PRICE ENERGY CONSULTING, LLC
P. O. BOX 50676
MIDLAND, TX 79710-0676
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July 9, 2024

Air Permits Initial Review Team (APIRT)
Texas Commission on Environmental Quality
MC 161
P. O. Box 13087
Austin, TX 78711-3087

Re: Highpeak Energy – CN605696349
Bledsoe 65 CTB Permit by Rule

Dear Madam/Sir:

Enclosed, please find the completed forms and supporting documentation to register the above referenced battery under 106.352(l) and 106.492, Permit by Rule.

If you have any questions or require additional information, please contact me at the above address or telephone.

Sincerely,

Robert A. Price

Enclosures

Cc: TCEQ, Region 7
9900 W IH-20, Ste 100
Midland, TX 79706

Bruce Woodard, Highpeak Energy – Midland, TX

Highpeak Energy Holdings LLC
Bledsoe 65 CTB

PROCESS DESCRIPTION:

This Permit by Rule application is being submitted to authorize emissions from Bledsoe 65 CTB. The application is being submitted to certify the use of a Vapor Recovery Unit and Low-Pressure Flare (LPF-01) to limit emissions from the storage tanks.

The facility gathers crude oil from producing wells. The produced fluids are initially split into gas, oil and water streams through inlet separation culminating in the heater treater (HT-01).

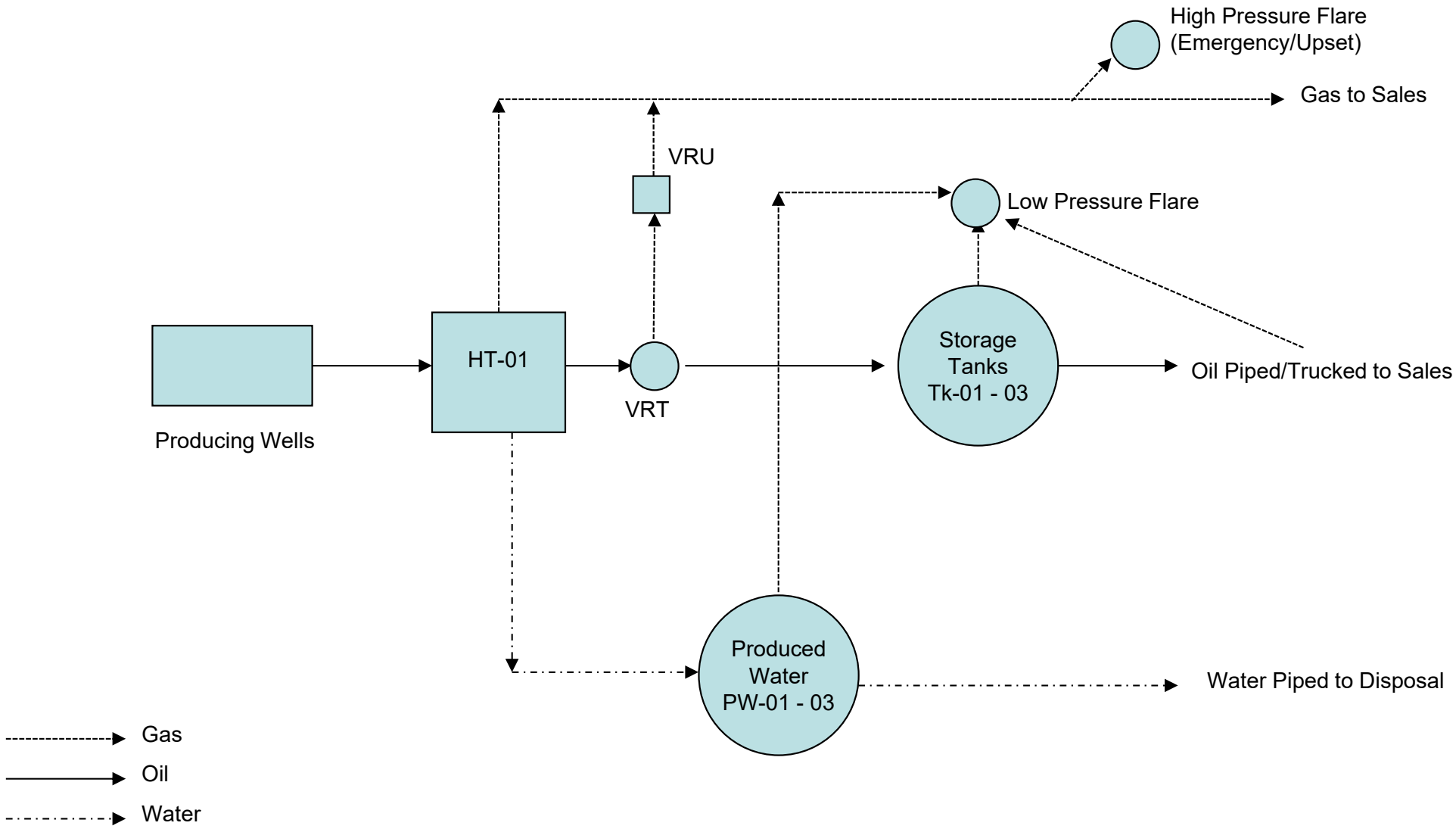
From the treaters, crude oil is routed through a vapor recovery tower (VRT) to remove the flash emissions from the oil. Vapors from the VRT are routed to an electric VRU and then to gas sales. During periods of VRU downtime, the vapors are routed to the low-pressure flare. The oil then flows to three (3) 1000 bbl storage tanks (TK-01 - 03). The vapors from the storage tanks are routed to a low-pressure flare (LPF-01) for destruction. Gas is piped from the facility to downstream markets. Crude oil is being trucked initially but will be converted to pipeline takeaway in the future. Truck vapors are routed to the low-pressure flare for destruction.

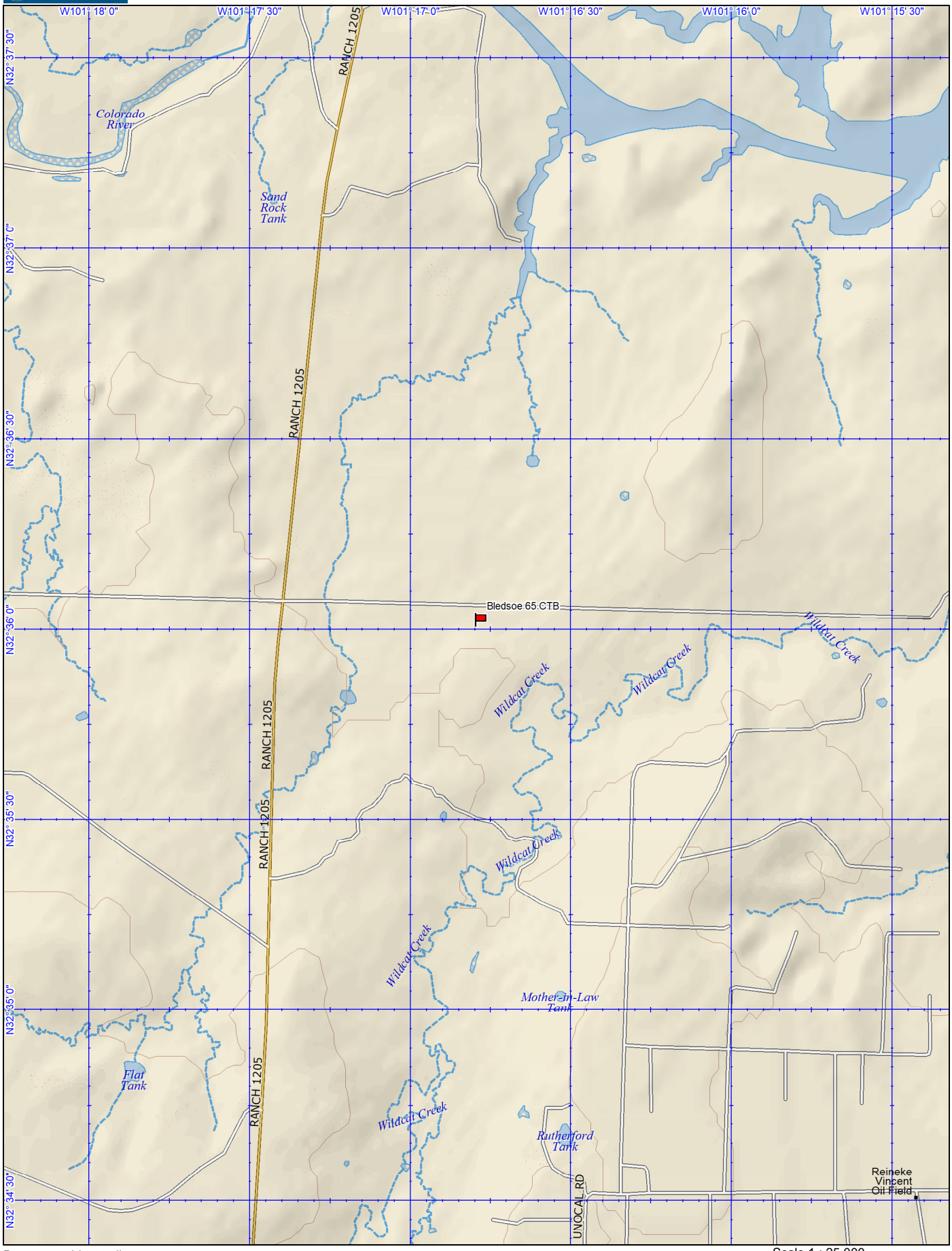
Water from the separators is routed to three (3) 1000 bbl produced water tanks (PW-01 - 03). Emissions from the produced water tanks are routed to the low-pressure flare. Produced water is piped from the facility to disposal.

A high-pressure flare is an emergency flare in the event of upset emissions. Both flare tips are equipped with pilot gas and an electronic ignition system.

MSS Emissions for the facility are included with this application to be registered under 106.352(l).

Bledsoe 65 CTB
Process Flow Diagram





TN

MN (4.9°E)

Scale 1 : 25,000

1" = 2,083.3 ft

Data Zoom 13-0

Highpeak Energy Holdings LLC
Bledsoe 65 CTB

NSPS OOOOb Legally and Practicably Enforceable (LPE) limits for Storage Vessels

Pursuant to 30 TAC 122.122(b) and subject to TCEQ's exclusive authority to regulate greenhouse gas emissions under SB 784 (88th R.S.), emissions from storage vessels (i.e., from each tank battery) to the atmosphere shall be less than 6 tons/yr VOC and less than 20 tpy methane.

Consistent with 40 CFR § 60.5365b(e)(2), compliance shall be demonstrated as follows:

- Battery-wide throughput of oil and produced water shall not exceed 2000 Bbl/d and 9000 Bbl/d, respectively, on a 30-day block average. The registrant may elect to track throughput on a calendar monthly basis in order to demonstrate compliance with the 30-day block average limit. For the limited purpose of demonstrating compliance with the emission limitations (< 6 tons/yr VOC and < 20 tpy/methane), the foregoing throughput limitations expressed herein may differ from throughput values otherwise used to calculate sitewide actual emissions for purposes of determining compliance with 30 TAC §§ 106.4, 106.352(l).
- The registrant shall operate the VRU such that either: (1) the on-stream time (measured in hours) shall be no less than 95% of the hours in a given year; or (2) the flow-weighted gas recovery (measured in scf) shall be no less than 95% of the value corresponding to 100% capture of tank battery vapors. The on-stream time or recovery rate limits shall apply on a rolling 12-month average basis. The registrant may elect to demonstrate compliance on a calendar monthly basis in order to demonstrate compliance with the 30-day block average limit. For the limited purpose of demonstrating compliance with the emission limitations (< 6 tons/yr VOC and < 20 tpy/methane), the foregoing on-stream time or recovery rate limitations expressed herein may differ from values otherwise used to calculate sitewide actual emissions for purposes of determining compliance with 30 TAC §§ 106.4, 106.352(l).
- The registrant shall perform equip the flare with a continuous pilot flame and shall continuously verify the presence of pilot flame using a thermocouple, flame scanner, or equivalent device. Any loss of pilot shall trigger an alarm that is transmitted to a manned location, and the registrant shall respond to all alarms within 24 hours. The monitoring device shall be installed, calibrated, and maintained, such that valid data is generated during 95% of the time (determined in hours, on a 30-day block average) that the flare operated.
- Within 30 days of start-up, the registrant shall conduct a visible emissions observation according Method 22 of appendix A-7 of Part 60 to determine operation of the flare with no visible emissions.
- The closed vent system used to direct vapors from the tank battery to the flare shall be designed in such a manner that the peak vapor flow rate to the flare from the tank battery does not give rise to frictional losses in excess of the lowest pressure relief set point on the closed vent system or tank battery. Closed vent system adequacy shall be determined and documented consistent with good engineering practices.
- All records demonstrating compliance with the foregoing limitations shall be maintained on-site and shall be provided, upon request, during regular business hours to representatives of the appropriate commission regional office and any local air pollution control agency having jurisdiction over the site. If however, the site normally operates unattended, certified registrations and records demonstrating compliance with the certified registration must be maintained at an office within Texas having day-to-day operational control of the site. Upon request, the commission shall make any such records of compliance available to the public in a timely manner.

- The registrant shall certify its compliance with the foregoing in writing annually through either: (a) a supplemental APD-CERT filing made via STEERS; (b) an appendix to any report required under WATER CODE § 5.586(b); (c) an appendix to any annual report otherwise required under 40 CFR Part 60, Subpart OOOO, OOOOa, OOOOb, or any state regulations satisfying plan requirements under 40 CFR Part 60, Subpart OOOOc; provided, however, that any such report shall be submitted to the appropriate commission regional office and/or uploaded to STEERS.

Highpeak Energy Holdings LLC
Bledsoe 65 CTB

Emission Rate Summary

			VOC Emissions		H2S Emissions		SO2 Emissions		NOx Emissions		CO Emissions	
EPN	Description	Production (bbls/day)	Emissions (lbs/hr)	Emissions (tons/yr)	Emissions (lbs/hr)	Emissions (tons/yr)	Emissions (lbs/hr)	Emissions (tons/yr)	Emissions (lbs/hr)	Emissions (tons/yr)	Emissions (lbs/hr)	Emissions (tons/yr)
PBR CERTIFIED EMISSIONS												
Tk-01	Oil Storage Tank	600	0.157	0.688	0.000	0.000						
Tk-02	Oil Storage Tank	600	0.157	0.688	0.000	0.000						
Tk-03	Oil Storage Tank	600	0.157	0.688	0.000	0.000						
LPF-01	Low Pressure Flare		EMISSIONS REPRESENTED AT TANKS				0.0000	0.00	2.0373	8.9234	4.0672	17.8144
HPF-01	High Pressure Flare		0.095	0.417	0.000	0.000	0.0000	0.00	0.03	0.12	0.05	0.24
PW-01	Produced Water Tank	3000	0.108	0.473	0.0000	0.0000						
PW-02	Produced Water Tank	3000	0.108	0.473	0.0000	0.0000						
PW-03	Produced Water Tank	3000	0.108	0.473	0.0000	0.0000						
Fug-01	Fugitive Emissions		1.292	5.658	0.0000	0.0000						
HT-01	Heater Treater		0.006	0.025			0.0000	0.0000	0.1022	0.4479	0.0859	0.3762
TL-01	Truck Loading	1800	10.338	13.385	0.0000	0.0000						
MSS-01	MSS Emissions		20.632	0.417	0.0000	0.0000						
Totals			**33.16**	**23.38**	**0.00**	**0.00**	**0.00**	**0.00**	**2.17**	**9.49**	**4.21**	**18.43**

		PM10 Emissions		PM2.5 Emissions	
EPN	Description	Emissions (lbs/hr)	Emissions (tons/yr)	Emissions (lbs/hr)	Emissions (tons/yr)
HT-01	Heater Treater	0.008	0.034	0.0058	0.0255
Totals		**0.01**	**0.03**	**0.01**	**0.03**

MISCELLANEOUS EMISSIONS
Bledsoe 65 CTB

CRUDE OIL STORAGE TANK EMISSIONS

	VOC Emissions								
	Throughput bbls/day	W&B Flashing Loss	Flashing Loss	VRU Downtime Emissions	VRU/VRT Control Efficiency**	W&B Losses	LP Flare Control Efficiency	Total Emissions (lb/hr)	Total Emissions (tpy)
Tk-01	600	473.004	461.71	23.09	1.00	11.30	0.98	0.16	0.69
Tk-02	600	473.004	461.71	23.09	1.00	11.30	0.98	0.16	0.69
Tk-03	600	473.004	461.71	23.09	1.00	11.30	0.98	0.16	0.69

	H2S Emissions								
	Throughput bbls/day	W&B Flashing Loss	Flashing Loss	VRU Downtime Emissions	VRU/VRT Control Efficiency**	W&B Losses	LP Flare Efficiency	Total Emissions (lb/hr)	Total Emissions (tpy)
Tk-01	600	0	0.00	0.00	1.00	0.000	0.98	0.00	0.00
Tk-02	600	0	0.00	0.00	1.00	0.000	0.98	0.00	0.00
Tk-03	600	0	0.00	0.00	1.00	0.000	0.98	0.00	0.00

Total Emissions = (W&B&Flash Emissions-VRU Downtime Emissions * VRU control efficiency) + (VRU Downtime * Flare Control efficiency)

** Per TCEQ Guidance, 98% efficiency of VRU based on (1) Electric VRU, (2) Variable Speed Compressor, (3) Load Sensing Equipment

PRODUCED WATER STORAGE TANK EMISSIONS

			VOC Emissions*			H2S Emissions	
Emission Point	Throughput bbls/day	Uncontrolled Emissions** tpy	lbs/hr	tons/yr	Uncontrolled H2S tpy	lbs/hr	tons/yr
PW-01	3000	2365.02	0.108	0.473	0.00	0.000	0.000
PW-02	3000	2365.02	0.108	0.473	0.00	0.000	0.000
PW-03	3000	2365.02	0.108	0.473	0.00	0.000	0.000

*** From E&P Tanks Results multiplied by 0.01 per TCEQ Guidance. Then multiplied by control efficiency of LP Flare. ** From E&P Tanks.**

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*****************************************************************************************
*     Project Setup Information                                                         *
*****************************************************************************************
Project File              : C:\Users\Andy\Documents\Virtual Machine Tanks Data\Highpeak - Bledsoe 65.ept3
Flowsheet Selection       : Oil Tank with Separator
Calculation Method        : RVP Distillation
Control Efficiency        :  0.00%
Known Separator Stream    : Low Pressure Oil
Entering Air Composition  : No
Component Group           : C10+

Filed Name                : Bledsoe 65 CTB
Well Name                 : Crude Oil Tank Emissions
Permit Number             : Griffin 48-37 Unit A 1H Representative Analytical
Date                      : 2022.04.21


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

Separator Pressure (psia)         : 58.00
Separator Temperature (F)         : 100.0
C10+ SG                           : 0.88
C10+ MW(lb/lbmol)                 : 270.40

-- Low Pressure Oil ---------------------------------------------------------------------
No.   Component           Mole%    Wt%
1     H2S                    0.0000   0.0000
2     O2                     0.0000   0.0000
3     CO2                    0.0150   0.0039
4     N2                     0.0530   0.0087
5     C1                     0.9390   0.0885
6     C2                     1.7940   0.3170
7     C3                     5.2199   1.3526
8     i-C4                   1.1180   0.3818
9     n-C4                   5.4259   1.8530
10    i-C5                   2.5759   1.0921
11    n-C5                   3.2869   1.3935
12    C6                     3.4959   1.7699
13    C7                     8.0838   4.7595
14    C8                     9.1348   6.1314
15    C9                     5.6099   4.2286
16    C10+                  45.4981  72.2899
17    Benzene                0.9460   0.4342
18    Toluene                1.8950   1.0259
19    E-Benzene              0.6550   0.4086
20    Xylenes                1.1950   0.7455
21    n-C6                   2.0490   1.0376
22    224Trimethylp          1.0100   0.6780

-- Sales Oil ----------------------------------------------------------------------------
Production Rate (bbl/day)     : 600.00
Days of Annual Operation      : 365
API Gravity                   : 38.67
Reid Vapor Pressure (psia)    : 7.01
Ambient Pressure (psia)       : 14.70
Ambient Temperature (F)       : 70.0


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

-- Emission Summary ---------------------------------------------------------------------
                  Uncontrolled
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	ton
Total HAPs	8.6180
Total HC	600.2870
VOCs, C2+	572.3870
VOCs, C3+	473.0040
CO2	1.2230
CH4	27.9000

Uncontrolled Recovery Information:

Vapor(mscfd):	30.1900
HC Vapor(mscfd):	29.9300
CO2(mscfd):	0.0600
CH4(mscfd):	3.6100
GOR(SCF/STB):	50.3167

-- Emission Composition ----------

No	Component	Uncontrolled ton
1	H2S	0.0000
2	O2	0.0000
3	CO2	1.2230
4	N2	2.7500
5	C1	27.9000
6	C2	99.3830
7	C3	276.7730
8	i-C4	30.8860
9	n-C4	99.4200
10	i-C5	22.6870
11	n-C5	21.3480
12	C6	8.0360
13	Benzene	1.4970
14	Toluene	0.9760
15	E-Benzene	0.1270
16	Xylenes	0.1970
17	n-C6	4.7050
18	224Trimethylp	1.1150
19	Pseudo Comp1	5.1970
20	Pseudo Comp2	0.0400
21	Pseudo Comp3	0.0000
22	Pseudo Comp4	0.0000
23	Pseudo Comp5	0.0000
24	Total	604.2600

-- Stream Data ----------

No	Component	MW lb/lbmol	LP Oil mole %	Flash Oil mole %	Sales Oil mole %	Flash Gas mole %	W&S Gas mole %	Total Emission mole %
1	H2S	34.80	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	O2	32.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	CO2	44.01	0.0150	0.0038	0.0000	0.2888	0.0927	0.1911
4	N2	28.01	0.0530	0.0016	0.0000	1.3070	0.0388	0.6753
5	C1	16.04	0.9390	0.1079	0.0000	21.2089	2.6502	11.9641
6	C2	30.07	1.7940	0.8364	0.0106	25.1484	20.2989	22.7327
7	C3	44.10	5.2199	4.1076	1.9880	32.3478	54.0684	43.1676
8	i-C4	58.12	1.1180	1.0312	0.9019	3.2338	4.0796	3.6551
9	n-C4	58.12	5.4259	5.2029	4.8859	10.8644	12.6740	11.7658
10	i-C5	72.15	2.5759	2.5969	2.6111	2.0647	2.2615	2.1627
11	n-C5	72.15	3.2869	3.3417	3.3935	1.9503	2.1206	2.0351
12	C6	84.00	3.4959	3.6134	3.7376	0.6302	0.6861	0.6580
13	Benzene	78.11	0.9460	0.9795	1.0153	0.1287	0.1351	0.1319
14	Toluene	92.14	1.8950	1.9698	2.0502	0.0706	0.0751	0.0729
15	E-Benzene	106.17	0.6550	0.6815	0.7101	0.0079	0.0086	0.0083
16	Xylenes	106.17	1.1950	1.2435	1.2957	0.0123	0.0133	0.0128
17	n-C6	86.18	2.0490	2.1182	2.1915	0.3605	0.3906	0.3755
18	224Trimethylp	114.23	1.0100	1.0488	1.0903	0.0638	0.0704	0.0671
19	Pseudo Comp1	110.87	27.0913	28.1894	29.3712	0.3103	0.3346	0.3224
20	Pseudo Comp2	179.24	18.3891	19.1431	19.9552	0.0015	0.0015	0.0015
21	Pseudo Comp3	266.50	10.1968	10.6149	11.0653	0.0000	0.0000	0.0000

22 Pseudo Comp4	369.46	7.9417	8.2674	8.6181	0.0000	0.0000	0.0000
23 Pseudo Comp5	587.50	4.7075	4.9006	5.1085	0.0000	0.0000	0.0000

	LP Oil	Flash Oil	Sales Oil	Flash Gas	W&S Gas	Total Emission
MW (lb/lbmol):	168.52	173.86	179.33	38.26	44.89	41.56
Stream Mole Ratio:	1.0000	0.9606	0.9215	0.0394	0.0391	0.0785
Stream Weight Ratio:	168.52	167.01	165.26	1.51	1.75	3.26
Total Emission (ton):				279.163	325.097	604.260
Heating Value (BTU/scf):				2172.02	2553.58	2362.09
Gas Gravity (Gas/Air):				1.32	1.55	1.43
Bubble Pt. @100F (psia):	63.38	21.06	8.32			
RVP @100F (psia):	20.73	12.65	6.99			
Spec. Gravity @100F:	0.84	0.85	0.85			

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**********************************************************************************
*     Project Setup Information                                                  *
**********************************************************************************
Project File              : C:\Users\Andy\Documents\Virtual Machine Tanks Data\Highpeak - Bledsoe 65.ept3
Model                     : Stable Oil Tank
Calculation Method        : AP42
Control Efficiency        :  0.00%
Component Group           : C10+

Filed Name                : Bledsoe 65 CTB
Well Name                 : Crude Oil Tank Emissions W&B
Permit Number             : Griffin 48-37 Unit A 1H Representative Analytical
Date                      : 2022.04.21


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

Separator Pressure (psia)         : 58.00
Separator Temperature (F)         : 100.0
C10+ SG                           : 0.88
C10+ MW(lb/lbmol)                 : 270.40

-- Stable Oil ------------------------------------------------------------------
No.   Component           Mole%    Wt%
1     H2S                    0.0000   0.0000
2     O2                     0.0000   0.0000
3     CO2                    0.0000   0.0000
4     N2                     0.0000   0.0000
5     C1                     0.0000   0.0000
6     C2                     0.0106   0.0018
7     C3                     1.9880   0.5045
8     i-C4                   0.9019   0.3016
9     n-C4                   4.8859   1.6341
10    i-C5                   2.6111   1.0841
11    n-C5                   3.3935   1.4089
12    C6                     3.7376   1.8531
13    C7                    12.0000   6.9190
14    C8                     9.0000   5.9159
15    C9                     8.3712   6.1794
16    C10+                  44.7471  69.6255
17    Benzene                1.0153   0.4563
18    Toluene                2.0502   1.0869
19    E-Benzene              0.7101   0.4338
20    Xylenes                1.2957   0.7916
21    n-C6                   2.1915   1.0868
22    224Trimethylp          1.0903   0.7167

-- Sales Oil -------------------------------------------------------------------
Production Rate (bbl/day)     : 600.00
Days of Annual Operation      : 365
API Gravity                   : 38.67
Reid Vapor Pressure (psia)    : 7.01
Bulk Temperature              : 80.0

-- Tank and Shell Data ---------------------------------------------------------
Diameter (ft)                 : 15.50
Shell Height (ft)             : 30.00
Cone Roof Slope               : 0.06
Average Liquid Height (ft)    : 15.00
Vent Pressure Range (psia)    : 0.06
Solar Absorbance              : 0.54

-- Meteorological Data ---------------------------------------------------------
City                      : Midland/Odessa, TX
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Min Ambient Temperature (F) : 49.9
Max Ambient Temperature (F) : 77.0
Total Solar Insolation (F) : 1802.00
Ambient Pressure (psia) : 14.70
Ambient Temperature (F) : 70.0

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

-- Emission Summary --

	Uncontrolled ton
Total HAPs	0.4270
Total HC	11.3250
VOCs, C2+	11.3250
VOCs, C3+	11.2950
CO2	0.0000
CH4	0.0000

Uncontrolled Recovery Information:
Vapor(mscfd): 0.4158
HC Vapor(mscfd): 0.4158
CO2(mscfd): 0.0000
CH4(mscfd): 0.0000
GOR(SCF/STB): 0.6930

-- Emission Composition --

NoComponent	Uncontrolled ton
1 H2S	0.0000
2 O2	0.0000
3 CO2	0.0000
4 N2	0.0000
5 C1	0.0000
6 C2	0.0300
7 C3	3.4990
8 i-C4	0.9700
9 n-C4	3.6600
10 i-C5	0.9890
11 n-C5	0.9620
12 C6	0.3880
13 Benzene	0.0740
14 Toluene	0.0510
15 E-Benzene	0.0070
16 Xylenes	0.0110
17 n-C6	0.2290
18 224Trimethylp	0.0560
19 Pseudo Comp1	0.3920
20 Pseudo Comp2	0.0070
21 Pseudo Comp3	0.0000
22 Pseudo Comp4	0.0000
23 Pseudo Comp5	0.0000
24 Total	11.3250

-- Stream Data --

NoComponent	MW lb/lbmol	Stable Oil mole %	Sales Oil mole %	Total Emission mole %
1 H2S	34.80	0.0000	0.0000	0.0000
2 O2	32.00	0.0000	0.0000	0.0000
3 CO2	44.01	0.0000	0.0000	0.0000
4 N2	28.01	0.0000	0.0000	0.0000
5 C1	16.04	0.0000	0.0000	0.0000
6 C2	30.07	0.0106	0.0095	0.5056
7 C3	44.10	1.9880	1.9049	39.6292
8 i-C4	58.12	0.9019	0.8856	8.3376

9	n-C4	58.12	4.8859	4.8278	31.4541
10	i-C5	72.15	2.6111	2.6019	6.8471
11	n-C5	72.15	3.3935	3.3864	6.6594
12	C6	84.00	3.7376	3.7408	2.3067
13	Benzene	78.11	1.0153	1.0165	0.4748
14	Toluene	92.14	2.0502	2.0541	0.2739
15	E-Benzene	106.17	0.7101	0.7116	0.0320
16	Xylenes	106.17	1.2957	1.2984	0.0502
17	n-C6	86.18	2.1915	2.1934	1.3272
18	224Trimethylp	114.23	1.0903	1.0922	0.2427
19	Pseudo Comp1	106.50	29.3712	29.4316	1.8398
20	Pseudo Comp2	164.75	19.9534	19.9972	0.0197
21	Pseudo Comp3	252.66	11.0642	11.0885	0.0000
22	Pseudo Comp4	355.64	8.6173	8.6362	0.0000
23	Pseudo Comp5	573.96	5.1123	5.1235	0.0000

	Stable Oil	Sales Oil	Total Emissions
MW (lb/lbmol):	171.76	171.89	56.56
Stream Mole Ratio:	1.0000	0.9989	0.0011
Stream Weight Ratio:	171.76	171.70	0.06
Total Emission (ton):			11.325
Heating Value (Btu/scf):			3168.80
Gas Gravity (Gas/Air):			1.95
Bubble Pt. @100F (psia):	8.37	8.17	
RVP @100F (psia):	48.79	47.73	
Spec. Gravity @100F (API):	0.84	0.84	

```
*****************************************************************************************
*     Project Setup Information                                                         *
*****************************************************************************************
Project File              : C:\Users\Andy\Documents\Virtual Machine Tanks Data\Highpeak - Bledsoe 65.ept3
Flowsheet Selection       : Oil Tank with Separator
Calculation Method        : RVP Distillation
Control Efficiency        :  0.00%
Known Separator Stream    : Low Pressure Oil
Entering Air Composition  : No
Component Group           : C10+

Filed Name                : Bledsoe 65 CTB
Well Name                 : Produced Water Tank Emissions
Permit Number             : Griffin 48-37 Unit A 1H Representative Analytical
Date                      : 4/21/2022


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

Separator Pressure (psia)         : 58.00
Separator Temperature (F)         : 100.0
C10+ SG                           : 0.88
C10+ MW(lb/lbmol)                 : 270.40

-- Low Pressure Oil ---------------------------------------------------------------------
No.   Component           Mole%    Wt%
1     H2S                    0.0000   0.0000
2     O2                     0.0000   0.0000
3     CO2                    0.0150   0.0039
4     N2                     0.0530   0.0087
5     C1                     0.9390   0.0885
6     C2                     1.7940   0.3170
7     C3                     5.2199   1.3526
8     i-C4                   1.1180   0.3818
9     n-C4                   5.4259   1.8530
10    i-C5                   2.5759   1.0921
11    n-C5                   3.2869   1.3935
12    C6                     3.4959   1.7699
13    C7                     8.0838   4.7595
14    C8                     9.1348   6.1314
15    C9                     5.6099   4.2286
16    C10+                  45.4981  72.2899
17    Benzene                0.9460   0.4342
18    Toluene                1.8950   1.0259
19    E-Benzene              0.6550   0.4086
20    Xylenes                1.1950   0.7455
21    n-C6                   2.0490   1.0376
22    224Trimethylp          1.0100   0.6780

-- Sales Oil ----------------------------------------------------------------------------
Production Rate (bbl/day)     : 3000.00
Days of Annual Operation      : 365
API Gravity                   : 38.67
Reid Vapor Pressure (psia)    : 7.01
Ambient Pressure (psia)       : 14.70
Ambient Temperature (F)       : 70.0


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

-- Emission Summary ---------------------------------------------------------------------
                  Uncontrolled
```

	ton
Total HAPs	43.0890
Total HC	3001.4370
VOCs, C2+	2861.9341
VOCs, C3+	2365.0200
CO2	6.1140
CH4	139.5030

Uncontrolled Recovery Information:

Vapor(mscfd):	150.9600
HC Vapor(mscfd):	149.6600
CO2(mscfd):	0.2900
CH4(mscfd):	18.0600
GOR(SCF/STB):	50.3200

-- Emission Composition ----------

No	Component	Uncontrolled ton
1	H2S	0.0000
2	O2	0.0000
3	CO2	6.1140
4	N2	13.7500
5	C1	139.5030
6	C2	496.9140
7	C3	1383.8640
8	i-C4	154.4280
9	n-C4	497.1020
10	i-C5	113.4330
11	n-C5	106.7400
12	C6	40.1820
13	Benzene	7.4870
14	Toluene	4.8810
15	E-Benzene	0.6370
16	Xylenes	0.9870
17	n-C6	23.5230
18	224Trimethylp	5.5730
19	Pseudo Comp1	25.9830
20	Pseudo Comp2	0.1980
21	Pseudo Comp3	0.0000
22	Pseudo Comp4	0.0000
23	Pseudo Comp5	0.0000
24	Total	3021.2991

-- Stream Data ----------

No	Component	MW lb/lbmol	LP Oil mole %	Flash Oil mole %	Sales Oil mole %	Flash Gas mole %	W&S Gas mole %	Total Emission mole %
1	H2S	34.80	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
2	O2	32.00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
3	CO2	44.01	0.0150	0.0038	0.0000	0.2888	0.0927	0.1911
4	N2	28.01	0.0530	0.0016	0.0000	1.3070	0.0388	0.6753
5	C1	16.04	0.9390	0.1079	0.0000	21.2089	2.6502	11.9641
6	C2	30.07	1.7940	0.8364	0.0106	25.1484	20.2989	22.7327
7	C3	44.10	5.2199	4.1076	1.9880	32.3478	54.0684	43.1676
8	i-C4	58.12	1.1180	1.0312	0.9019	3.2338	4.0796	3.6551
9	n-C4	58.12	5.4259	5.2029	4.8859	10.8644	12.6740	11.7658
10	i-C5	72.15	2.5759	2.5969	2.6111	2.0647	2.2615	2.1627
11	n-C5	72.15	3.2869	3.3417	3.3935	1.9503	2.1206	2.0351
12	C6	84.00	3.4959	3.6134	3.7376	0.6302	0.6861	0.6580
13	Benzene	78.11	0.9460	0.9795	1.0153	0.1287	0.1351	0.1319
14	Toluene	92.14	1.8950	1.9698	2.0502	0.0706	0.0751	0.0729
15	E-Benzene	106.17	0.6550	0.6815	0.7101	0.0079	0.0086	0.0083
16	Xylenes	106.17	1.1950	1.2435	1.2957	0.0123	0.0133	0.0128
17	n-C6	86.18	2.0490	2.1182	2.1915	0.3605	0.3906	0.3755
18	224Trimethylp	114.23	1.0100	1.0488	1.0903	0.0638	0.0704	0.0671
19	Pseudo Comp1	110.87	27.0913	28.1894	29.3712	0.3103	0.3346	0.3224
20	Pseudo Comp2	179.24	18.3891	19.1431	19.9552	0.0015	0.0015	0.0015
21	Pseudo Comp3	266.50	10.1968	10.6149	11.0653	0.0000	0.0000	0.0000

22 Pseudo Comp4	369.46	7.9417	8.2674	8.6181	0.0000	0.0000	0.0000
23 Pseudo Comp5	587.50	4.7075	4.9006	5.1085	0.0000	0.0000	0.0000

	LP Oil	Flash Oil	Sales Oil	Flash Gas	W&S Gas	Total Emission
MW (lb/lbmol):	168.52	173.86	179.33	38.26	44.89	41.56
Stream Mole Ratio:	1.0000	0.9606	0.9215	0.0394	0.0391	0.0785
Stream Weight Ratio:	168.52	167.01	165.26	1.51	1.75	3.26
Total Emission (ton):				1395.816	1625.485	3021.301
Heating Value (BTU/scf):				2172.02	2553.58	2362.09
Gas Gravity (Gas/Air):				1.32	1.55	1.43
Bubble Pt. @100F (psia):	63.38	21.06	8.32			
RVP @100F (psia):	20.73	12.65	6.99			
Spec. Gravity @100F:	0.84	0.85	0.85			

FUGITIVE COMPONENT EMISSIONS

					VOC Emissions		H2S Emissions	
Component	**Number**	**Service**	**Emissions Factor**	**VOC Content (Wt %)**	**lbs/hr**	**tons/yr**	**lbs/hr**	**tons/yr**
Flanges	120	Gas	0.00086	50.85596298	0.052	0.23	0.000	0.00
Flanges	200	Light Liquid	0.00024	100	0.048	0.21	0.000	0.00
Flanges	100	Water/Oil	0.000006	100	0.001	0.00	0.000	0.00
Connector	180	Gas	0.000463	50.85596298	0.042	0.19	0.000	0.00
Connector	100	Light Liquid	0.000463	100	0.046	0.20	0.000	0.00
Connector	100	Water/Oil	0.000243	100	0.024	0.11	0.000	0.00
Pump Seals	4	Light Liquid	0.02866	100	0.115	0.50	0.000	0.00
Pump Seals	4	Water/Oil	0.000052	100	0.000	0.00	0.000	0.00
Valves	80	Gas	0.00992	50.85596298	0.404	1.77	0.000	0.00
Valves	80	Light Liquid	0.00551	100	0.441	1.93	0.000	0.00
Valves	60	Water/Oil	0.000216	100	0.013	0.06	0.000	0.00
Other	10	Gas	0.00992	50.85596298	0.050	0.22	0.000	0.00
Other	10	Light Liquid	0.00551	100	0.055	0.24	0.000	0.00
			Totals		**1.292**	**5.658**	**0.000**	**0.000**

Highpeak Energy Holdings LLC
Bledsoe 65 CTB
Low Pressure Flare

Gas to be flared

Molecular Weight	41.56
Btu Content	2362.09
Specific Gravity	1.45

	Molecular Weight	Mole %	Weight %	lbs/hr Emitted
H2S	34.8	0	0.000	0.000
O2	32	0	0.000	0.000
CO2	44.01	0.1911	0.202	0.029
N2	28.01	0.6753	0.455	0.064
Methane	16.04	11.9641	4.618	0.653
Ethane	30.07	22.7327	16.448	2.325
Propane	44.1	43.1676	45.806	6.476
Iso-Butane	58.12	3.6551	5.112	0.723
Normal Butane	58.12	11.7658	16.454	2.326
Iso-Pentane	72.15	2.1627	3.755	0.531
Normal Pentane	72.15	2.0351	3.533	0.499
Hexanes	86.16	0.658	1.364	0.193
Benzene	78.11	0.1319	0.248	0.035
Toluene	92.13	0.0729	0.162	0.023
E-Benzene	106.17	0.0083	0.021	0.003
Xylenes	106.17	0.0128	0.033	0.005
n-Hexane	86.18	0.3755	0.779	0.110
224-Trimethyl-pentane	114.24	0.0671	0.184	0.026

Combustor H2S Emissions

Emission Point	Gas Volume (mcf/d)	VOC Wt %	Total SO2* (lbs/yr)	Gas Density (lbs/ft^3)	Flare Duration (days)	H2S Emissions lbs/hr	H2S Emissions Tons
LP-Flare	150	77.450	0	0.11	365	0.0000	0.000

Combustor SO2, NOx and CO EMISSIONS

Gas Volume (mcf/day)	H2S Concentration (Mole %)	Sulfur (LT/Day)	SO2 Emissions (lbs/hr)	SO2 Flare Duration (days)	SO2 Emissions (tons)	NOx Emissions lbs/hr	NOx Emissions Tons	CO Emissions lbs/hr	CO Emissions Tons
150	0	0.00	0.000	365	0.00	2.04	8.92	4.07	17.81

246051.0417 Btu/min Heat Rate

Highpeak Energy Holdings LLC
Bledsoe 65 CTB
High Pressure Flare

Gas to be flared

Molecular Weight	34.85
Btu Content	1956
Specific Gravity	1.216

	Molecular Weight	Mole %	Weight %	lbs/hr Emitted
H2S	34.8	0	0.000	0.000
O2	32	0	0.000	0.000
CO2	44.01	0.219	0.277	0.001
N2	28.01	3.676	2.955	0.006
Methane	16.04	44.343	20.409	0.039
Ethane	30.07	15.736	13.578	0.026
Propane	44.1	15.747	19.927	0.038
Iso-Butane	58.12	1.798	2.999	0.006
Normal Butane	58.12	6.725	11.215	0.021
Iso-Pentane	72.15	1.961	4.060	0.008
Normal Pentane	72.15	2.192	4.538	0.009
Hexanes	86.16	1.686	4.168	0.008
Benzene	78.11	0.395	0.263	0.000
Toluene	92.13	0.257	0.679	0.001
E-Benzene	106.17	0.023	0.070	0.000
Xylenes	106.17	0.021	0.064	0.000
n-Hexane	86.18	0.91	2.250	0.004
224-Trimethyl-pentane	114.24	0	0.000	0.000

Combustor H2S Emissions

						VOC Emissions		H2S Emissions	
Emission Point	**Gas Volume (mcf/d)**	**VOC Wt %**	**Total SO2* (lbs/yr)**	**Gas Density (lbs/ft^3)**	**Flare Duration (days)**	**lbs/hr**	**Tons**	**lbs/hr**	**Tons**
HP-Flare	2.4	50.233	0	0.09	365	0.0953	0.417	0.0000	0.000

Combustor SO2, NOx and CO EMISSIONS

						NOx Emissions		CO Emissions	
Gas Volume (mcf/day)	**H2S Concentration (Mole %)**	**Sulfur (LT/Day)**	**SO2 Emissions (lbs/hr)**	**SO2 Flare Duration (days)**	**SO2 Emissions (tons)**	**lbs/hr**	**Tons**	**lbs/hr**	**Tons**
2.4	0	0.00	0.000	365	0.00	0.03	0.12	0.05	0.24

3260 Btu/min Heat Rate

Highpeak Energy Holdings LLC
Bledsoe 65 CTB
HT-01

Run Time (hours/yr)	8760	
H2S Content of Fuel (ppm)	0	
Fuel Gas Heating Value (Btu/scf)	1956	
Design Heat Input (MMBtu/hr)	2	
Fuel Usage Rate (scf/hr)	1022	Heat Input / Fuel Gas Heating Value
Estimated Annual Fuel Usage (MMscf/yr)	8.957	Fuel Usage * Run Time

NOx Emission Factor (lbs/MMscf)	100	
NOx Emissions (lbs/hr)	**0.102**	Fuel Usage Rate * NOx Emission Factor / 1000000
NOx Emissions (Tons/yr)	**0.448**	NOx lbs/hr * Run Time / 2000

CO Emission Factor (lbs/MMscf)	84	
CO Emissions (lbs/hr)	**0.086**	Fuel Usage Rate * CO Emission Factor / 1000000
CO Emissions (Tons/yr)	**0.376**	CO lbs/hr * Run Time / 2000

VOC Emission Factor (lbs/MMscf)	5.5	
VOC Emissions (lbs/hr)	**0.006**	Fuel Usage Rate * VOC Emission Factor / 1000000
VOC Emissions (Tons/yr)	**0.025**	VOC lbs/hr * Run Time / 2000

SO2 Emission Factor (lbs/MMscf)	0.6	
SO2 Emissions (lbs/hr)	**0.000**	Fuel Usage Rate * SO2 Emission Factor * (H2S Content/3.18) / 1000000
SO2 Emissions (Tons/yr)	**0.000**	SO2 lbs/hr * Run Time / 2000

PM10 Emission Factor (lbs/MMscf)	7.6	
PM10 Emissions (lbs/hr)	**0.008**	Fuel Usage Rate * PM10 Emission Factor / 1000000
PM10 Emissions (Tons/yr)	**0.034**	PM10 lbs/hr * Run Time / 2000

PM2.5 Emission Factor (lbs/MMscf)	5.7	
PM2.5 Emissions (lbs/hr)	**0.006**	Fuel Usage Rate * PM2.5 Emission Factor / 1000000
PM2.5 Emissions (Tons/yr)	**0.026**	PM10 lbs/hr * Run Time / 2000

References:

EPA. "Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources," Section 1.4

AP-42, Office of Air Quality Planning and Standards, Research Triangle Park, NC. 5th edition (1/96). Supplements A & B (11/96).

Highpeak Energy Holdings LLC
Bledsoe 65 CTB

Truck Loading (TL-01)

L = 12.46 SPM/T AP-42, Fifth Edition, Equation 5.2-1, January 1995

L =	Loading Loss (lb/1000 gal liquid loaded)	Live Oil	RVP Constant A =	10.937
M =	Vapor Molecular Weight of liquid loaded		RVP Constant B =	4893.037
P =	True Vapor Pressure of liquid loaded	Skim Oil	RVP Constant A =	#NUM!
T =	Temperature of bulk liquid loaded (R^o) F + 459.67		RVP Constant B =	#NUM!
S =	Saturation Factor (1.45 for splash loading, 0.6 for submerged from Table 5.2-1)			
RVP =	7.01 Live Oil			
	0.00 Skim Oil			

Hourly Emissions:

EPN	Loading Vessel	Liquid Loaded	Saturation Factor	Max Temp.	Mol. Weight	Vapor Pressure	Loading Loss	Control Efficiency	Max. (gal/hr) Loading Rate	Loading Emissions (lbs/hr)
TL-01	Tank Truck	Produced Water*	0.6	554.67	41.56	8.290	4.6435	0	0	0.00
TL-01	Tank Truck	Crude Oil	0.6	554.67	41.56	8.290	4.6435	0.69	7560	10.88

Annual Emissions:

EPN	Loading Vessel	Liquid Loaded	Saturation	Avg. Temp.	Mol. Weight	Vapor Pressure	Loading Loss	Control Efficiency	Max. (gal/yr) ** Loading Rate	Loading Emissions (tons/yr)
TL-01	Tank Truck	Produced Water*	0.6	531.41	41.56	5.634	3.2943	0	0	0.00
TL-01	Tank Truck	Crude Oil	0.6	531.41	41.56	5.634	3.2943	0.69	27594000	14.09

* Produced water emissions are 1% of that total per TCEQ Guidance

** 180 days of truck loading are included awaiting pipeline tie-in.

Total Loading Emissions:

Pollutant	Wt%	Lb/hr	Tons/yr
VOC	95.00	10.34	13.39
H2S	0.00	0.00	0.00
Benzene	0.25	0.03	0.03

Highpeak Energy Holdings LLC
Bledsoe 65 CTB
Chemical Weight Percent Calculations

		Sales Gas*		Flash Gas**		W&B Gas**		Combined F, W&B	
	Spc Grv.	1.216							
	Btu/scf	1956		2172.02		2553.58		2362.09	
	MW	34.85		38.26		44.89		41.56	
		Mole %	Wt%	Mole%	Wt%	Mole%	Wt%	Mole%	Wt%
H2S	34.8	0	0.000	0	0.000	0	0.000	0	0.000
O2	32	0	0.000	0	0.000	0	0.000	0	0.000
CO2	44.01	0.219	0.277	0.2888	0.332	0.0927	0.091	0.1911	0.202
N2	28.01	3.676	2.955	1.307	0.957	0.0388	0.024	0.6753	0.455
C1	16.04	44.343	20.409	21.2089	8.892	2.6502	0.947	11.9641	4.618
C2	30.07	15.736	13.578	25.1484	19.765	20.2989	13.597	22.7327	16.448
C3	44.1	15.747	19.927	32.3478	37.285	54.0684	53.117	43.1676	45.806
i-C4	58.12	1.798	2.999	3.2338	4.912	4.0796	5.282	3.6551	5.112
n-C4	58.12	6.725	11.215	10.8644	16.504	12.674	16.409	11.7658	16.454
i-C5	72.15	1.961	4.060	2.0647	3.894	2.2615	3.635	2.1627	3.755
n-C5	72.15	2.192	4.538	1.9503	3.678	2.1206	3.408	2.0351	3.533
C6	86.16	1.686	4.168	0.6302	1.419	0.6861	1.317	0.658	1.364
Benzene	78.11	0.395	0.885	0.1287	0.263	0.1351	0.235	0.1319	0.248
Toluene	92.13	0.257	0.679	0.0706	0.170	0.0751	0.154	0.0729	0.162
E-Benzene	106.17	0.023	0.070	0.0079	0.022	0.0086	0.020	0.0083	0.021
Xylenes	106.17	0.021	0.064	0.0123	0.034	0.0133	0.031	0.0128	0.033
n-C6	86.18	0.91	2.250	0.3605	0.812	0.3906	0.750	0.3755	0.779
224-tmp	114.24	0	0.000	0.0638	0.190	0.0704	0.210	0.0671	0.184
VOC Wt%			50.856		69.184		84.569		77.450

* From Gas Analysis
** From E&P Tanks Stream Data Printout in Section 7

Highpeak Energy Holdings LLC
Bledsoe 65 CTB
Planned MSS Emissions

MSS-1 Heater Treater Cleaning

Treater Volume (ft^3)	1005.31
Treater Pressure (psia)	16.7
Atm Pressure (psia)	14.7
Max Heater Temp (F)	100
Ideal Gas Constant (ft^3)(psi)/(lb-mol)(R)	10.73
Number of Treaters per Cleaning	1
Duration of Cleanings (hours)	8
Cleanings per year	6
Vapor Pressure of Oil (psia)	8.2896
Vapor MW of Flash Gas (lb/lb-mol)	38.260
VOC Concentration (wt%)	69.184
Benzene Concentration (wt%)	0.263
Benzene Concentration (mol%)	0.129
H2S Concentration (wt%)	0.000
H2S Concentration (mol%)	0.000

Emissions	Opening Vessel			Depressurizing Vessel		Total	
	lb/activity	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Total HC	93.984	11.748	0.282	12.787	0.307	24.535	0.589
VOC	65.022	8.128	0.195	8.846	0.212	16.974	0.407
Benzene	0.247	0.031	0.001	0.034	0.001	0.064	0.002
H2S	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Highpeak Energy Holdings LLC

Bledsoe 65 CTB

Planned MSS Emissions

Vacuum Truck Loading (Heater Treater Cleaning and Tank Cleaning)

L = 12.46 SPM/T AP-42, Fifth Edition, Equation 5.2-1, January 1995

	Source	Frequency/yr
MSS-2	Heater Treater	6
MSS-3	Crude Oil Tank	3
MSS-4	Produced Water Tank	3

L = Loading Loss (lb/1000 gal liquid loaded)

M = Vapor Molecular Weight of liquid loaded

P = True Vapor Pressure of liquid loaded

T = Temperature of bulk liquid loaded (R^o) F + 459.67

S = Saturation Factor (1.45 for splash loading, 0.6 for submerged from Table 5.2-1)

Hourly Emissions:

EPN	Loading Vessel	Liquid Loaded	Type of Loading	Saturation Factor	Max Temp.	Mol. Weight	Vapor Pressure	Loading Loss	Control Efficiency	Max. (gal/hr) Loading Rate	Loading Emissions (lbs/hr)
MSS-2	Tank Truck	Crude Oil	Submerged	0.6	554.67	44.89	8.2896	5.0156	0	126	0.63
MSS-3	Tank Truck	Crude Oil	Submerged	0.6	554.67	44.89	8.2896	5.0156	0	630	3.16
MSS-4	Tank Truck	Produced Water	Submerged	0.6	554.67	44.89	8.2896	5.0156	0	630	0.03

* Treater volume is estimated at 100 bbls for MSS-2. Tank Heel is assumed to be 3% of tank volume for MSS-3 and MSS-4. Tank cleaning 1/yr.

Annual Emissions:

EPN	Loading Vessel	Liquid Loaded	Type of Loading	Saturation Factor	Max Temp.	Mol. Weight	Vapor Pressure	Loading Loss	Control Efficiency	Max. (gal/yr) Loading Rate	Loading Emissions (tons/yr)
MSS-2	Tank Truck	Crude Oil	Submerged	0.6	531.41	44.89	5.6344	3.5582	0	756	0.001
MSS-3	Tank Truck	Crude Oil	Submerged	0.6	531.41	44.89	5.6344	3.5582	0	1890	0.003
MSS-4	Tank Truck	Produced Water	Submerged	0.6	531.41	44.89	5.6344	3.5582	0	1890	0.000

* Produced water emissions are 1% of that total per TCEQ Guidance

		MSS2		MSS3		MSS4	
Weight %		lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
95.00	VOC	0.600	0.001	3.002	0.003	0.030	0.000
0.00	H2S	0.000	0.000	0.000	0.000	0.000	0.000
0.25	Benzene	0.002	0.000	0.008	0.000	0.000	0.000

Highpeak Energy Holdings LLC
Bledsoe 65 CTB

Emissions Calculation Methodology

Storage Tanks:

Working, Breathing and Flashing Losses – Estimated using E&P Tanks

The representative analytical data used is from the Griffin 48-37 Unit A lease which produces from the same formation and has similar site processes to the Bledsoe 65 CTB.

Produced Water Tank Emissions:

Produced water tank emissions were calculated using E&P Tanks, the results multiplied by 0.01 (1%) per TCEQ guidance.

Heaters:

NOx, CO, VOC, SO2, PM – Utilize AP-42 Emission Factors, Section 1.4. The Btu/scf content of the fuel gas was taken from the facility gas analysis.

Fugitive Emissions:

TCEQ approved Fugitive Emission factors were used.

Truck Loading:

AP-42 Emission Factors were used.

January 31, 2022

FESCO, Ltd.
1100 Fesco Ave. - Alice, Texas 78332

Sample: Griffin 48-37 Unit A No. 1H
First Stage Separator Gas
Spot Gas Sample @ 58 psig & 100 °F

Date Sampled: 01/21/2022 Job Number: 221179.001

GLYCALC FORMAT

COMPONENT	MOL%	GPM	Wt %
Carbon Dioxide	0.219		0.277
Hydrogen Sulfide	< 0.001		< 0.001
Nitrogen	3.676		2.955
Methane	44.343		20.413
Ethane	15.736	4.230	13.578
Propane	15.747	4.361	19.926
Isobutane	1.798	0.591	2.999
n-Butane	6.725	2.132	11.220
Isopentane	1.961	0.721	4.060
n-Pentane	2.192	0.799	4.538
Cyclopentane	0.000	0.000	0.000
n-Hexane	0.910	0.376	2.250
Cyclohexane	0.524	0.179	1.265
Other C6's	1.686	0.698	4.169
Heptanes	2.595	1.073	6.983
Methylcyclohexane	0.488	0.197	1.375
2,2,4 Trimethylpentane	0.000	0.000	0.000
Benzene	0.395	0.111	0.885
Toluene	0.257	0.087	0.680
Ethylbenzene	0.023	0.009	0.070
Xylenes	0.021	0.008	0.064
Octanes Plus	0.704	0.339	2.293
Totals	100.000	15.911	100.000

Real Characteristics Of Octanes Plus:

Specific Gravity	3.962	(Air=1)
Molecular Weight	113.50	
Gross Heating Value	5724	BTU/CF

Real Characteristics Of Total Sample:

Specific Gravity	1.216	(Air=1)
Compressibility (Z)	0.9892	
Molecular Weight	34.85	
Gross Heating Value		
Dry Basis	1956	BTU/CF
Saturated Basis	1922	BTU/CF

February 8, 2022

FESCO, Ltd.
1100 FESCO Avenue - Alice, Texas 78332

For: OTA Compression, LLC
P. O. Box 141747
Irving, Texas 75014

Sample: Griffin 48-37 Unit A No. 1H
First Stage Separator Hydrocarbon Liquid
Sampled @ 58 psig & 100 °F

Date Sampled: 01/21/2022 Job Number: 221179.002

CHROMATOGRAPH EXTENDED ANALYSIS - GPA 2186-M

COMPONENT	MOL %	LIQ VOL %	WT %
Nitrogen	0.053	0.009	0.009
Carbon Dioxide	0.015	0.004	0.004
Methane	0.939	0.244	0.089
Ethane	1.794	0.736	0.319
Propane	5.220	2.205	1.363
Isobutane	1.118	0.561	0.385
n-Butane	5.363	2.593	1.846
2,2 Dimethylpropane	0.063	0.037	0.027
Isopentane	2.576	1.444	1.101
n-Pentane	3.287	1.827	1.405
2,2 Dimethylbutane	0.014	0.009	0.007
Cyclopentane	0.000	0.000	0.000
2,3 Dimethylbutane	0.337	0.212	0.172
2 Methylpentane	1.982	1.261	1.011
3 Methylpentane	1.162	0.728	0.593
n-Hexane	2.049	1.292	1.046
Heptanes Plus	74.028	86.837	90.622
Totals:	100.000	100.000	100.000

Characteristics of Heptanes Plus:

Specific Gravity	0.8562	(Water=1)
°API Gravity	33.76	@ 60°F
Molecular Weight	206.7	
Vapor Volume	13.15	CF/Gal
Weight	7.13	Lbs/Gal

Characteristics of Total Sample:

Specific Gravity	0.8205	(Water=1)
°API Gravity	40.96	@ 60°F
Molecular Weight	168.8	
Vapor Volume	15.42	CF/Gal
Weight	6.84	Lbs/Gal

Base Conditions: 14.650 PSI & 60 °F

Certified: FESCO, Ltd. - Alice, Texas

Sampled By: (24) D. M
Analyst: JL
Processor: ANBdjv
Cylinder ID: W-1631

Conan Pierce 361-661-7015

FESCO, Ltd. Job Number: 221179.002

TANKS DATA INPUT REPORT - GPA 2186-M

COMPONENT	Mol %	LiqVol %	Wt %
Carbon Dioxide	0.015	0.004	0.004
Nitrogen	0.053	0.009	0.009
Methane	0.939	0.244	0.089
Ethane	1.794	0.736	0.319
Propane	5.220	2.205	1.363
Isobutane	1.118	0.561	0.385
n-Butane	5.426	2.630	1.873
Isopentane	2.576	1.444	1.101
n-Pentane	3.287	1.827	1.405
Other C-6's	3.496	2.210	1.784
Heptanes	8.084	5.002	4.449
Octanes	9.135	6.267	5.786
Nonanes	5.610	4.487	4.207
Decanes Plus	45.499	67.803	72.861
Benzene	0.946	0.406	0.437
Toluene	1.895	0.974	1.034
E-Benzene	0.655	0.387	0.412
Xylenes	1.195	0.706	0.751
n-Hexane	2.049	1.292	1.046
2,2,4 Trimethylpentane	1.010	0.806	0.684
Totals:	100.000	100.000	100.000

Characteristics of Total Sample:

Specific Gravity ----------	0.8205	(Water=1)
°API Gravity ----------	40.96	@ 60°F
Molecular Weight----------	168.8	
Vapor Volume ----------	15.42	CF/Gal
Weight ----------	6.84	Lbs/Gal

Characteristics of Decanes (C10) Plus:

Specific Gravity ----------	0.8817	(Water=1)
Molecular Weight----------	270.4	

Characteristics of Atmospheric Sample:

°API Gravity ----------	38.67	@ 60°F
Reid Vapor Pressure Equivalent (D-6377)----------	7.01	psi

QUALITY CONTROL CHECK			
	Sampling Conditions	Test Samples	
Cylinder Number	------	W-1631	------
Pressure, PSIG	58	49	------
Skin Temperature, °F	100	100	------

* Sample used for analysis