atmospheric Pressure (psia)		Patm	20	<Rs>	2070	scf/bbl

Constants			
	^{0}API Gravity		
^{0}APTI	<30	≥30	Given ^{0}API
C1	0.0362	0.0178	
C2	1.0937	1.187	
C3	25.724	23.931	

SGx = Dissolved gas gravity at Separator pressure = SGi [1.0+0.00005912*API*Ti*Log(Pi/114.7)]

Rs = (C1 * SGx * Pi^C2) exp ((C3 * API) / (Ti + 460)) for P + Patm

THC = Rs * Q * MW * 1/385 scf/lb-mole * 365 D/Yr * 1 ton/2000 lbs

VOC = THC * Frac. of C3+ in the Stock Tank Vapor

Technical Disclaimer
This document is intended to help you accurately determine produced water storage tank flash, working and standing emissions. It does not supersede or replace any state or federal law, rule, or regulation. This guidance reflects the current understanding of how these units work and how they generate emissions, how they are monitored or tested, and what data are available for emissions determination, may change over time as the AQB continue scientific studies and as new information becomes available. The AQB welcome any data, information, or feedback that may improve our understanding of produced water storage tank flash, working and standing emissions and thereby further improve determinations within the emissions inventory. The calculation methods represented are intended as an emissions calculation aid; alternate calculation methods may be equally acceptable if they are based upon, and adequately demonstrate, sound engineering assumptions or data. If you have a question regarding the acceptability of a given emissions determination method, contact the Permitting Section at 505-476-4300.

Date:		**Permit Number:**	GCP-O&G-9888
Company Name:	Steward Energy II, LLC	**AI# if Known:**	40920
Facility Name:	Wexler Tank Battery	**Elevation (ft.):**	3,806

Vertical Fixed Roof (VFR) Water Tanks VOC Working & Standing Emissions Calculations Form

Select Tanks W & S Emission Calculation Method

AP-42 Chpt. 7	EPA Tanks 4.09d	ProMax	E & P Tanks

ProMax Produced Water Tanks W & S Emission Calculations

(Assumes W & S emissions are 1% of the emissions calculated based on oil properties and entered as uncontrolled emissions)

Please attach the ProMAX printout with all input data provided along with the calculated emissions. Enter the uncontrolled VOC emissions below. If the tank vapors are routed to a flare, enclosed combustion device, vapor combustion unit, vapor recovery unit or thermal oxidizer select the appropriate VOC destruction method below along with selected VOC destruction efficiency supported by manufacturer specifications submitted with the application.

Tanks VOC Control Method			
Capture Efficiency	99	Represent Uncaptured and/or Controlled VOC's at Tanks	YES
VOC Control Method	Flare (FL)	Represent VRU/ULPC Downtime Emissions at Tanks	NA
VOC Destruction Efficiency	98	Represent VOC Controlled Emissions at Tanks*	NO
Notes			

Total VOC W & S Emissions From Produced Water Storage Tanks Calculated with ProMax

Add/Remove Rows Up To 10 Units	Tank ID	VOC Uncontrolled Emissions		VOC Emissions after Control		VOC Emissions at the Tanks	
		pph	tpy	pph*	tpy*	pph	tpy
+ -	PWTK-1	0.38	1.65	0.01	0.03	0	0.02
+ -	PWTK-2	0.38	1.65	0.01	0.03	0	0.02
+ -	PWTK-3	0.38	1.65	0.01	0.03	0	0.02
	Totals	1.14	4.95	0.03	0.09	0	0.06

New Mexico Environment Department Air Quality Bureau Equipment Emissions Calculation Form

Date:		**Permit Number:**	GCP-O&G-9888
Company Name:	Steward Energy II, LLC	**AI# if Known:**	40920
Facility Name:	Wexler Tank Battery	**Elevation (ft.):**	3,806

Emissions From Loading Produced Water Liquids

Select Appropriate AP-42 Petroleum Liquid Loading Methodology & Enter appropriate information in the green boxes below changing default values as appropriate.

Emission Unit ID: PWLOAD-1

Facility Produced Water Throughput (gal/yr)	6,430,935
Max. Hourly Loading Rate (gal/hr)	12,000
% Oil in Water	1

*Select Appropriate AP-42 Petroleum Liquid Loading Methodology Below**

(●) AP-42, 5.2-4 Equation 1 ( ) AP-42, Table 5.2-5

S - Saturation Factor (From AP-42 Table 5.2-1)	1.0
M - Molecular Weight of Vapors (lb/lb-mole)	50
P_{annual} - Avg. Annual True Vapor Pressure of Liquid Loaded (psia)	3.4
P_{hourly} - Max Hourly True Vapor Pressure of Liquid Loaded (psia)	5.7
T_{annual} - Average Annual Temperature ^{o}F of Bulk Liquid Loaded	70
T_{hourly} - Maximum Hourly Temperature ^{o}F of Bulk Liquid Loaded	100

Select Emission Source - From AP-42 Table 5.2-5

- ( ) Submerged Loading Dedicated Normal Service
- (●) Submerged Loading Vapor Balance Service
- ( ) Splash Loading Dedicated Normal Service
- ( ) Splash Loading Vapor Balance Service

Notes: Produced water truck loading occurs 10% of the year.
64,309,350 gal/year * 10% = 6,430,935 gal/year

Total VOC Emissions From Loading Produced Water Liquids Based On % Oil in Water Selected Above

Pollutant	Uncontrolled Emissions (pph)	Uncontrolled Emissions (tpy)
VOC	0.76	0.13

Footnote: * All emission factors based on AP-42, 5.2-4 Equation 1 or AP-42 Table 5.2-5 (July 2008); See reverse side for calculation notes

Calculation Tool for Emissions From Loading Produced Water Liquids

Emissions based on AP-42, 5.2-4 Equation 1 (July 2008) or AP-42, Table 5.2-5

https://www3.epa.gov/ttn/chief/ap42/ch05/final/c05s02.pdf

AP-42 5.2-4 Equation 1

Emissions from loading produced water liquids can be estimated (with a probable error of ±30 percent)[4] using the following expression:

Equation 1 $L_L = 12.46 * SPM/T$

where:

L_L = loading loss, pounds per 1000 gallons (lb/10^3 gal) of liquid loaded (assumes 1% oil in water)

S = a saturation factor (see Table 5.2-1 reproduced below))

P = true vapor pressure of liquid loaded, pounds per square inch absolute (psia) (see Section 7.1, "Organic Liquid Storage Tanks")

M = molecular weight of vapors, pounds per pound-mole (lb/lb-mole) (see Section 7.1, "Organic Liquid Storage Tanks")

T = temperature of bulk liquid loaded, °R (°F + 460)

VOC pph = (12.46*0.6*7.0 (psia)*50 (lb/lb-mole)/550°R)/1000 (gal) * 8400 (gal/hr) * 0.01 (1% oil in water)
= 39.96 lb/hr

VOC tpy = (12.46*0.6*4.5 (psia)*50 (lb/lb-mole)/525°R)/1000 * 1533000 (gal/hr) * 1/2000 (ton/lbs) * 0.01 (1% oil in water)
= 2.46 tpy

Table 5.2-1. SATURATION (S) FACTORS FOR CALCULATING PETROLEUM LIQUID LOADING LOSSES

Cargo Carrier	Mode of Operation	S Factor
Tank trucks and rail tank cars	Submerged loading of a clean cargo tank	0.5
	Submerged loading: dedicated normal service	0.6
	Submerged loading: dedicated vapor balance service	1.0
	Splash loading of a clean cargo tank	1.45
	Splash loading: dedicated normal service	1.45
	Splash loading: dedicated vapor balance service	1.0
Marine vessels[a]	Submerged loading: ships	0.2
	Submerged loading: barges	0.5

[a] For products other than gasoline and crude oil. For marine loading of gasoline, use factors from Table 5.2-2. For marine Loading of crude oil, use Equations 2 and 3 and Table 5.2-3.

AP-42 Table 5.2-5 (assumes 1% oil in water)

VOC pph= (2lb/1000 (gal) * ((100-15)/100) * 8400 (gal/hr) * 0.01 (1% oil in water) = 0.168 pph

VOC tpy = (2lb/1000 (gal) * ((100-15)/100) * 100 (BOPD) * 42 (gal/bbl) * 365 (days/yr) * 1/2000 (ton/lb) * 0.01 (1% oil in water) = 0.0153 tpy

Table 5.2-5 TOTAL UNCONTROLLED ORGANIC EMISSION FACTORS FOR PETROLEUM LIQUID RAIL TANK CARS AND TANK TRUCKS

Emission Source	Mode of Operation	Crude Oil (lb/1000 gal transferred)[b]
Loading Operations[c]		
	Submerged loading: dedicated normal service	2
	Submerged loading: dedicated vapor balance service	3
	Splash loading: dedicated normal service	5
	Splash loading: dedicated vapor balance service	3

a Reference 2. ……VOC factors for crude oil can be assumed to be 15% lower than the total organic factors, to account for the methane and ethane content of crude oil evaporative emissions. All other products should be assumed to have VOC factors equal to total organics; b The example crude oil has an RVP of 34 kPa (5 psia); c Loading emission factors are calculated using Equation 1 for a dispensed product temperature of 16°C (60°F). In the absence of specific inputs for Equations 1 , the typical evaporative emission factors presented in Tables 5.2-5 should be used. It should be noted that, although the crude oil used to calculate the emission values presented in this tables has an RVP of 5, the RVP of crude oils can range from less than 1 up to 10. In areas where loading and transportation sources are major factors affecting air quality, it is advisable to obtain the necessary parameters and to calculate emission estimates using Equations 1.

Technical Disclaimer

This document is intended to help you accurately determine truck loading produced water emissions. It does not supersede or replace any state or federal law, rule, or regulation. This guidance reflects the current understanding of how truck loading operations work and how it generates emissions, how it is monitored or tested, and what data are available for emissions determination, may change over time as the AQB continue scientific studies and as new information becomes available. The AQB welcome any data, information, or feedback that may improve our understanding of truck loading produced water emissions and thereby further improve determinations within the emissions inventory. The calculation methods represented are intended as an emissions calculation aid; alternate calculation methods may be equally acceptable if they are based upon, and adequately demonstrate, sound engineering assumptions or data. If you have a question regarding the acceptability of a given emissions determination method, contact the Permitting Section at 505-476-4300.

New Mexico Environment Department Air Quality Bureau Equipment Emissions Calculation Form

Date:		**Permit Number:**	GCP-O&G-9888
Company Name:	Steward Energy II, LLC	**AI# if Known:**	40920
Facility Name:	Wexler Tank Battery	**Elevation (ft.):**	3,806

Flare

Enter information in green boxes below changing default values as appropriate.

	Gas Stream 1	Gas Stream 2	Gas Stream 3		Gas Stream 1	Gas Stream 2	Gas Stream 3
Emission Unit ID	FL-1-HP	FL-1-LP-SSM	FL-1-LP	Hourly Gas Routed to Flare (MMBtu/hr)	513.081728	567.79903	725.1875
Hourly Gas Stream to Flare (Mscf/hr)	389.17	389.17	353.75	Annual Gas Routed to Flare (MMBtu/yr)	301,689.472	379.34	18,224.5
Annual Gas Stream to Flare (MMscf/yr)	228.83	0.26	8.89	Pilot Gas Routed to Flare (MMBtu/hr)	0.10679	0	0
Max. Heat Value of Gas (Btu/scf)	1,318.4	1,459	2,050	Gas MW (lb/lbmol)	27.13	31.09	40.31
Field Gas Mol Fraction (lbmol H2S/lb-mol)	0.437	0.524	0.858	Gas Pressure (psia)	14.7	14.7	14.7
Field Gas Sulfur Content (S grains/100 scf)	258.81	310.6	508.19	Gas Temperature (°F)	70	70	70
Pilot Gas to Flare (Mscf/hr)	0.081			Field Gas H2S Wt.% to Flare (%)	0.549	0.575	0.704
Max. Heat Value Pilot Gas (Btu/scf)	1,318.4			Flare Control Efficiency	98	98	98
Pilot Gas Sulfur Content (S grains/100 scf)	258.81			Total VOC wt.% to Flare (%)[1]	31.99	42.1	67.08
Source of Flare Emission Factors	TCEQ Air or	TCEQ Air or	TCEQ Air or	Safety Factor Applied to Total Emissions (%)			
Use Highest NOx & CO Emission Factors From AP-42 or TCEQ	NO	NO	NO				

Total Emissions to Flare

Pollutant	NOx			CO			VOC			SO2			H2S		
Gas Streams to Flare	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
Uncontrolled (pph)	0	0	0	0	0	0	9,373.77	126.91	116.59	0	0	0	149.8176	179.8164	259.4676
Uncontrolled (tpy)	0	0	0	0	0	0	2,755.89	23.38	189.81	0	0	0	44.046	0.0601	3.2603
Field Gas (pph)	70.8053	78.3563	100.0759	141.354	156.4286	199.7892	187.48	2.54	2.33	277.0551	332.2125	494.4576	2.9964	3.5963	5.1894
Field Gas (tpy)	20.8166	0.0262	1.2575	41.5577	0.0523	2.5104	55.12	0.47	3.8	81.4535	0.111	6.213	0.8809	0.0012	0.0652
Pilot Gas (pph)	0.0147			0.0294			0.04	0	0	0.0587	0	0	0.0006	0	0
Pilot Gas (tpy)	0.0645			0.1289			0.01	0	0	0.2571	0	0	0.0026	0	0
Subtotal Flare (pph)	70.82	78.3563	100.0759	141.3834	156.4286	199.7892	187.52	2.54	2.33	277.1138	332.2125	494.4576	2.997	3.5963	5.1894
Subtotal Flare (tpy)	20.8811	0.0262	1.2575	41.6866	0.0523	2.5104	55.13	0.47	3.8	81.7106	0.111	6.213	0.8835	0.0012	0.0652
Total Flare (pph)	249.25			497.6			192.39			1,103.7839			11.7827		
Total Flare (tpy)	22.16			44.25			59.4			88.0346			0.9499		

See reverse side for calculation notes.

1) Based on representative gas analysis which must be submitted with application; 2) Assumes pilot gas has a negligible amount of VOC & 0.25 grains H2S/100scf; *) Emission factors for NOx, CO & VOC based on AP-42, Table 13.5-1, (Dec. 2015) or TCEQ RG-360A/11 (February 2012); #) Assumes H_2S is converted to SO_2 at selected control efficiency; SO2 emissions based on mass balance; +) Assumes H_2S Destruction Efficiency equals flare destruction efficiency;

Calculation Tool for Flare Emissions for Oil & Gas Production Sites

All emission factors based on AP-42, Emission factors for NOx, CO & VOC, Table 13.5-1, (December 2016); https://www3.epa.gov/ttn/chief/ap42/ch13/final/C13S05_12-13-16.pdf or https://www.tceq.texas.gov/assets/public/comm_exec/pubs/rg/rg360/rg36011/rg-360a.pdf

1) Information included in calculation tool must be based on representative gas analysis which must be submitted with application;
2) Assumes pilot gas used has a negligible amount of VOC's and 0.25 grains H2S/100 scf;
3) SO_2 calculations assumes H_2S is converted to SO_2 at selected control efficiency; SO_2 emissions based on mass balance;
4) H_2S calculations assume H_2S Destruction Efficiency equals flare destruction efficiency;

Sample Calculations

NOx pph = hourly gas routed to flare (MMBtu/hr) * NOx Emission factor (lbs/MMBtu)
= 1(MMBtu/hr) * 0.068 (lbs/MMBtu)
= 0.068 lbs/hr

NOx tpy = annual gas routed to flare (MMBtu/yr) * NOx Emission factor (lbs/MMBtu) * 1/lbs/ton)
= 1000 (MMBtu/yr) * 0.068 (lb/MMBtu) * 1/2000 (lbs/ton)
= 0.034 tpy

SO_2 pph= Hourly Gas Stream to flare (MMScf/hr) * 1000000/1 (scf/MMScf) * Field Gas mol Fraction of H_2S (mol H_2S/lb-mol)/100 * 1/Universal Gas Constant 385 scf/lb-mole @ 60^{O}F, 1 atm * Conversion Rate of H_2S to SO_2 lb-mol SO_2/lb-mol H_2S * Molecular Weight of Sulfur Dioxide (64 lb SO_2/lb-mol SO_2)
= 1 MMScf/hr * 1000000/1 (Scf/MMScf) * 0.1 mol H_2S* 1/385 scf/lb-mole * 0.95 lb-mol SO_2/lb-mol H_2S * 64 lb/lb-mol

Residual

H_2S pph= Hourly Gas Stream to flare (MMScf/hr) * 1000000/1 (scf/MMScf) * Field Gas mol Fraction of H_2S (mol H_2S/lb-mol)/100 * 1/Universal Gas Constant 385 scf/lb-mole @ 60^{O}F, 1 atm * (100-(Flare Control Efficiency))/100) * Molecular Weight of Hydrogen Sulfide (34 lb H_2S/lb-mol H_2S)
= 1 MMScf/hr * 1000000/1 (Scf/MMScf) * 0.1 mol H_2S* 1/385 scf/lb-mole * (100-95%/100) * 34 lb/lb-mol

Flare, Vapor Combustion Devices & Enclosed Combustion Devices Emission Factors				
Contaminant	Assist Type	Waste Gas Stream Heat Value (Btu/scf)	AP-42 Emission Factor (lb/MMBtu)	TCEQ Emission Factor (lb/MMBtu)
NOx	Steam	≥1000	0.068	0.0485
	Steam	<1000	0.068	0.068
	Air or Unassisted	≥1000	0.068	0.138
	Air or Unassisted	<1000	0.068	0.0641
CO	Steam	≥1000	0.31	0.3503
	Steam	<1000	0.31	0.3465
	Air or Unassisted	≥1000	0.31	0.2755
	Air or Unassisted	<1000	0.31	0.5496
VOC	Air & Steam Assist	≥300	0.66	

Technical Disclaimer
This document is intended to help you accurately determine flares, enclosed combustion devices and vapor combustion units emissions. It does not supersede or replace any state or federal law, rule, or regulation. This guidance reflects the current understanding of how these combustion units work and how they generate emissions, how they are monitored or tested, and what data are available for emissions determination, may change over time as the AQB continue scientific studies and as new information becomes available. The AQB welcome any data, information, or feedback that may improve our understanding of flares, enclosed combustion devices and vapor combustion units emissions and thereby further improve determinations within the emissions inventory. The calculation methods represented are intended as an emissions calculation aid; alternate calculation methods may be equally acceptable if they are based upon, and adequately demonstrate, sound engineering assumptions or data. If you have a question regarding the acceptability of a given emissions determination method, contact the Permitting Section at 505-476-4300.

New Mexico Environment Department Air Quality Bureau Equipment Emissions Calculation Form

Date:		**Permit Number:**	GCP-O&G-9888
Company Name:	Steward Energy II, LLC	**AI# if Known:**	40920
Facility Name:	Wexler Tank Battery	**Elevation (ft.):**	3,806

Emission Unit ID: FUG-1 **Fill all green/blue boxes changing default values as appropriate.**

Fugitive Volatile Organic Compounds (VOC), Total HAPs (HAP), Benzene (CH6) & Hydrogen Sulfide (H_2S) Emissions

					Uncontrolled Total								Controlled Total							
					VOC		Total HAP		CH_6		H_2S		VOC		Total HAP		CH_6		H_2S	
Service	%VOC	%HAP	%CH_6	%H_2S	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY	PPH	TPY
Gas	32.22%	1.812	0.476	0.549	0.91	3.99	0.05	0.22	0.013	0.059	0.016	0.07	0	0	0	0	0	0	0.016	0.07
Heavy Oil	99.8%	11.65	1.086	0.549	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Light Oil	99.8%	11.65	1.086	0.549	1.59	6.94	0.19	0.81	0.017	0.074	0.009	0.039	0	0	0	0	0	0	0.009	0.039
Water/Oil	99.8%	11.65	1.086	0.549	0.2	0.88	0.02	0.1	0.002	0.009	0.001	0.004	0	0	0	0	0	0	0.001	0.004
Totals					2.7	11.81	0.26	1.13	0.032	0.142	0.026	0.113	0	0	0	0	0	0	0.026	0.113

				Uncontrolled VOC, HAP & CH_6 Emissions							Controlled VOC, HAP & CH_6 Emissions					
Equipment Type	Service[a]	EF[b] PPH/Source	No. of Sources	VOC PPH	VOC TPY	HAP PPH	HAP TPY	CH_6 PPH	CH_6 TPY	Control Efficiency	VOC PPH	VOC TPY	HAP PPH	HAP TPY	CH_6 PPH	CH_6 TPY
Valves	Gas	0.0099207	128	0.4091	1.7919	0.023	0.1007	0.006	0.0263	0%	0	0	0	0	0	0
	Heavy Oil	0.00001852	0	0	0	0	0	0	0	0%	0	0	0	0	0	0
	Light Oil	0.0055115	153	0.8416	3.6862	0.0982	0.4301	0.0092	0.0403	0%	0	0	0	0	0	0
	Water/Oil	0.00021605	86	0.0185	0.081	0.0022	0.0096	0.0002	0.0009	0%	0	0	0	0	0	0
Subtotals				1.2692	5.5591	0.1234	0.5404	0.0154	0.0675		0	0	0	0	0	0
Pump Seals	Gas	0.00529104	0	0	0	0	0	0	0	0%	0	0	0	0		0
	Heavy Oil	0.0286598	0	0	0	0	0	0	0	0%	0	0	0	0	0	0
	Light Oil	0.0286598	2	0.0572	0.2505	0.0067	0.0293	0.0006	0.0026	0%	0	0	0	0	0	0
	Water/Oil	0.00005291	3	0.0002	0.0009	0	0	0	0	0%	0	0	0	0	0	0
Subtotals				0.0574	0.2514	0.0067	0.0293	0.0006	0.0026		0	0	0	0	0	0
Connectors	Gas	0.00044092	374	0.0531	0.2326	0.003	0.0131	0.0008	0.0035	0%	0	0	0	0	0	0
	Heavy Oil	0.00001653	12	0.0002	0.0009	0	0	0	0	0%	0	0	0	0	0	0
	Light Oil	0.00046297	346	0.1599	0.7004	0.0187	0.0819	0.0017	0.0074	0%	0	0	0	0	0	0
	Water/Oil	0.00024251	237	0.0574	0.2514	0.0067	0.0293	0.0006	0.0026	0%	0	0	0	0	0	0
Subtotals				0.2706	1.1853	0.0284	0.1243	0.0031	0.0135		0	0	0	0	0	0
Flanges	Gas	0.00085979	249	0.069	0.3022	0.0039	0.0171	0.001	0.0044	0%	0	0	0	0	0	0
	Heavy Oil	0.00000086	8	0	0	0	0	0	0	0%	0	0	0	0	0	0
	Light Oil	0.00024251	230	0.0557	0.244	0.0065	0.0285	0.0003	0.0013	0%	0	0	0	0	0	0
	Water/Oil	0.00000639	158	0.001	0.0044	0.0001	0.0004	0	0	0%	0	0	0	0	0	0
Subtotals				0.1257	0.5506	0.0105	0.046	0.0013	0.0057		0	0	0	0	0	0
Open Ends	Gas	0.0044092	25	0.0355	0.1555	0.002	0.0088	0.0005	0.0022	0%	0	0	0	0	0	0
	Heavy Oil	0.00030864	0	0	0	0	0	0	0	0%	0	0	0	0	0	0
	Light Oil	0.00308644	19	0.0585	0.2562	0.0068	0.0298	0.0006	0.0026	0%	0	0	0	0	0	0
	Water/Oil	0.00055115	3	0.0017	0.0074	0.0002	0.0009	0	0	0%	0	0	0	0	0	0
Subtotals				0.0957	0.4191	0.009	0.0395	0.0011	0.0048		0	0	0	0	0	0
Other[c]	Gas	0.01940048	55	0.3438	1.5058	0.0193	0.0845	0.0051	0.0223	0%	0	0	0	0	0	0
	Heavy Oil	0.00007055	0	0	0	0	0	0	0	0%	0	0	0	0	0	0
	Light Oil	0.0165345	25	0.4125	1.8068	0.0482	0.2111	0.0045	0.0197	0%	0	0	0	0	0	0
	Water/Oil	0.0308644	4	0.1232	0.5396	0.0144	0.0631	0.0013	0.0057	0%	0	0	0	0	0	0
Subtotals				0.8795	3.8522	0.0819	0.3587	0.0109	0.0477		0	0	0	0	0	0

Based on: *1995 Protocol for Equipment Leak Emission Estimates*, Table 2.4 Version Date: 6/23/16; See next page for calculation notes.

Calculation Tool for Fugitive Emissions Oil & Gas Production

Protocol for Equipment Leak Emission Estimates (EPA-453/R-95-017), Table 2-4;
available at the EPA Web site at https://www3.epa.gov/ttn/chief/efdocs/equiplks.pdf

a) Service categories are defined as follows:

1) Gas/vapor - material in a gaseous state at operating conditions;

2) Light liquid - material in a liquid state in which the sum of the concentration of individual constituents with a vapor pressure over 0.3 kilopascals (kPa) at 200C is greater than or equal to 20 weight percent;

3) Heavy liquid - not in gas/vapor service or light liquid service.

4) Water/Oil emission factors apply to water streams in oil service with a water content greater than 50%, from the point of origin to the point where the water content reaches 99%. For water streams with a water content greater than 99%, the emission rate is considered negligible.

b) These factors are for total organic compound emission rates (including non-VOC's such as methane and ethane) and apply to light crude, heavy crude, gas plant, gas production, and off shore facilities. "NA" indicates that not enough data were available to develop the indicated emission factor.

c) The "other" equipment type was derived from compressors, diaphragms, drains, dump arms, hatches, instruments, meters, pressure relief valves, polished rods, relief valves, and vents. This "other" equipment type should be applied for any equipment type other than connectors, flanges, open-ended lines, pumps, or valves.

d) Note that the average factors generally determine total hydrocarbon emissions. Therefore, you may need to multiply the calculated emission rates by the stream's weight percentage of VOC compounds to determine total VOC emissions. Please attach a copy of the appropriate gas and oil analysis with the stream's weight percentage of VOC compounds identified.

VOC Sample Calculation
For 10 Valves in Gas Service with a gas stream weight percentage of 25% VOC

Emission Factor (EF) lb/hr=0.0045 kg/hr * 2.2046 lbs/kg
Gas Valves Uncontrolled Emissions

pph EF (Valves in Gas Service) * Number of Valves in Gas Service & VOC wt%
0.0099207 lb/hr * 10 valves = 0.099207 lb/hr * 25%/100

tpy EF (Valves in Gas Service) * Number of Valves in Gas Service * 8760 hrs/yr * 1ton/2000 lbs
0.0099207 lb/hr * 10 valves * 8760 hrs/yr * 1/2000 ton/lbs = 0.4345 tons/yr * 25%/100

Total Uncontrolled Fugitive Emissions for all Service types in Gas Service

pph (Uncontrolled pph Emissions for Valves + Pump Seals + Connectors + Flanges + Open Ends + Other) * VOC wt%/100

tpy (Uncontrolled tpy Emissions for Valves + Pump Seals + Connectors + Flanges + Open Ends + Other) * VOC wt%/100

New Mexico Environment Department Air Quality Bureau Equipment Emissions Calculation Form

Date:		**Permit Number:**	GCP-O&G-9888
Company Name:	Steward Energy II, LLC	**AI# if Known:**	40920
Facility Name:	Wexler Tank Battery	**Elevation (ft.):**	3,806

Unpaved Haul Roads

Enter Information in all green boxes.

Haul Road Fugitive Emission Unit ID: HR-1

% Silt	4.8	**Haul Road Distance-Round-trip in Miles (Only enter round-trip distance within facility boundaries)**	0.15
Mean Vehicle Weight (tons)	26.5	**Number of Haul Road Round-trips/hour**	3
Rain Days	70	**Number of Haul Road Round-trips/yr**	1,373
User % Control	0	**Vehicle Miles Traveled/hr (VMT/hr)**	0.45
		Vehicle Miles Traveled/yr (VMT/yr)	205.95

Notes:

Hourly lbs/VMT			Annually lbs/VMT		
TSP	**PM10**	**PM2.5**	**TSP**	**PM10**	**PM2.5**
6.88	1.75	0.18	5.56	1.41	0.15

TSP/PM10/PM2.5 Emission Rates

Control	TSP		PM10		PM2.5	
	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr
Continuous	3.1	10.96	0.79	2.78	0.08	0.3
0% Control	3.1	0.57	0.79	0.15	0.08	0.02
User % Control	3.1	0.57	0.79	0.15	0.08	0.02

Footnote: All emissions based on AP-42, 13.2.2-4 (November 2006); See reverse side for calculation notes.

NMED-AQB Unpaved Haul Road Calculation Tool

All emission factors based on AP-42, AP-42 13.2.2-4; November 2006
https://www3.epa.gov/ttn/chief/ap42/ch13/final/c13s0202.pdf

Emissions from vehicles traveling on unpaved surfaces at industrial sites (based on 8760 Hours/year) can be estimated using the following expression:

AP-42 13.2.2-4; Equation 1a: $$E = k\,(s/12)^a (W/3)^b$$

where k, a, b, c and d are empirical constants (Reference 6) given below and

E = size-specific emission factor (lb/VMT)

s = surface material silt content (%)

W = mean vehicle weight (tons)

M = surface material moisture content (%)

Table 13.2.2-2. CONSTANTS FOR EQUATION 1a

Constant	Industrial Roads (Equation 1a)		
	PM-2.5	PM-10	PM-30*
k (lb/VMT)	0.15	1.5	4.9
a	0.9	0.9	0.7
b	0.45	0.45	0.45
Quality Rating	B	B	B

*Assumed equivalent to total suspended particulate matter (TSP)

Technical Disclaimer

This document is intended to help you accurately determine unpaved haul road emissions. It does not supersede or replace any state or federal law, rule, or regulation. This guidance reflects the current understanding of how unpaved haul roads work and how they generate emissions, how they are monitored or tested, and what data are available for emissions determination, may change over time as we continue our scientific studies and as new information becomes available. We welcome any data, information, or feedback that may improve our understanding of unpaved haul road emissions and thereby further improve determinations within the emissions inventory. The calculation methods represented are intended as an emissions calculation aid; alternate calculation methods may be equally acceptable if they are based upon, and adequately demonstrate, sound engineering assumptions or data. If you have a question regarding the acceptability of a given emissions determination method, contact the Permitting Section at 505-476-4300.

New Mexico Environment Department Air Quality Bureau Emissions Calculation Forms

Date:
Company Name: Steward Energy II, LLC
Facility Name: Wexler Tank Battery

Permit Number: 9888
AI# if Known: 40920
Elevation (ft.): 3,806

Total Requested Emissions For All Regulated Facility Equipment (GCP-O&G Request)

Emission Unit	NO_x		CO		VOC		SO_x		TSP		PM_{10}		$PM_{2.5}$		H_2S		Total HAP	
	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr
Engines	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	0	0
Heaters	0.19	0.83	0.16	0.7	0.01	0.04	1.47	6.45	0.02	0.07	0.02	0.07	0.02	0.07	-	-		
Oil Tanks Flash	-	-	-	-	0.33	1.41	-	-	-	-	-	-	-	-				
Oil Tanks W & S	-	-	-	-	0.09	0.33	-	-	-	-	-	-	-	-				
Water Tks Flash	-	-	-	-	0.03	0.09	-	-	-	-	-	-	-	-				
Water Tks W & S	-	-	-	-	0	0.06	-	-	-	-	-	-	-	-				
Skim or Slop Tank	-	-	-	-			-	-	-	-	-	-	-	-				
GBS	-	-	-	-			-	-	-	-	-	-	-	-				
ECD	0	0	0	0	0	0	0	0										
VCU	0	0	0	0	0	0	0	0										
TO	0	0	0	0	0	0	0	0										
Flares	249.25	22.16	497.6	44.25	192.39	59.4	1,103.78	88.03										
Fugitives	-	-	-	-	2.7	11.81									0.03	0.11	0.26	1.13
SSM						10												
Malf.	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-
Unpaved Haul Rds.	-	-	-	-	-	-	-	-	3.1	0.57	0.79	0.15	0.08	0.02	-	-	-	-
Paved Haul Rds.	-	-	-	-	-	-	-	-	0	0	0	0	0	0	-	-	0	0
Oil Load	-	-	-	-	33.13	0.92	-	-	-	-	-	-	-	-				
Water Loading	-	-	-	-	0.76	0.13	-	-	-	-	-	-	-	-				
Amine Unt	-	-	-	-	0	0	-	-	-	-	-	-	-	-	0	0	0	0
Amine Reb	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-		
Dehy Unit	-	-	-	-			-	-	-	-	-	-	-	-				
Dehy Reb.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-		
Totals	**249.44**	**22.99**	**497.76**	**44.95**	**229.44**	**84.19**	**1,105.2!**	**94.48**	**3.12**	**0.64**	**0.81**	**0.22**	**0.1**	**0.09**	**0.03**	**0.11**	**0.26**	**1.13**

A red-outlined cell indicates that the facility exceeds the allowable emission limits for that pollutant for the requested permitting action and the application cannot be approved as proposed.

Company Name: Stweard Energy II, LLC
Site Name: Wexler Tank Battery
Date: 7/23/2024

Emission Estimations for HAPS

INPUTS:

Emission Source	VOCs (lb/hr)	VOCs (tpy)
HT-1	0.00	0.01
HT Remainder	0.01	0.03
OT	0.13	0.58
OT Remainder	0.27	1.16
GBT		
GBT Remainder		
PWT	0.01	0.05
PWT Remainder	0.02	0.10
OLOAD-1	33.13	0.92
PWLOAD-1	0.24	0.04
M	0.00	0.00
FL-1A-LP-SSM	0.20	0.09
FL-1A-HP	187.51	55.13
SSM-1	0.00	10.00
FUG-1		
HR-1	0.00	0.00
VRT Gas	0.00	0.00
FL-1A-LP	2.33	3.80
0	0.00	0.00
0	0.00	0.00
0	0.00	0.00
0	0.00	0.00
0	0.00	0.00
ENG-1	0.00	0.00
ENG-2	0.00	0.00
ENG-3	0.00	0.00
ENG-4	0.00	0.00
ENG-5	0.00	0.00

Number	Component	W&B Gas wt %	W&B fraction	Normalized W&B Fraction
1	H2S	0.704172671	0.007041727	
2	O2	0	0	
3	CO2	4.786327318	0.047863273	
4	N2	0.015872618	0.000158726	
5	C1	1.485814692	0.014858147	
6	C2	25.13155173	0.251315517	
7	C3	36.47662338	0.364766234	0.543812329
8	i-C4	6.309927584	0.063099276	0.094071657
9	n-C4	13.3509935	0.133509935	0.199043502
10	i-C5	3.518641741	0.035186417	0.052457727
11	n-C5	3.2095308	0.032095308	0.047849342
12	C6	0.889592989	0.00889593	0.013262511
13	Benzene	0.784763866	0.007847639	0.011699665
14	Toluene	0.266247227	0.002662472	0.003969351
15	E-Benzene	0.083313496	0.000833135	0.001242081
16	Xylenes	0.029855432	0.000298554	0.0004451
17	n-C6	0.65857705	0.00658577	0.009818407
18	224Trimethylp	0	0	0
19	C7	1.104356142	0.011043561	0.016464311
20	C8	0.319598932	0.003195989	0.004764746
21	C9	0.073694052	0.000736941	0.001098669
22	C10+	4.03288E-05	4.03288E-07	6.01242E-07
23	Pseudo Comp5		0	0
			0.670757565	

Hazardous Air Pollutants - Determination of Major Source

Pollutant	Total (tpy)
Benzene	0.84
Total Benzene	0.98
Toluene	0.29
E-Benzene	0.09
Xylenes	0.03
n-Hexane	0.71
224Trimethylp	0.00
FUG-1 Benzene	0.14

Largest HAP (tpy)	0.98
Total HAPs (tpy)	2.10

Major Source of HAPs?	NO
FUG-1	1.13
Formaldehyde	0.00
Total:	3.08

Pollutant	Total (lb/hr)	Largest HAP (lb/hr)	2.65
Benzene	2.62	Total HAPs (lb/hr)	6.12
Total Benzene	2.65		
Toluene	0.89		
E-Benzene	0.28		
Xylenes	0.10	FUG-1	0.26
n-Hexane	2.20		
224Trimethylp	0.00	Formaldehyde	0.00
FUG-1 Benzene	0.03	Total:	6.34

Hazardous Air Pollutants - Emission Source: **HT-1**

Pollutant	lb/hr
H2S	0.00
Propane	0.00
Butanes	0.00
Pentanes	0.00
Hexanes	0.00
Benzene	**0.0000**
Toluene	**0.0000**
E-Benzene	**0.0000**
Xylenes	**0.0000**
n-Hexane	**0.0000**
224Trimethylp	**0.0000**
Psuedo Comp1	0.00
Psuedo Comp2	0.00
Psuedo Comp3	0.00
Psuedo Comp4	0.00
Psuedo Comp5	0.00
Total VOCS	0.00

Total HAPS lb/hr	Max HAPs lb/hr
0.00	0.00

Pollutant	tpy
H2S	0.00
Propane	0.01
Butanes	0.00
Pentanes	0.00
Hexanes	0.00
Benzene	**0.0002**
Toluene	**0.0001**
E-Benzene	**0.0000**
Xylenes	**0.0000**
n-Hexane	**0.0001**
224Trimethylp	**0.0000**
Psuedo Comp1	0.00
Psuedo Comp2	0.00
Psuedo Comp3	0.00
Psuedo Comp4	0.00
Psuedo Comp5	0.00
Total VOCS	0.01

Total HAPs tpy	Max HAPS tpy
0.00	0.00

Hazardous Air Pollutants - Emission Source: **HT Remainder**

Pollutant	lb/hr
H2S	0.00
Propane	0.00
Butanes	0.00
Pentanes	0.00
Hexanes	0.00
Benzene	**0.0001**
Toluene	**0.0000**
E-Benzene	**0.0000**
Xylenes	**0.0000**
n-Hexane	**0.0001**
224Trimethylp	**0.0000**
Psuedo Comp1	0.00
Psuedo Comp2	0.00
Psuedo Comp3	0.00
Psuedo Comp4	0.00
Psuedo Comp5	0.00
Total VOCS	0.01

Total HAPS lb/hr	Max HAPs lb/hr
0.00	0.00

Pollutant	tpy
H2S	0.00
Propane	0.01
Butanes	0.01
Pentanes	0.00
Hexanes	0.00
Benzene	**0.0003**
Toluene	**0.0001**
E-Benzene	**0.0000**
Xylenes	**0.0000**
n-Hexane	**0.0003**
224Trimethylp	**0.0000**
Psuedo Comp1	0.00
Psuedo Comp2	0.00
Psuedo Comp3	0.00
Psuedo Comp4	0.00
Psuedo Comp5	0.00
Total VOCS	0.03

Total HAPs tpy	Max HAPS tpy
0.00	0.00

Hazardous Air Pollutants - Emission Source: **OT**

Pollutant	lb/hr
H2S	0.00
Propane	0.07
Butanes	0.04
Pentanes	0.01
Hexanes	0.00
Benzene	**0.0016**
Toluene	**0.0005**
E-Benzene	**0.0002**
Xylenes	**0.0001**
n-Hexane	**0.0013**
224Trimethylp	**0.0000**
Psuedo Comp1	0.00
Psuedo Comp2	0.00
Psuedo Comp3	0.00
Psuedo Comp4	0.00
Psuedo Comp5	0.00
Total VOCS	0.13

Total HAPS lb/hr	Max HAPs lb/hr
0.00	0.00

Pollutant	tpy
H2S	0.00
Propane	0.32
Butanes	0.17
Pentanes	0.06
Hexanes	0.01
Benzene	**0.0068**
Toluene	**0.0023**
E-Benzene	**0.0007**
Xylenes	**0.0003**
n-Hexane	**0.0057**
224Trimethylp	**0.0000**
Psuedo Comp1	0.01
Psuedo Comp2	0.00
Psuedo Comp3	0.00
Psuedo Comp4	0.00
Psuedo Comp5	0.00
Total VOCS	0.58

Total HAPs tpy	Max HAPS tpy
0.02	0.01

Hazardous Air Pollutants - Emission Source: **OT Remainder**

Pollutant	lb/hr
H2S	0.00
Propane	0.14
Butanes	0.08
Pentanes	0.03
Hexanes	0.00
Benzene	**0.0031**
Toluene	**0.0011**
E-Benzene	**0.0003**
Xylenes	**0.0001**
n-Hexane	**0.0026**
224Trimethylp	**0.0000**
Psuedo Comp1	0.00
Psuedo Comp2	0.00
Psuedo Comp3	0.00
Psuedo Comp4	0.00
Psuedo Comp5	0.00
Total VOCS	0.27

Total HAPS lb/hr	Max HAPs lb/hr
0.01	0.00

Pollutant	tpy
H2S	0.01
Propane	0.63
Butanes	0.34
Pentanes	0.12
Hexanes	0.02
Benzene	**0.0136**
Toluene	**0.0046**
E-Benzene	**0.0014**
Xylenes	**0.0005**
n-Hexane	**0.0114**
224Trimethylp	**0.0000**
Psuedo Comp1	0.02
Psuedo Comp2	0.01
Psuedo Comp3	0.00
Psuedo Comp4	0.00
Psuedo Comp5	0.00
Total VOCS	1.16

Total HAPs tpy	Max HAPS tpy
0.03	0.01

Hazardous Air Pollutants - Emission Source: **PWT**

Pollutant	lb/hr
H2S	0.00
Propane	0.01
Butanes	0.00
Pentanes	0.00
Hexanes	0.00
Benzene	**0.0001**
Toluene	**0.0000**
E-Benzene	**0.0000**
Xylenes	**0.0000**
n-Hexane	**0.0001**
224Trimethylp	**0.0000**
Psuedo Comp1	0.00
Psuedo Comp2	0.00
Psuedo Comp3	0.00
Psuedo Comp4	0.00
Psuedo Comp5	0.00
Total VOCS	0.01

Total HAPS lb/hr	Max HAPs lb/hr
0.0003	0.00

Pollutant	tpy
H2S	0.00
Propane	0.03
Butanes	0.01
Pentanes	0.00
Hexanes	0.00
Benzene	**0.0006**
Toluene	**0.0002**
E-Benzene	**0.0001**
Xylenes	**0.0000**
n-Hexane	**0.0005**
224Trimethylp	**0.0000**
Psuedo Comp1	0.00
Psuedo Comp2	0.00
Psuedo Comp3	0.00
Psuedo Comp4	0.00
Psuedo Comp5	0.00
Total VOCS	0.05

Total HAPs tpy	Max HAPS tpy
0.0014	0.00

Hazardous Air Pollutants - Emission Source: **PWT Remainder**

Pollutant	lb/hr
H2S	0.00
Propane	0.01
Butanes	0.01
Pentanes	0.00
Hexanes	0.00
Benzene	**0.0003**
Toluene	**0.0001**
E-Benzene	**0.0000**
Xylenes	**0.0000**
n-Hexane	**0.0002**
224Trimethylp	**0.0000**
Psuedo Comp1	0.00
Psuedo Comp2	0.00
Psuedo Comp3	0.00
Psuedo Comp4	0.00
Psuedo Comp5	0.00
Total VOCS	0.02

Total HAPS lb/hr	Max HAPs lb/hr
0.0006	0.00

Pollutant	tpy
H2S	0.00
Propane	0.05
Butanes	0.03
Pentanes	0.01
Hexanes	0.00
Benzene	**0.0012**
Toluene	**0.0004**
E-Benzene	**0.0001**
Xylenes	**0.0000**
n-Hexane	**0.0010**
224Trimethylp	**0.0000**
Psuedo Comp1	0.00
Psuedo Comp2	0.00
Psuedo Comp3	0.00
Psuedo Comp4	0.00
Psuedo Comp5	0.00
Total VOCS	0.10

Total HAPs tpy	Max HAPS tpy
0.0027	0.00

Hazardous Air Pollutants - Emission Source: **OLOAD-1**

Pollutant	lb/hr
H2S	0.23
Propane	18.02
Butanes	9.71
Pentanes	3.32
Hexanes	0.44
Benzene	**0.3876**
Toluene	**0.1315**
E-Benzene	**0.0412**
Xylenes	**0.0147**
n-Hexane	**0.3253**
224Trimethylp	**0.0000**
Psuedo Comp1	0.55
Psuedo Comp2	0.16
Psuedo Comp3	0.04
Psuedo Comp4	0.00
Psuedo Comp5	0.00
Total VOCS	33.13

Total HAPS lb/hr	Max HAPs lb/hr
0.9004	0.39

Pollutant	tpy
H2S	0.01
Propane	0.50
Butanes	0.27
Pentanes	0.09
Hexanes	0.01
Benzene	**0.0108**
Toluene	**0.0037**
E-Benzene	**0.0011**
Xylenes	**0.0004**
n-Hexane	**0.0091**
224Trimethylp	**0.0000**
Psuedo Comp1	0.02
Psuedo Comp2	0.00
Psuedo Comp3	0.00
Psuedo Comp4	0.00
Psuedo Comp5	0.00
Total VOCS	0.92

Total HAPs tpy	Max HAPS tpy
0.0251	0.01

Hazardous Air Pollutants - Emission Source: **PWLOAD-1**

Pollutant	lb/hr
H2S	0.00
Propane	0.13
Butanes	0.07
Pentanes	0.02
Hexanes	0.00
Benzene	**0.0028**
Toluene	**0.0009**
E-Benzene	**0.0003**
Xylenes	**0.0001**
n-Hexane	**0.0023**
224Trimethylp	**0.0000**
Psuedo Comp1	0.00
Psuedo Comp2	0.00
Psuedo Comp3	0.00
Psuedo Comp4	0.00
Psuedo Comp5	0.00
Total VOCS	0.24

Total HAPS lb/hr	Max HAPs lb/hr
0.0064	0.00

Pollutant	tpy
H2S	0.00
Propane	0.02
Butanes	0.01
Pentanes	0.00
Hexanes	0.00
Benzene	**0.0005**
Toluene	**0.0002**
E-Benzene	**0.0001**
Xylenes	**0.0000**
n-Hexane	**0.0004**
224Trimethylp	**0.0000**
Psuedo Comp1	0.00
Psuedo Comp2	0.00
Psuedo Comp3	0.00
Psuedo Comp4	0.00
Psuedo Comp5	0.00
Total VOCS	0.04

Total HAPs tpy	Max HAPS tpy
0.0011	0.00

Hazardous Air Pollutants - Emission Source: **FL-1A-LP-SSM**

Pollutant	lb/hr
H2S	0.00
Propane	0.11
Butanes	0.06
Pentanes	0.02
Hexanes	0.00
Benzene	**0.0024**
Toluene	**0.0008**
E-Benzene	**0.0002**
Xylenes	**0.0001**
n-Hexane	**0.0020**
224Trimethylp	**0.0000**
Psuedo Comp1	0.00
Psuedo Comp2	0.00
Psuedo Comp3	0.00
Psuedo Comp4	0.00
Psuedo Comp5	0.00
Total VOCS	0.20

Total HAPS lb/hr	Max HAPs lb/hr
0.0055	0.00

Pollutant	tpy
H2S	0.00
Propane	0.05
Butanes	0.03
Pentanes	0.01
Hexanes	0.00
Benzene	**0.0010**
Toluene	**0.0003**
E-Benzene	**0.0001**
Xylenes	**0.0000**
n-Hexane	**0.0009**
224Trimethylp	**0.0000**
Psuedo Comp1	0.00
Psuedo Comp2	0.00
Psuedo Comp3	0.00
Psuedo Comp4	0.00
Psuedo Comp5	0.00
Total VOCS	0.09

Total HAPs tpy	Max HAPS tpy
0.0024	0.00

Hazardous Air Pollutants - Emission Source: **FL-1A-HP**

Pollutant	lb/hr
H2S	1.32
Propane	101.97
Butanes	54.96
Pentanes	18.81
Hexanes	2.49
Benzene	**2.1939**
Toluene	**0.7443**
E-Benzene	**0.2329**
Xylenes	**0.0835**
n-Hexane	**1.8411**
224Trimethylp	**0.0000**
Psuedo Comp1	3.09
Psuedo Comp2	0.89
Psuedo Comp3	0.21
Psuedo Comp4	0.00
Psuedo Comp5	0.00
Total VOCS	187.51

Total HAPS lb/hr	Max HAPs lb/hr
5.0956	2.19

Pollutant	tpy
H2S	0.39
Propane	29.98
Butanes	16.16
Pentanes	5.53
Hexanes	0.73
Benzene	**0.6450**
Toluene	**0.2188**
E-Benzene	**0.0685**
Xylenes	**0.0245**
n-Hexane	**0.5413**
224Trimethylp	**0.0000**
Psuedo Comp1	0.91
Psuedo Comp2	0.26
Psuedo Comp3	0.06
Psuedo Comp4	0.00
Psuedo Comp5	0.00
Total VOCS	55.13

Total HAPs tpy	Max HAPS tpy
1.4981	0.64

Hazardous Air Pollutants - Emission Source: **SSM-1**

Pollutant	lb/hr
H2S	0.00
Propane	0.00
Butanes	0.00
Pentanes	0.00
Hexanes	0.00
Benzene	**0.0000**
Toluene	**0.0000**
E-Benzene	**0.0000**
Xylenes	**0.0000**
n-Hexane	**0.0000**
224Trimethylp	**0.0000**
Psuedo Comp1	0.00
Psuedo Comp2	0.00
Psuedo Comp3	0.00
Psuedo Comp4	0.00
Psuedo Comp5	0.00
Total VOCS	0.00

Total HAPS lb/hr	Max HAPs lb/hr
0.0000	0.00

Pollutant	tpy
H2S	0.07
Propane	5.44
Butanes	2.93
Pentanes	1.00
Hexanes	0.13
Benzene	**0.1170**
Toluene	**0.0397**
E-Benzene	**0.0124**
Xylenes	**0.0045**
n-Hexane	**0.0982**
224Trimethylp	**0.0000**
Psuedo Comp1	0.16
Psuedo Comp2	0.05
Psuedo Comp3	0.01
Psuedo Comp4	0.00
Psuedo Comp5	0.00
Total VOCS	10.00

Total HAPs tpy	Max HAPS tpy
0.2717	0.12

Hazardous Air Pollutants - Emission Source: **FL-1A-LP**

Pollutant	lb/hr
H2S	0.02
Propane	1.27
Butanes	0.68
Pentanes	0.23
Hexanes	0.03
Benzene	**0.0273**
Toluene	**0.0092**
E-Benzene	**0.0029**
Xylenes	**0.0010**
n-Hexane	**0.0229**
224Trimethylp	**0.0000**
Psuedo Comp1	0.04
Psuedo Comp2	0.01
Psuedo Comp3	0.00
Psuedo Comp4	0.00
Psuedo Comp5	0.00
Total VOCS	2.33

Total HAPS lb/hr	Max HAPs lb/hr
0.0633	0.03

Pollutant	tpy
H2S	0.03
Propane	2.07
Butanes	1.11
Pentanes	0.38
Hexanes	0.05
Benzene	**0.0445**
Toluene	**0.0151**
E-Benzene	**0.0047**
Xylenes	**0.0017**
n-Hexane	**0.0373**
224Trimethylp	**0.0000**
Psuedo Comp1	0.06
Psuedo Comp2	0.02
Psuedo Comp3	0.00
Psuedo Comp4	0.00
Psuedo Comp5	0.00
Total VOCS	3.80

Total HAPs tpy	Max HAPS tpy
0.1033	0.04

Section 6

Information Used to Determine Emissions

Hardcopy and Portal Submittals – complete this section

Check the box for each type of information submitted. This documentation is required, if applicable to the facility.

Failure to include applicable supporting documentation may result in application denial.

☒ Specifications for control equipment, including control efficiency specifications and sufficient engineering data for verification of control equipment operation, including design drawings, test reports, and design parameters that affect normal operation.

☐ Engine or Generator Manufacturer specifications

☐ Catalyst Manufacturer specifications (If a catalyst is being utilized to reduce emissions, the catalyst manufacturer emission factors must be used in all emission calculations. A 25% safety factor may be applied to each pollutant.

☐ NSPS JJJJ emission factors **may not** be utilized in lieu of catalyst manufacture specifications when a catalyst is installed, and the catalysts manufacturer achieves higher control efficiency.

☒ Flare Manufacturer specifications

☒ Oil/Liquid Analysis: This data is required to match the inputs in all applicable emission calculations. For facilities that have not been constructed and a representative analysis is used it cannot be older than 1 year. For existing facilities, the gas analyses required by Condition A201.A (must be 1 year old or less).

☐ Gas Analysis (must be 1 year old or less) This data is required to match the inputs in all applicable emission calculations.

☒ Extended Gas Analysis (must be 1 year old or less) This data is required to match the inputs in all applicable emission calculations.

☐ 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).

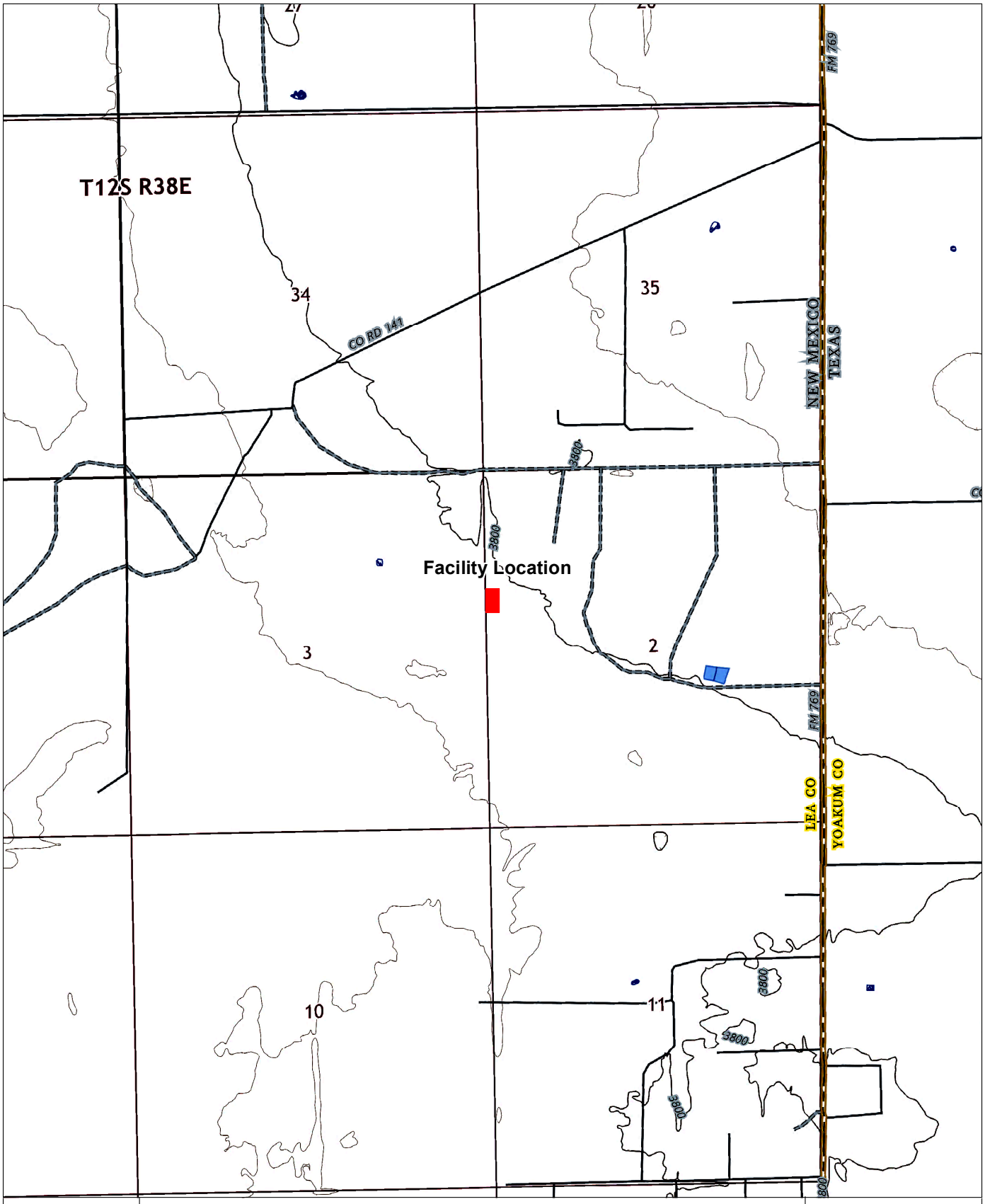
☐ If test data are used, to support emissions calculations or to establish allowable emission limits, include a copy of the complete test report. If the test data are for an emissions unit other than the one being permitted, the emission units must be identical. Test data may not be used if any difference in operating conditions of the unit being permitted and the unit represented in the test report significantly effect emission rates.

☐ Fuel specifications sheet.

☒ If computer models are used to estimate emissions, include an input summary and a detailed report, and a disk containing the input file used to run the model.

☐ For tank-flashing 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.

Representative Gas Analysis Justification:



Topographic Map
Wexler Tank Battery
Lea County, NM

N
W E
S

0 1,000 2,000 4,000 6,000 8,000 Feet

SPHERE 3 ENVIRONMENTAL

1501 Bill Owens Parkway
Longview, TX 75604
Phone: (903) 297-4673
www.sphere3env.com

Steward Energy II, LLC Project Number: 050241.00	Date: 07/24/2024	Base Map: USGS 7.5 Minute Topographic Quadrangle: Prairieview NE, NM (Published 2023)

Section 8A

Applicable State & Federal Regulations

Hardcopy and Portal Submittals – complete this section

Provide a discussion demonstrating compliance with each 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 listed in the "Applies to Unit No(s)" column, 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.

Applicable State Regulations:

State Regulation Citation	Title	Federally Enforceable	Overview of Regulation		Unit(s) or Facility	Applies? (Yes or No)	Justification: Identify the applicability criteria, numbering each (i.e. 1. Post 7/23/84, 2. 75 m^3, 3. VOL)
20.2.1 NMAC	General Provisions	Yes	General Provisions apply to Notice of Intent, Construction, and Title V permit applications.		Facility	Yes	20.2.1.5 specifies the effective date for permanent compliance with statewide air quality regulations is September 27, 1995
20.2.3 NMAC	Ambient Air Quality Standards NMAAQS	Yes	20.2.3 NMAC is a State Implementation Plan (SIP) approved regulation that limits the maximum allowable concentration of Sulfur Compounds, Carbon Monoxide, and Nitrogen Dioxide.		Facility	Yes	The facility has individual emission units to which the NMAAQS apply.
20.2.7 NMAC	Excess Emissions	Yes	If your entire facility or individual pieces of equipment are subject to emissions limits in a permit or numerical emissions standards in a federal or state regulation, this applies.		Facility	Yes	The facility has individual pieces of equipment that have emission limits, therefore, this rule applies
20.2.38 NMAC	Hydrocarbon Storage Facility	No	Use the regulation link then cut & paste applicable sections. 20.2.38 NMAC does **not** establish practically enforceable limits that can be used for PTE or PER calculations.		N/A	No	This facility stores less than 65,000 gallons of hydrocarbon so this rule is not applicable.
20.2.50 NMAC	Oil and Gas Sector – Ozone Precursor Pollutants	No	This regulation establishes emission standards for volatile organic compounds (VOC) and oxides of nitrogen (NO_x) for oil and gas production, processing, compression, and transmission sources.	Check the box for the subparts that are applicable: ☐ 113 – Engines and Turbines ☐ 114 – Compressor Seals ☒ 115 – Control Devices and Closed Vent Systems ☒ 116 – Equipment Leaks and Fugitive Emissions ☐ 117 – Natural Gas Well Liquid Unloading ☐ 118 – Glycol Dehydrators ☐ 119 – Heaters ☐ 120 – Hydrocarbon Liquid Transfers ☐ 121 – Pig Launching and Receiving ☐ 122 – Pneumatic Controllers and Pumps ☒ 123 – Storage Vessels ☐ 124 – Well Workovers ☐ 125 – Small Business Facilities ☒ 126 – Produced Water Management Unit		115 - All control devices at this site will be installed, operated, and maintained consistent with manufacturing specifications and good engineering practices as stated in this subpart. 116 - Fugitive components at this tank battery will meet the monitoring, repair, recordkeeping, and reporting requirements consistent with the emissions standards stated in this subpart. 123 - This subpart applies as the storage tanks at this

State Regulation Citation	Title	Federally Enforceable	Overview of Regulation	Unit(s) or Facility	Applies? (Yes or No)	Justification: Identify the applicability criteria, numbering each (i.e. 1. Post 7/23/84, 2. 75 m^3, 3. VOL)
			☐ 127 – Flowback Vessels and Preproduction Operations			battery exceed a PTE of 3 tpy VOC without control. All measurement, monitoring, recordkeeping, and reporting criteria will be met.
20.2.61.109 NMAC	Smoke & Visible Emissions	No	Engines and heaters are Stationary Combustion Equipment. Specify units subject to this regulation.	HT 1-3, FL-1A-HP, FL-1A-LP-SSM FL-1A-LP	Yes	Listed Units are stationary combustion units.
20.2.73 NMAC	NOI & Emissions Inventory Require-ments	Yes	NOI: 20.2.73.200 NMAC applies to all facilities emitting over 10 TPY of any regulated air contaminate. Thus, permitted facilities are also subject to this rule. This GCP-O&G registration also serves the purpose of meeting 20.2.73 NMAC notification requirements. Emissions Inventory: 20.2.73.300. NMAC applies to facilities registering under the GCP.	Facility	Yes – applies to all GCP-O&G registrants.	Under 20.2.73.300.B(4) NMAC, NMED will periodically request emissions inventory reporting from minor source (expected each third year starting in 2020.) Under 20.2.73.300.B(1) NMAC, if fugitives result in PTE >100 tpy VOC, annual reporting is required.
20.2.77 NMAC	New Source Performanc e	Yes	This is a stationary source which is subject to the requirements of 40 CFR Part 60, as amended on the date of certification.	FUG-1	Yes	Subpart OOOOb for oil storage tanks and fugitives
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 on the date of certification.	N/A	No	There are no source operations at this facility that are subject to 40 CFR Part 61 NESHAP standards.
20.2.82 NMAC	MACT Standards for source categories of HAPS	Yes	This regulation applies to all sources emitting hazardous air pollutants, which are subject to the requirements of 40 CFR Part 63, as amended on the date of certification.	N/A	No	There are no source operations at this facility that are subject to 40 CFR Subpart 63.

Applicable Federal Regulations (This is not an exhaustive list; add applicable regulations such as NSPS GG and KKKK):

Federal Regulation Citation	Title	Overview of Regulation	Units(s) or Facility	Applies? (Yes or No)	Justification: Identify the applicability criteria, numbering each (i.e. 1. Post 7/23/84, 2. 75 m3, 3. VOL)
40 CFR 50	National Primary and Secondary Ambient Air Quality Standards (NAAQS)	Applicable requirement per GCP-O&G Condition A103. Any national ambient air quality standard.	Facility	Yes	The facility has individual emission units to which the NAAQS applies.
40 CFR 60, Subpart A	General Provisions	Applies if any other NSPS subpart applies.	OT 1-3, FUG-1	Yes	Applies because this facility has units subject to NSPS Subpart OOOOa.
40 CFR 60, Subpart OOOO	Standards of Performance for Crude Oil and Natural Gas Production, Transmission and	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);	N/A	No	This regulation does not apply because the facilities were constructed after September 18, 2015.

Federal Regulation Citation	Title	Overview of Regulation	Units(s) or Facility	Applies? (Yes or No)	Justification: Identify the applicability criteria, numbering each (i.e. 1. Post 7/23/84, 2. 75 m3, 3. VOL)
	Distribution for which Construction, Modification or Reconstruction Commenced After August 23, 2011, and on or before September 18, 2015	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)			
40 CFR 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).	N/A	No	This regulation does not apply because the facilities were modified after December 6, 2022.
40 CFR 60, Subpart OOOOb	Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After December 6, 2022	If there is a standard or other requirement, then the facility is an "affected facility." Currently there are standards for: gas wells (60.5375b); centrifugal compressors (60.5380b); reciprocating compressors (60.5385b): controllers (60.5390b); storage vessels (60.5395b); fugitive emissions at well sites and compressor stations (60.5397b); equipment leaks at gas plants (60.5400b); sweetening units (60.5405b).	FUG-1	Yes	This regulation applies because "affected" facilities were modified after December 6, 2022. The storage vessels are not subject due to practically enforceable limits. Fugitive emissions at the facility are subject to the standards in §60.5397b.
40 CFR 60, Subpart IIII	Standards of performance for Stationary Compression Ignition Internal Combustion Engines	See 40 CFR 60.4200(a) 1 through 4 to determine applicable category and state engine size, fuel type, and date of manufacture.	N/A	No	There are no compression ignition IC engines at this facility.
40 CFR 60, Subpart JJJJ	Standards of Performance for Stationary Spark Ignition Internal Combustion Engines	See 40 CFR 60.4230(a), 1 through 5 to determine applicable category and state engine size, fuel type, and date of manufacture.	N/A	No	There are no spark ignition IC engines at this facility.
40 CFR 63, Subpart A	General Provisions	Applies if any other subpart applies.	N/A	No	There are no source operations at this facility that are subject to 40 CFR Subpart 63.
40 CFR 63, Subpart HH	NESHAP for Glycol Dehydrators	See 40 CFR 63, Subpart HH	N/A	No	There are no glycol dehydrators at this facility.
40 CFR 63, Subpart ZZZZ	NESHAP 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.	N/A	No	There are no reciprocating internal combustion engines at this facility.

Section 8B
Compliance Test History and Disclosure Form

Hardcopy and Portal Submittals – complete this section

To evaluate the requirement for compliance tests, you must submit a compliance test history. The table below provides an example.

Compliance Test History Table

Unit No.	Test Description	Test Date
N/A	N/A	N/A

Air Permit Application
Compliance History Disclosure Form

Pursuant to Subsection 74-2-7(S) of the New Mexico Air Quality Control Act ("AQCA"), NMSA §§ 74-2-1 to -17, the New Mexico Environment Department ("Department") may deny any permit application or revoke any permit issued pursuant to the AQCA if, within ten years immediately preceding the date of submission of the permit application, the applicant met any one of the criteria outlined below. In order for the Department to deem an air permit application administratively complete or issue an air permit for those permits without an administrative completeness determination process, the applicant must complete this Compliance History Disclosure Form as specified in Subsection 74-2-7(P). An existing permit holder (permit issued prior to June 18, 2021) shall provide this Compliance History Disclosure Form to the Department upon request.

Permittee/Applicant Company Name		**Expected Application Submittal Date**
Steward Energy II, LLC		12/20/24
Permittee/Company Contact	**Phone**	**Email**
Nick White	214-297-0500	Nick.white@stewardenergy.com

	Within the 10 years preceding the expected date of submittal of the application, has the permittee or applicant:	
1	Knowingly misrepresented a material fact in an application for a permit?	☐ Yes X No
2	Refused to disclose information required by the provisions of the New Mexico Air Quality Control Act?	☐ Yes X No
3	Been convicted of a felony related to environmental crime in any court of any state or the United States?	☐ Yes X No
4	Been convicted of a crime defined by state or federal statute as involving or being in restraint of trade, price fixing, bribery, or fraud in any court of any state or the United States?	☐ Yes X No
5a	Constructed or operated any facility for which a permit was sought, including the current facility, without the required air quality permit(s) under 20.2.70 NMAC, 20.2.72 NMAC, 20.2.74 NMAC, 20.2.79 NMAC, or 20.2.84 NMAC?	X Yes ☐ No
5b	If "No" to question 5a, go to question 6. If "Yes" to question 5a, state whether each facility that was constructed or operated without the required air quality permit met at least one of the following exceptions: a. The unpermitted facility was discovered after acquisition during a timely environmental audit that was authorized by the Department; or b. The operator of the facility estimated that the facility's emissions would not require an air permit, **and** the operator applied for an air permit within 30 calendar days of discovering that an air permit was required for the facility.	X Yes ☐ No
6	Had any permit revoked or permanently suspended for cause under the environmental laws of any state or the United States?	☐ Yes X No
7	For each "yes" answer, please provide an explanation and documentation. On February 8, 2022, Steward Energy received a post-inspection notification from NMED AQB regarding failure to obtain a permit prior to commencing construction of ten facilities that had been previously acquired or constructed.	

Calculations for the total Mcf flared
End Meter Volume – the Begin Meter Volume.

***Composition for the gas has been entered into the question portion of the C-129.
If further back up is needed please let us know and will provide requested data.

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

DEFINITIONS

Operator: BURK ROYALTY CO., LTD. P.O. Box 94903 Wichita Falls, TX 76308	OGRID: 3053
	Action Number: 502141
	Action Type: [C-129] Venting and/or Flaring (C-129)

DEFINITIONS

For the sake of brevity and completeness, please allow for the following in all groups of questions and for the rest of this application:

- this application's operator, hereinafter "this operator";
- venting and/or flaring, hereinafter "vent or flare";
- any notification or report(s) of the C-129 form family, hereinafter "any C-129 forms";
- the statements in (and/or attached to) this, hereinafter "the statements in this";
- and the past tense will be used in lieu of mixed past/present tense questions and statements.

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

Action 502141

QUESTIONS

Operator: BURK ROYALTY CO., LTD. P.O. Box 94903 Wichita Falls, TX 76308	OGRID: 3053
	Action Number: 502141
	Action Type: [C-129] Venting and/or Flaring (C-129)

QUESTIONS

Prerequisites	
Any messages presented in this section, will prevent submission of this application. Please resolve these issues before continuing with the rest of the questions.	
Incident Well	*Unavailable.*
Incident Facility	**[fAPP2305752280] WEXLER FEE TANK BATTERY**

Determination of Reporting Requirements	
Answer all questions that apply. The Reason(s) statements are calculated based on your answers and may provide addional guidance.	
Was this vent or flare caused by an emergency or malfunction	Yes
Did this vent or flare last eight hours or more cumulatively within any 24-hour period from a single event	Yes
Is this considered a submission for a vent or flare event	**Yes, minor venting and/or flaring of natural gas.**
An operator shall file a form C-141 instead of a form C-129 for a release that, includes liquid during venting and/or flaring that is or may be a major or minor release under 19.15.29.7 NMAC.	
Was there **at least 50 MCF** of natural gas vented and/or flared during this event	Yes
Did this vent or flare result in the release of **ANY** liquids (not fully and/or completely flared) that reached (or has a chance of reaching) the ground, a surface, a watercourse, or otherwise, with reasonable probability, endanger public health, the environment or fresh water	No
Was the vent or flare within an incorporated municipal boundary or withing 300 feet from an occupied permanent residence, school, hospital, institution or church in existence	No

Equipment Involved	
Primary Equipment Involved	*Not answered.*
Additional details for Equipment Involved. Please specify	*Not answered.*

Representative Compositional Analysis of Vented or Flared Natural Gas	
Please provide the mole percent for the percentage questions in this group.	
Methane (CH4) percentage	55
Nitrogen (N2) percentage, if greater than one percent	6
Hydrogen Sulfide (H2S) PPM, rounded up	4,374
Carbon Dioxide (C02) percentage, if greater than one percent	7
Oxygen (02) percentage, if greater than one percent	0
If you are venting and/or flaring because of Pipeline Specification, please provide the required specifications for each gas.	
Methane (CH4) percentage quality requirement	*Not answered.*
Nitrogen (N2) percentage quality requirement	*Not answered.*
Hydrogen Sufide (H2S) PPM quality requirement	*Not answered.*
Carbon Dioxide (C02) percentage quality requirement	*Not answered.*
Oxygen (02) percentage quality requirement	*Not answered.*

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 (continued)

Operator: BURK ROYALTY CO., LTD. P.O. Box 94903 Wichita Falls, TX 76308	OGRID: 3053
	Action Number: 502141
	Action Type: [C-129] Venting and/or Flaring (C-129)

QUESTIONS

Date(s) and Time(s)	
Date vent or flare was discovered or commenced	08/31/2025
Time vent or flare was discovered or commenced	12:00 AM
Time vent or flare was terminated	11:59 PM
Cumulative hours during this event	15

Measured or Estimated Volume of Vented or Flared Natural Gas	
Natural Gas Vented (Mcf) Details	*Not answered.*
Natural Gas Flared (Mcf) Details	Cause: Power Failure | Gas Plant | Natural Gas Flared | Released: 124 Mcf | Recovered: 0 Mcf | Lost: 124 Mcf.
Other Released Details	*Not answered.*
Additional details for Measured or Estimated Volume(s). Please specify	*Not answered.*
Is this a gas only submission (i.e. only significant Mcf values reported)	**Yes, according to supplied volumes this appears to be a "gas only" report.**

Venting or Flaring Resulting from Downstream Activity	
Was this vent or flare a result of downstream activity	Yes
Was notification of downstream activity received by this operator	No
Downstream OGRID that should have notified this operator	[712133] STAKEHOLDER MIDSTREAM LLC
Date notified of downstream activity requiring this vent or flare	*Not answered.*
Time notified of downstream activity requiring this vent or flare	*Not answered.*

Steps and Actions to Prevent Waste	
For this event, this operator could not have reasonably anticipated the current event and it was beyond this operator’s control.	True
Please explain reason for why this event was beyond this operator's control	Stakeholder Midstream Campo Viejo experienced a total power outage resulting in both plants to be down.
Steps taken to limit the duration and magnitude of vent or flare	Stakeholder Midstream Campo Viejo experienced a total power outage resulting in both plants to be down.
Corrective actions taken to eliminate the cause and reoccurrence of vent or flare	Stakeholder Midstream Campo Viejo experienced a total power outage resulting in both plants to be down.

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ACKNOWLEDGMENTS

Operator: BURK ROYALTY CO., LTD. P.O. Box 94903 Wichita Falls, TX 76308	OGRID: 3053
	Action Number: 502141
	Action Type: [C-129] Venting and/or Flaring (C-129)

ACKNOWLEDGMENTS

☑	I acknowledge that I am authorized to submit a *Venting and/or Flaring* (C-129) report on behalf of this operator and understand that this report can be **a complete** C-129 submission per 19.15.27.8 and 19.15.28.8 NMAC.
☑	I acknowledge that upon submitting this application, I will be creating a new incident file (assigned to this operator) to track any C-129 forms, pursuant to 19.15.27.7 and 19.15.28.8 NMAC and understand that this submission meets the notification requirements of Paragraph (1) of Subsection G and F respectively.
☑	I hereby certify the statements in this report are true and correct to the best of my knowledge and acknowledge that any false statement may be subject to civil and criminal penalties under the Oil and Gas Act.
☑	I acknowledge that the acceptance of any C-129 forms by the OCD does not relieve this operator of liability should their operations have failed to adequately investigate, report, and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment.
☑	I acknowledge that OCD acceptance of any C-129 forms does not relieve this operator of responsibility for compliance with any other applicable federal, state, or local laws and/or regulations.

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CONDITIONS

Operator: BURK ROYALTY CO., LTD. P.O. Box 94903 Wichita Falls, TX 76308	OGRID: 3053
	Action Number: 502141
	Action Type: [C-129] Venting and/or Flaring (C-129)

CONDITIONS

Created By	Condition	Condition Date
nwhite01	If the information provided in this report requires an amendment, submit a [C-129] Amend Venting and/or Flaring Incident (C-129A), utilizing your incident number from this event.	9/3/2025