ONEOK, Inc. - Reveille Compressor Station
Generator Engine Emissions

Unit:	GEN-2		
Model:	Aggreko - Waukesha H24SE-EPA		4SRB
	530	hp	Mfg. specs
Fuel Consumption:	8500	Btu/hp-hr	Mfg. specs
Fuel Heating Value:	1020.00	Btu/scf	Facility Specific
Daily Fuel Usage:	106000	scf/day	Calculated
Hourly Fuel Usage:	4417	scf/hr	Hourly Fuel Consumption
Annual Fuel Usage:	38.69	MMscf/yr	Calculated

Uncontrolled Emissions

	NO_x[1]	CO[1]	VOC[1]	SO_2[2]	PM[3]	Formaldehyde[4]	Acetaldehyde[4]	Acrolein[4]	Benzene[4]	E-Benzene[4]	Toluene[4]	Xylene[4]	Total HAP	Units
Emission Factors	1.00	2.00	0.70											g/hp-hr
					9.95E-03	0.0205	0.00279	0.00263	0.00158	0.0000248	0.000558	0.000195		lb/MMBtu
				0.020										gr/scf
Hourly Totals	1.17	2.34	0.82	0.03	4.48E-02	0.09	1.26E-02	1.18E-02	7.12E-03	1.12E-04	2.51E-03	8.78E-04	0.13	lb/hr
Annual Totals	5.12	10.24	3.58	0.11	1.96E-01	0.40	5.51E-02	5.19E-02	3.12E-02	4.89E-04	1.10E-02	3.85E-03	0.56	ton/yr

Controlled Emissions

	NO_x	CO	VOC	SO_2[2]	PM[3]	Formaldehyde[4]	Acetaldehyde[4]	Acrolein[4]	Benzene[4]	E-Benzene[4]	Toluene[4]	Xylene[4]	Total HAP	Units
Emission Factors	0.30	0.70	0.30			0.010								g/hp-hr
Percent Reduction	70.00%	65.00%	57.14%			87.3%	87.3%	87.3%	87.3%	87.3%	87.3%	87.3%		
					9.95E-03		0.00035	0.00033	0.00020	0.0000031	0.000071	0.000025		lb/MMBtu
				0.020										gr/scf
Hourly Totals	0.35	0.82	0.35	0.025	4.48E-02	0.012	1.59E-03	1.50E-03	9.01E-04	1.41E-05	3.18E-04	1.11E-04	0.02	lb/hr
Annual Totals	1.54	3.58	1.54	0.11	1.96E-01	0.05	6.97E-03	6.57E-03	3.94E-03	6.19E-05	1.39E-03	4.87E-04	0.07	ton/yr

GHG Calculations

	CO_2[5]	N_2O[5]	CH_4[5]	CO_2e[5]		
	53.06	0.0001	0.001		kg/MMBtu	40 CFR 98 Subpart Tables
	1	265	28		GWP	40 CFR 98 Table A-1
	2308.18	0.00	0.04	2308.23	tpy	
	2308.18	1.15	1.22	2310.55	tpy CO2e	

Notes

[1] Emissions factors are referenced from the EPA certification for pre catalyst emissions and post catayst is based on vendor performance data.

[2] SO_2 is calculated based on the default fuel sulfur content from AECT of 0.02 grains total sulfur per scf.

[3] Assumes $PM_{10} = PM_{2.5}$ (condensable and filterable particulate), referenced from AP-42 Table 3.2-3.

[4] HAPs emissions factors are referenced from AP-42 Table 3.2-3.
HAPs include: Formaldehyde, Acetaldehyde, Acrolein, Benzene, Ethylbenzene, N-Hexane, Toluene, and Xylene
HAP emission factors were adjusted using the heat value of gas from site and standard 1020 Btu/scf

[5] N_2O, CH_4, and CO_2 tpy Emission Rate = EF * Fuel Usage * Fuel Heat Value *2.20462 lb/kg * 1 ton/2000 lb
CO_2e tpy Emission Rate = CO_2 Emission Rate + N_2O Emission Rate * GWP Factor + CH_4 Emission Rate * GWP Factor

Table 2-A: Regulated Emission Sources

Unit and stack numbering must correspond throughout the application package. If applying for a NOI under 20.2.73 NMAC, equipment exemptions under 2.72.202 NMAC do not apply.

Unit Number[1]	Source Description	Make	Model #	Serial #	Manufacturer's Rated Capacity[3] (Specify Units)	Requested Permitted Capacity[3] (Specify Units)	Date of Manufacture[2] / Date of Construction/ Reconstruction[2]	Controlled by Unit # / Emissions vented to Stack #	Source Classification Code (SCC)	For Each Piece of Equipment, Check One	RICE Ignition Type (CI, SI, 4SLB, 4SRB, 2SLB)[4]	Replacing Unit No.
ENG-1	Compressor Engine	Caterpillar	3612A4	BB200917	3750 hp	3750 hp	10/1/2023 2/21/2024	CAT-1 ENG-1	20200254	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced	4SLB	N/A
ENG-2	Compressor Engine	Caterpillar	3612A4	BB200921	3750 hp	3750 hp	9/1/2023 2/29/2024	CAT-2 ENG-2	20200254	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced	4SLB	N/A
ENG-3	Compressor Engine	Caterpillar	3612A4	BB200929	3750 hp	3750 hp	10/1/2023 3/11/2024	CAT-3 ENG-3	20200254	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced	4SLB	N/A
ENG-4	Compressor Engine	Waukesha	16V275GL	WAU-1680118	5000 hp	5000 hp	8/1/2023 1/30/2024	CAT-4 ENG-4	20200254	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced	4SLB	N/A
ENG-5	Compressor Engine	Waukesha	16V275GL	WAU-1680111	5000 hp	5000 hp	7/1/2023 2/8/2024	CAT-5 ENG-5	20200254	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced	4SLB	N/A
ENG-6	Compressor Engine	Caterpillar	3612A4	BB200930	3750 hp	3750 hp	10/1/2023 3/28/2024	CAT-6 ENG-6	20200254	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced	4SLB	N/A
ENG-7	Compressor Engine	Caterpillar	3612A4	TBD	3750 hp	3750 hp	10/1/2023 3/28/2024	CAT-6 ENG-6	20200254	☐ Existing (unchanged) ☑ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	4SLB	N/A
ENG-8	Compressor Engine	Caterpillar	3612A4	TBD	3750 hp	3750 hp	10/1/2023 3/28/2024	CAT-6 ENG-6	20200254	☐ Existing (unchanged) ☑ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	4SLB	N/A
ENG-7	Compressor Engine	Caterpillar	3616 A4 Gen 2	TBD	5500 hp	5500 hp	TBD TBD	CAT-7 ENG-7	20200254	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	4SLB	N/A
ENG-8	Compressor Engine	Caterpillar	3616 A4 Gen 2	TBD	5500 hp	5500 hp	TBD TBD	CAT-8 ENG-8	20200254	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	4SLB	N/A
GEN-1	Generator Engine	Taylor	TG400 21.9L	EZY0F903478	684 hp	684 hp	TBD TBD	N/A GEN-1	20200253	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	4SRB	N/A
DEHY-1	TEG Glycol Dehydrator	TBD	TBD	TBD	170 MMSCFD	170 MMSCFD	TBD 1/31/2024	BTEX / ECD-2 ECD-2	31000301	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced	N/A	N/A
RBL-1	Glycol Reboiler	TBD	TBD	TBD	2 MMBtu/hr	2 MMBtu/hr	TBD 1/31/2024	N/A RBL-1	31000228	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
TK-405	Oil Tank	TBD	Vertical Tank	TBD	210 bbl	210 bbl	9/1/2023 12/1/2023	ECD-1 ECD-1	40400313	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
TK-406	Oil Tank	TBD	Vertical Tank	TBD	210 bbl	210 bbl	9/1/2023 12/1/2023	ECD-1 ECD-1	40400313	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A

Unit Number[1]	Source Description	Make	Model #	Serial #	Manufacturer's Rated Capacity[3] (Specify Units)	Requested Permitted Capacity[3] (Specify Units)	Date of Manufacture[2] / Date of Construction/ Reconstruction[2]	Controlled by Unit # / Emissions vented to Stack #	Source Classification Code (SCC)	For Each Piece of Equipment, Check One	RICE Ignition Type (CI, SI, 4SLB, 4SRB, 2SLB)[4]	Replacing Unit No.
TK-406A	Condensate Tank	Pitts	Vertical Tank	2045	1000 bbl	1000 bbl	9/1/2023 12/1/2023	ECD-1 ECD-1	40400311	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced	N/A	N/A
TK-406B	Condensate Tank	Pitts	Vertical Tank	2046	1000 bbl	1000 bbl	9/1/2023 12/1/2023	ECD-1 ECD-1	40400311	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced	N/A	N/A
TK-406C	Produced Water Tank	Pitts	Vertical Tank	2047	1000 bbl	1000 bbl	9/1/2023 12/1/2023	ECD-1 ECD-1	40400315	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced	N/A	N/A
TK-407	Gunbarrel Separator	Pitts	Vertical Tank	2044	750 bbl	750 bbl	9/1/2023 12/1/2023	ECD-1 ECD-1	31000503	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced	N/A	N/A
ECD-1	Enclosed Combustion Unit	Cimarron	ECD48	TBD	109 MSCF/d	109 MSCF/d	TBD 12/1/2024	N/A ECD-1	30600903	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced	N/A	N/A
ECD-2	Enclosed Combustion Unit 2	Cimarron	ECD48	24400E-001	109 MSCF/d	109 MSCF/d	2024 TBD	N/A ECD-2	30600903	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
LOAD-1	Condensate and Produced Water Loading	N/A	N/A	N/A	N/A	N/A	N/A N/A	N/A N/A	40600137	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced	N/A	N/A
FUG	Fugitive Emissions	N/A	N/A	N/A	N/A	N/A	N/A 2/21/2024	N/A FUG	31088811	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☑ To Be Modified ☐ To be Replaced	N/A	N/A
COMP-1 FUG	Compressor 1 Fugitives	Ariel	2701	F-69691	N/A	N/A	9/1/2023 2/21/2024	N/A COMP-1 FUG	31088811	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
COMP-2 FUG	Compressor 2 Fugitives	Ariel	2702	F-66793	N/A	N/A	10/1/2023 2/29/2024	N/A COMP-2 FUG	31088811	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
COMP-3 FUG	Compressor 3 Fugitives	Ariel	2703	F-66802	N/A	N/A	10/1/2023 3/11/2024	N/A COMP-3 FUG	31088811	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
COMP-4 FUG	Compressor 4 Fugitives	Ariel	2704	F-68478	N/A	N/A	8/1/2023 1/30/2024	N/A COMP-4 FUG	31088811	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
COMP-5 FUG	Compressor 5 Fugitives	Ariel	2705	F-68711	N/A	N/A	9/1/2023 2/8/2024	N/A COMP-5 FUG	31088811	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
COMP-6 FUG	Compressor 6 Fugitives	Ariel	2706	F-68944	N/A	N/A	10/1/2023 3/28/2024	N/A COMP-6 FUG	31088811	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
COMP-7 FUG	Compressor 7 Fugitives	Ariel	TBD	TBD	N/A	N/A	TBD TBD	N/A COMP-7 FUG	31088811	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
COMP-8 FUG	Compressor 8 Fugitives	Ariel	TBD	TBD	N/A	N/A	TBD TBD	N/A COMP-8 FUG	31088811	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
SSM	Start-up, Shutdown & Maintenance	N/A	N/A	N/A	N/A	N/A	N/A 2/21/2024	N/A SSM	31088811	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
M	Malfunction	N/A	N/A	N/A	N/A	N/A	N/A 2/21/2024	N/A M	30188811	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A

[1] Unit numbers must correspond to unit numbers in the previous permit unless a complete cross reference table of all units in both permits is provided.

[2] Specify dates required to determine regulatory applicability.

[3] To properly account for power conversion efficiencies, generator set rated capacity shall be reported as the rated capacity of the engine in horsepower, not the kilowatt capacity of the generator set.

[4] "4SLB" means four stroke lean burn engine, "4SRB" means four stroke rich burn engine, "2SLB" means two stroke lean burn engine, "CI" means compression ignition, and "SI" means spark ignition

Table 2-B: Insignificant Activities[1] (20.2.70 NMAC) OR Exempted Equipment (20.2.72 NMAC)

All 20.2.70 NMAC (Title V) applications must list all Insignificant Activities in this table. 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 6, Calculations. Equipment and activities exempted under 20.2.72.202 NMAC may not necessarily be Insignificant under 20.2.70 NMAC (and vice versa). Unit & stack numbering must be consistent throughout the application package. Per Exemptions Policy 02-012.00 (see http://www.env.nm.gov/aqb/permit/aqb_pol.html), 20.2.72.202.B NMAC Exemptions do not apply, but 20.2.72.202.A NMAC exemptions do apply to NOI facilities under 20.2.73 NMAC. List 20.2.72.301.D.4 NMAC Auxiliary Equipment for Streamline applications in Table 2-A. The List of Insignificant Activities (for TV) can be found online at https://www.env.nm.gov/wp-content/uploads/sites/2/2017/10/InsignificantListTitleV.pdf. TV sources may elect to enter both TV Insignificant Activities and Part 72 Exemptions on this form.

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) / Insignificant Activity citation (e.g. IA List Item #1.a)	Date of Manufacture /Reconstruction[2] / Date of Installation /Construction[2]	For Each Piece of Equipment, Check Onc
HAUL	Haul Road	N/A	N/A N/A	N/A N/A	20.2.72.202.B.5 NMAC	N/A N/A	☑ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
TK-408	Methanol Tank	TBD	TBD TBD	210 bbl	20.2.72.202.B.5 NMAC	TBD TBD	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
TK-409	Coolant Tank	TBD	TBD TBD	210 bbl	20.2.72.202.B.2 NMAC	TBD TBD	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
TK-TEG	TEG Tank	TBD	TBD TBD	1,000 gal	20.2.72.202.B.2 NMAC	TBD TBD	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
TK-OIL1	Oil Tank	TBD	TBD TBD	1,000 gal	20.2.72.202.B.2 NMAC	TBD TBD	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
TK-OIL2	Oil Tank	TBD	TBD TBD	1,000 gal	20.2.72.202.B.2 NMAC	TBD TBD	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
TK-OIL3	Oil Tank	TBD	TBD TBD	1,000 gal	20.2.72.202.B.2 NMAC	TBD TBD	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
TK-OIL4	Oil Tank	TBD	TBD TBD	1,000 gal	20.2.72.202.B.2 NMAC	TBD TBD	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
TK-AF1	Antifreeze Tank	TBD	TBD TBD	1,000 gal	20.2.72.202.B.2 NMAC	TBD TBD	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
TK-AF2	Antifreeze Tank	TBD	TBD TBD	1,000 gal	20.2.72.202.B.2 NMAC	TBD TBD	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
TK-AF3	Antifreeze Tank	TBD	TBD TBD	1,000 gal	20.2.72.202.B.2 NMAC	TBD TBD	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
TK-AF4	Antifreeze Tank	TBD	TBD TBD	1,000 gal	20.2.72.202.B.2 NMAC	TBD TBD	☐ Existing (unchanged) ☐ To be Removed ☑ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced

[1] Insignificant activities exempted due to size or production rate are defined in 20.2.70.300.D.6, 20.2.70.7.Q NMAC, and the NMED/AQB List of Insignificant Activities, dated September 15, 2008. Emissions from these insignificant activities do not need to be reported, unless specifically requested.

[2] Specify date(s) required to determine regulatory applicability.

Table 2-C: Emissions Control Equipment

Unit and stack numbering must correspond throughout the application package. Only list control equipment for TAPs if the TAP's maximum uncontrolled emissions rate is over its respective threshold as listed in 20.2.72 NMAC, Subpart V, Tables A and B. 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 control device regardless if the applicant takes credit for the reduction in emissions.

Control Equipment Unit No.	Control Equipment Description	Date Installed	Controlled Pollutant(s)	Controlling Emissions for Unit Number(s)[1]	Efficiency (% Control by Weight)	Method used to Estimate Efficiency
CAT-1	Oxidation Catalyst	2/21/2024	CO, HCHO, VOC	ENG-1	CO = 86.89% VOC = 55.75% HCHO = 87.89%	Catalyst Spec Sheet
CAT-2	Oxidation Catalyst	2/29/2024	CO, HCHO, VOC	ENG-2		Catalyst Spec Sheet
CAT-3	Oxidation Catalyst	3/11/2024	CO, HCHO, VOC	ENG-3		Catalyst Spec Sheet
CAT-4	Oxidation Catalyst	1/30/2024	CO, HCHO, VOC	ENG-4	CO = 83.19% VOC = 50.98% HCHO = 91.79%	Catalyst Spec Sheet
CAT-5	Oxidation Catalyst	2/8/2024	CO, HCHO, VOC	ENG-5		Catalyst Spec Sheet
CAT-6	Oxidation Catalyst	3/28/2024	CO, HCHO, VOC	ENG-6	CO = 86.89% VOC = 55.75% HCHO = 87.89%	Catalyst Spec Sheet
CAT-7	Oxidation Catalyst	TBD	CO, HCHO	ENG-7	CO = 81.40% HCHO = 77.00%	Catalyst Spec Sheet
CAT-8	Oxidation Catalyst	TBD	CO, HCHO	ENG-8		Catalyst Spec Sheet
ECD-1	Vapor Combustor	12/1/2024	VOC, HAP	TK-406A through TK-407, Condensate and Produced Water Loading	98%	Engineering Estimate
ECD-2	Vapor Combustor	TBD	VOC, HAP	DEHY-1 Still Vent and Flash Tank	98%	Manufacturer Specs
VRU-1	Vapor Recovery Unit	2024	VOC, HAP	TK-406A through TK-407, Condensate and Produced Water Loading	95%	Engineering Estimate
BTEX	BTEX Condenser	TBD	VOC, HAP, BTEX	DEHY-1 Still Vent	VOC: 37.70% HAP: 59.45% BTEX: 63.03%	Emission Model (ProMax)
CAT-9	Non-Selective Catalytic Reduction	TBD	NOX, CO, VOC, HCHO	GEN-1	NOx = 70.00% CO = 65.00% VOC = 57.14% HCHO = 83.00%	Manufacturer Specs (EPA Certified)

[1] List each control device on a separate line. For each control device, list all emission units controlled by the control device.

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. Unit & stack numbering must be consistent throughout the application package. Fill all cells in this table with the emission numbers or a "-" symbol. A "-" symbol indicates that emissions of this pollutant are not expected. Numbers shall be expressed to at least 2 decimal points (e.g. 0.41, 1.41, or 1.41E-4).

Unit No.	NOx		CO		VOC		SOx		PM[1]		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	lb/hr	ton/yr
ENG-1	2.48	10.86	25.22	110.44	9.34	40.92	0.14	0.63	0.01	0.03	0.01	0.03	0.01	0.03	-	-	-	-
ENG-2	2.48	10.86	25.22	110.44	9.34	40.92	0.14	0.63	0.01	0.03	0.01	0.03	0.01	0.03	-	-	-	-
ENG-3	2.48	10.86	25.22	110.44	9.34	40.92	0.14	0.63	0.01	0.03	0.01	0.03	0.01	0.03	-	-	-	-
ENG-4	3.31	14.48	26.24	114.91	11.24	49.25	0.19	0.85	0.01	0.05	0.01	0.05	0.01	0.05	-	-	-	-
ENG-5	3.31	14.48	26.24	114.91	11.24	49.25	0.19	0.85	0.01	0.05	0.01	0.05	0.01	0.05	-	-	-	-
ENG-6	2.48	10.86	25.22	110.44	9.34	40.92	0.14	0.63	0.01	0.03	0.01	0.03	0.01	0.03	-	-	-	-
ENG-7	3.64	15.93	26.07	114.19	1.94	8.50	0.21	0.90	0.01	0.05	0.01	0.05	0.01	0.05	-	-	-	-
ENG-8	3.64	15.93	26.07	114.19	1.94	8.50	0.21	0.90	0.01	0.05	0.01	0.05	0.01	0.05	-	-	-	-
GEN-1	1.51	6.60	3.02	13.21	1.06	4.62	0.02	0.11	0.04	0.19	0.04	0.19	0.04	0.19	-	-	-	-
RBL-1	0.20	0.86	0.16	0.72	0.01	0.05	0.01	0.05	0.01	0.07	0.01	0.07	0.01	0.07	-	-	-	-
TK-405	-	-	-	-	*	0.75	-	-	-	-	-	-	-	-	-	-	-	-
TK-406	-	-	-	-	*	0.75	-	-	-	-	-	-	-	-	-	-	-	-
TK-406A	-	-	-	-	*	133.49	-	-	-	-	-	-	-	-	-	-	-	-
TK-406B	-	-	-	-	*	133.49	-	-	-	-	-	-	-	-	-	-	-	-
TK-406C	-	-	-	-	*	0.64	-	-	-	-	-	-	-	-	-	-	-	-
TK-407	-	-	-	-	*	1132.76	-	-	-	-	-	-	-	-	-	-	-	-
DEHY-1	-	-	-	-	217.08	950.80	-	-	-	-	-	-	-	-	-	-	-	-
ECD-1	0.0042	0.02	0.0084	0.04	-	-	0.00	0.00	-	-	-	-	-	-	-	-	-	-
ECD-2	0.0042	0.02	0.0084	0.04	-	-	0.00	0.00	-	-	-	-	-	-	-	-	-	-
LOAD-1	-	-	-	-	5.02	22.00	-	-	-	-	-	-	-	-	-	-	-	-
FUG	-	-	-	-	2.63	11.51	-	-	-	-	-	-	-	-	-	-	-	-
COMP-1 FUG	-	-	-	-	0.05	0.21	-	-	-	-	-	-	-	-	-	-	-	-
COMP-2 FUG	-	-	-	-	0.05	0.21	-	-	-	-	-	-	-	-	-	-	-	-
COMP-3 FUG	-	-	-	-	0.05	0.21	-	-	-	-	-	-	-	-	-	-	-	-
COMP-4 FUG	-	-	-	-	0.05	0.21	-	-	-	-	-	-	-	-	-	-	-	-
COMP-5 FUG	-	-	-	-	0.05	0.21	-	-	-	-	-	-	-	-	-	-	-	-
COMP-6 FUG	-	-	-	-	0.05	0.21	-	-	-	-	-	-	-	-	-	-	-	-
COMP-7 FUG	-	-	-	-	0.05	0.21	-	-	-	-	-	-	-	-	-	-	-	-
FUG	-	-	-	-	2.65	11.61	-	-	-	-	-	-	-	-	-	-	-	-
MALF	-	-	-	-	*	10.00	-	-	-	-	-	-	-	-	-	-	-	-
Totals	25.52	111.79	208.67	913.97	292.52	2693.12	1.40	6.15	0.13	0.59	0.13	0.59	0.13	0.59	0.00	0.00	0.00	0.00

[1]**Condensable Particulate Matter:** Include condensable particulate matter emissions for PM10 and PM2.5 if the source is a combustion source. Do not include condensable particulate matter for PM unless PM is set equal to PM10 and PM2.5.

Table 2-E: Requested Allowable Emissions

Unit & stack numbering must be consistent throughout the application package. Fill all cells in this table with the emission numbers or a "-" symbol. A "-" symbol indicates that emissions of this pollutant are not expected. Numbers shall be expressed to at least 2 decimal points (e.g. 0.41, 1.41, or $1.41E^{-4}$).

Unit No.	NOx		CO		VOC		SOx		PM[1]		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	lb/hr	ton/yr
ENG-1	2.48	10.86	3.31	14.48	4.13	18.11	0.14	0.63	0.01	0.03	0.01	0.03	0.01	0.03	-	-	-	-
ENG-2	2.48	10.86	3.31	14.48	4.13	18.11	0.14	0.63	0.01	0.03	0.01	0.03	0.01	0.03	-	-	-	-
ENG-3	2.48	10.86	3.31	14.48	4.13	18.11	0.14	0.63	0.01	0.03	0.01	0.03	0.01	0.03	-	-	-	-
ENG-4	3.31	14.48	4.41	19.31	5.51	24.14	0.19	0.85	0.01	0.05	0.01	0.05	0.01	0.05	-	-	-	-
ENG-5	3.31	14.48	4.41	19.31	5.51	24.14	0.19	0.85	0.01	0.05	0.01	0.05	0.01	0.05	-	-	-	-
ENG-6	2.48	10.86	3.31	14.48	4.13	18.11	0.14	0.63	0.01	0.03	0.01	0.03	0.01	0.03	-	-	-	-
ENG-7	3.64	15.93	4.85	21.24	4.85	21.24	0.21	0.90	0.01	0.05	0.01	0.05	0.01	0.05	-	-	-	-
ENG-8	3.64	15.93	4.85	21.24	4.85	21.24	0.21	0.90	0.01	0.05	0.01	0.05	0.01	0.05	-	-	-	-
GEN-1	0.45	1.98	1.06	4.62	0.45	1.98	0.02	0.11	0.04	0.19	0.04	0.19	0.04	0.19	-	-	-	-
RBL-1	0.20	0.86	0.16	0.72	0.01	0.05	0.01	0.05	0.01	0.07	0.01	0.07	0.01	0.07	-	-	-	-
TK-405	-	-	-	-	*	0.75	-	-	-	-	-	-	-	-	-	-	-	-
TK-406	-	-	-	-	*	0.75	-	-	-	-	-	-	-	-	-	-	-	-
TK-406A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TK-406B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TK-406C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TK-407	-	-	-	-	-	-	-	-	-	-	-	-	0.00	-	-	-	-	-
DEHY-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ECD-1	1.07	4.70	2.14	9.37	0.32	1.42	0.00	0.00	-	-	-	-	-	-	-	-	-	-
ECD-2	0.27	1.18	0.54	2.36	1.94	8.51	0.00	0.00	-	-	-	-	-	-	-	-	-	-
LOAD-1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FUG	-	-	-	-	*	11.51	-	-	-	-	-	-	-	-	-	-	-	-
COMP-1 FUG	-	-	-	-	0.05	0.21	-	-	-	-	-	-	-	-	-	-	-	-
COMP-2 FUG	-	-	-	-	0.05	0.21	-	-	-	-	-	-	-	-	-	-	-	-
COMP-3 FUG	-	-	-	-	0.05	0.21	-	-	-	-	-	-	-	-	-	-	-	-
COMP-4 FUG	-	-	-	-	0.05	0.21	-	-	-	-	-	-	-	-	-	-	-	-
COMP-5 FUG	-	-	-	-	0.05	0.21	-	-	-	-	-	-	-	-	-	-	-	-
COMP-6 FUG	-	-	-	-	0.05	0.21	-	-	-	-	-	-	-	-	-	-	-	-
COMP-7 FUG	-	-	-	-	0.05	0.21	-	-	-	-	-	-	-	-	-	-	-	-
FUG	-	-	-	-	2.65	11.61	-	-	-	-	-	-	-	-	-	-	-	-
MALF	-	-	-	-	*	10.00	-	-	-	-	-	-	-	-	-	-	-	-
Totals	25.80	113.00	35.65	156.13	42.98	211.26	1.40	6.15	0.13	0.59	0.13	0.59	0.13	0.59	-	-	-	-

[1] **Condensable Particulate Matter:** Include condensable particulate matter emissions for PM10 and PM2.5 if the source is a combustion source. Do not include condensable particulate matter for PM unless PM is set equal to PM10 and PM2.5.

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

☐ This table is intentionally left blank since all emissions at this facility due to routine or predictable startup, shutdown, or scehduled maintenance are no higher than those listed in Table 2-E and a malfunction emission limit is not already permitted or requested. If you are required to report GHG emissions as described in Section 6a, include any GHG emissions during Startup, Shutdown, and/or Scheduled Maintenance (SSM) in Table 2-P. Provide an explanations of SSM emissions in Section 6 and 6a.

All applications for facilities that have emissions during routine our predictable startup, shutdown or scheduled maintenance (SSM)[1], 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). In Section 6 and 6a, provide emissions calculations for all SSM emissions reported in this table. Refer to "Guidance for Submittal of Startup, Shutdown, Maintenance Emissions in Permit Applications (https://www.env.nm.gov/aqb/permit/aqb_pol.html) for more detailed instructions. Numbers shall be expressed to at least 2 decimal points (e.g. 0.41, 1.41, or 1.41E-4).

Unit No.	NOx		CO		VOC		SOx		PM[2]		PM10[2]		PM2.5[2]		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	lb/hr	ton/yr
SSM	-	-	-	-	-	10	-	-	-	-	-	-	-	-	-	-	-	-
Totals	-	-	-	-	-	10	-	-	-	-	-	-	-	-	-	-	-	-

[1] **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 this table. 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.

[2] **Condensable Particulate Matter:** Include condensable particulate matter emissions for PM10 and PM2.5 if the source is a combustion source. Do not include condensable particulate matter for PM unless PM is set equal to PM10 and PM2.5. Particulate matter (PM) is not subject to an ambient air quality standard, but it is a regulated air pollutant under PSD (20.2.74 NMAC) and Title V (20.2.70 NMAC).

Table 2-G: Stack Exit and Fugitive Emission Rates for Special Stacks

☑ I have elected to leave this table blank because this facility does not have any stacks/vents that split emissions from a single source or combine emissions from more than one source listed in table 2-A. Additionally, the emission rates of all stacks match the Requested allowable emission rates stated in Table 2-E.

Use this table to list stack emissions (requested allowable) from split and combined stacks. List Toxic Air Pollutants (TAPs) and Hazardous Air Pollutants (HAPs) in Table 2-I. List all fugitives that are associated with the normal, routine, and non-emergency operation of the facility. Unit and stack numbering must correspond throughout the application package. Refer to Table 2-E for instructions on use of the "-" symbol and on significant figures.

Stack No.	Serving Unit Number(s) from Table 2-A	NOx		CO		VOC		SOx		PM		PM10		PM2.5		☐ H_2S or ☐ 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
N/A																	
Totals:																	

Table 2-H: Stack Exit Conditions

Unit and stack numbering must correspond throughout the application package. Include the stack exit conditions for each unit that emits from a stack, including blowdown venting parameters and tank emissions. If the facility has multiple operating scenarios, complete a separate Table 2-H for each scenario and, for each, type scenario name here:

Stack Number	Serving Unit Number(s) from Table 2-A	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)			
ENG-1	ENG-1	Vertical	No	28	820	399.14	-	-	127.05	2.00
ENG-2	ENG-2	Vertical	No	28	820	399.14	-	-	127.05	2.00
ENG-3	ENG-3	Vertical	No	28	820	399.14	-	-	127.05	2.00
ENG-4	ENG-4	Vertical	No	35	864	432.26	-	-	88.06	2.50
ENG-5	ENG-5	Vertical	No	35	864	432.26	-	-	88.06	2.50
ENG-6	ENG-6	Vertical	No	28	820	399.14	-	-	127.05	2.00
ENG-7	ENG-7	Vertical	No	28	790	521.62	-	-	166.04	2.00
ENG-8	ENG-8	Vertical	No	28	790	521.62	-	-	166.04	2.00
GEN-1	GEN-1	Vertical	No	10	1,382	39.20	-	-	49.92	1.00
RBL-1	RBL-1	Vertical	No	9	1,400	13.37	-	-	26.60	0.80
ECD-1	ECD-1	Vertical	No	25	1,400	32.46	-	-	2.58	4.00
ECD-2	ECD-2	Vertical	No	25	1,400	32.46	-	-	2.58	4.00

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

In the table below, report the Potential to Emit for each HAP from each regulated emission unit listed in Table 2-A, only if the entire facility emits the HAP at a rate greater than or equal to one (1) ton per year For each such emission unit, HAPs shall be reported to the nearest 0.1 tpy. Each facility-wide Individual HAP total and the facility-wide Total HAPs shall be the sum of all HAP sources calculated to the nearest 0.1 ton per year. Per 20.2.72.403.A.1 NMAC, facilities not exempt [see 20.2.72.402.C NMAC] from TAP permitting shall report each TAP that has an uncontrolled emission rate in excess of its pounds per hour screening level specified in 20.2.72.502 NMAC. TAPs shall be reported using one more significant figure than the number of significant figures shown in the pound per hour threshold corresponding to the substance. Use the HAP nomenclature as it appears in Section 112 (b) of the 1990 CAAA and the TAP nomenclature as it listed in 20.2.72.502 NMAC. Include tank-flashing emissions estimates of HAPs in this table. For each HAP or TAP listed, fill all cells in this table with the emission numbers or a "-" symbol. A "-" symbol indicates that emissions of this pollutant are not expected or the pollutant is emitted in a quantity less than the threshold amounts described above.

Stack No.	Unit No.(s)	Total HAPs		Formaldehyde ☑ HAP or ☐ TAP		Acetaldehyde ☑ HAP or ☐ TAP		Provide Pollutant Name Here ☐ HAP or ☐ TAP		Provide Pollutant Name Here ☐ HAP or ☐ TAP		Provide Pollutant Name Here ☐ HAP or ☐ TAP		Provide Pollutant Name Here ☐ HAP or ☐ TAP		Provide Pollutant Name Here ☐ HAP or ☐ TAP		Provide Pollutant Name Here ☐ HAP or ☐ TAP	
		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
ENG-1	ENG-1	0.2	1.0	0.2	0.8	0.0	0.1												
ENG-2	ENG-2	0.2	1.0	0.2	0.8	0.0	0.1												
ENG-3	ENG-3	0.2	1.0	0.2	0.8	0.0	0.1												
ENG-4	ENG-4	0.3	1.3	0.3	1.1	0.0	0.1												
ENG-5	ENG-5	0.3	1.3	0.3	1.1	0.0	0.1												
ENG-6	ENG-6	0.2	1.0	0.2	0.8	0.0	0.1												
ENG-7	ENG-7	0.4	1.8	0.3	1.2	0.1	0.3												
ENG-8	ENG-8	0.4	1.8	0.3	1.2	0.1	0.3												
GEN-1	GEN-1	0.0	0.1	0.0	0.1	0.0	0.0												
RBL-1	RBL-1	0.0	0.0	0.0	0.0	-	-												
TK-405	TK-405	-	-	-	-	-	-												
TK-406	TK-406	-	-	-	-	-	-												
TK-406A	TK-406A	-	-	-	-	-	-												
TK-406B	TK-406B	-	-	-	-	-	-												
TK-406C	TK-406C	-	-	-	-	-	-												
TK-407	TK-407	-	-	-	-	-	-												
DEHY-1	DEHY-1	-	-	-	-	-	-												
ECD-1	ECD-1	0.0	0.1	-	-	-	-												
ECD-2	ECD-2	0.5	2.1	-	-	-	-												
LOAD-1	LOAD-1	-	-	-	-	-	-												
FUG	FUG	0.2	0.8	-	-	-	-	-	-										
COMP-1 FUG	COMP-1 FUG	0.0	0.0	-	-	-	-	-	-										
COMP-2 FUG	COMP-2 FUG	0.0	0.0	-	-	-	-	-	-										
COMP-3 FUG	COMP-3 FUG	0.0	0.0	-	-	-	-	-	-										
COMP-4 FUG	COMP-4 FUG	0.0	0.0	-	-	-	-	-	-										
COMP-5 FUG	COMP-5 FUG	0.0	0.0	-	-	-	-	-	-										
COMP-6 FUG	COMP-6 FUG	0.0	0.0	-	-	-	-	-	-										
COMP-7 FUG	COMP-7 FUG	0.0	0.0	-	-	-	-	-	-										
FUG	FUG	0.2	0.8	-	-	-	-												
SSM	SSM	*	1.0	-	-	-	-												
MALF	MALF	*	1.0	-	-	-	-												
Totals:		3.2	16.2	1.8	8.1	0.3	1.3												

Table 2-J: Fuel

Specify fuel characteristics and usage. Unit and stack numbering must correspond throughout the application package.

Unit No.	Fuel Type (low sulfur Diesel, ultra low sulfur diesel, Natural Gas, Coal, …)	Fuel Source: purchased commercial, pipeline quality natural gas, residue gas, raw/field natural gas, process gas (e.g. SRU tail gas) or other	Specify Units				
			Lower Heating Value	Hourly Usage	Annual Usage	% Sulfur	% Ash
ENG-1	Field Gas	Process Gas	1,020 Btu/scf	25000.00 scf/hr	219.00 MMscf/yr	2 gr S/100 scf	N/A
ENG-2	Field Gas	Process Gas	1,020 Btu/scf	25000.00 scf/hr	219.00 MMscf/yr	2 gr S/100 scf	N/A
ENG-3	Field Gas	Process Gas	1,020 Btu/scf	25000.00 scf/hr	219.00 MMscf/yr	2 gr S/100 scf	N/A
ENG-4	Field Gas	Process Gas	1,020 Btu/scf	33872.55 scf/hr	296.72 MMscf/yr	2 gr S/100 scf	N/A
ENG-5	Field Gas	Process Gas	1,020 Btu/scf	33872.55 scf/hr	296.72 MMscf/yr	2 gr S/100 scf	N/A
ENG-6	Field Gas	Process Gas	1,020 Btu/scf	25000.00 scf/hr	219.00 MMscf/yr	2 gr S/100 scf	N/A
ENG-7	Field Gas	Process Gas	1,020 Btu/scf	35,917.16 scf/hr	314.63 MMscf/yr	2 gr S/100 scf	N/A
ENG-8	Field Gas	Process Gas	1,020 Btu/scf	35,917.16 scf/hr	314.63 MMscf/yr	2 gr S/100 scf	N/A
GEN-1	Field Gas	Process Gas	1,020 Btu/scf	4,231.41 scf/hr	37.07 MMscf/yr	2 gr S/100 scf	N/A
RBL-1	Field Gas	Process Gas	1,020 Btu/scf	1960.78 scf/hr	17.18 MMscf/yr	2 gr S/100 scf	N/A
ECD-1	Field Gas	Process Gas	1,020 Btu/scf	30.00 scf/hr	0.26 MMscf/yr	2 gr S/100 scf	N/A
ECD-2	Field Gas	Process Gas	1,020 Btu/scf	30.00 scf/hr	0.26 MMscf/yr	2 gr S/100 scf	N/A

Table 2-K: Liquid Data for Tanks Listed in Table 2-L

For each tank, list the liquid(s) to be stored in each tank. If it is expected that a tank may store a variety of hydrocarbon liquids, enter "mixed hydrocarbons" in the Composition column for that tank and enter the corresponding data of the most volatile liquid to be stored in the tank. If tank is to be used for storage of different materials, list all the materials in the "All Calculations" attachment, run the newest version of TANKS on each, and use the material with the highest emission rate to determine maximum uncontrolled and requested allowable emissions rate. The permit will specify the most volatile category of liquids that may be stored in each tank. Include appropriate tank-flashing modeling input data. Use additional sheets if necessary. Unit and stack numbering must correspond throughout the application package.

Tank No.	SCC Code	Material Name	Composition	Liquid Density (lb/gal)	Vapor Molecular Weight (lb/lb*mol)	Average Storage Conditions		Max Storage Conditions	
						Temperature (°F)	True Vapor Pressure (psia)	Temperature (°F)	True Vapor Pressure (psia)
TK-405	40400313	Oil	Lube Oil	7.21	50.00	66.35	4.83	75.8	4.83
TK-406	40400313	Oil	Lube Oil	7.21	50.00	66.35	4.83	75.8	4.83
TK-406A	40400311	Condensate	Mixed Hydrocarbons	5.75	46.83	66.35	34.82	75.8	34.82
TK-406B	40400311	Condensate	Mixed Hydrocarbons	5.75	46.83	66.35	34.82	75.8	34.82
TK-406C	40400315	Produced Water	Water and Mixed Hydrocarbons	8.32	31.27	66.35	36.39	75.8	36.39

Table 2-L: Tank Data

Include appropriate tank-flashing modeling input data. Use an addendum to this table for unlisted data categories. Unit and stack numbering must correspond throughout the application package. Use additional sheets if necessary. See reference Table 2-L2. Note: 1.00 bbl = 10.159 M3 = 42.0 gal

Tank No.	Date Installed	Materials Stored	Seal Type (refer to Table 2-LR below)	Roof Type (refer to Table 2-LR below)	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			
TK-405	12/1/2023	Oil	N/A	VFR	210	33	3.66	3.05	Dark Green	Dark Green	Average	70,560	8.00
TK-406	12/1/2023	Oil	N/A	VFR	210	33	3.66	3.05	Dark Green	Dark Green	Average	70,560	8.00
TK-406A	12/1/2023	Condensate	N/A	VFR	1,000	159	4.57	4.57	Dark Green	Dark Green	Good	7,665,000	91.25
TK-406B	12/1/2023	Condensate	N/A	VFR	1,000	159	4.57	4.57	Dark Green	Dark Green	Good	7,665,000	91.25
TK-406C	12/1/2023	Produced Water	N/A	VFR	1,000	159	3.66	3.05	Dark Green	Dark Green	Good	3,832,500	91.25

Table 2-L2: Liquid Storage Tank Data Codes Reference Table

Roof Type	Seal Type, Welded Tank Seal Type		Seal Type, Riveted Tank Seal Type		Roof, Shell Color	Paint Condition
FX: Fixed Roof	**Mechanical Shoe Seal**	**Liquid-mounted resilient seal**	**Vapor-mounted resilient seal**	**Seal Type**	**WH**: White	Good
IF: Internal Floating Roof	**A**: Primary only	**A**: Primary only	**A**: Primary only	**A**: Mechanical shoe, primary only	**AS**: Aluminum (specular)	Poor
EF: External Floating Roof	**B**: Shoe-mounted secondary	**B**: Weather shield	**B**: Weather shield	**B**: Shoe-mounted secondary	**AD**: Aluminum (diffuse)	
P: Pressure	**C**: Rim-mounted secondary	**C**: Rim-mounted secondary	**C**: Rim-mounted secondary	**C**: Rim-mounted secondary	**LG**: Light Gray	
					MG: Medium Gray	
					BL: Black	
					OT: Other (specify)	

Note: 1.00 bbl = 0.159 M^3 = 42.0 gal

Table 2-M: Materials Processed and Produced (Use additional sheets as necessary.)

Material Processed				Material Produced			
Description	**Chemical Composition**	**Phase (Gas, Liquid, or Solid)**	**Quantity (specify units)**	**Description**	**Chemical Composition**	**Phase**	**Quantity (specify units)**
Field Gas	Mixed Hydrocanbons	Gas	170 MMscf/day	Condensate	Mixed Hydrocanbons	Liquid	500 bbl/day
				Prodcued Water	Water and Mixed Hydrocanbons	Liquid	250 bbl/day
				Sales Gas	Mixed Hydrocanbons	Gas	170 MMscf/day

Table 2-N: CEM Equipment

Enter Continuous Emissions Measurement (CEM) Data in this table. If CEM data will be used as part of a federally enforceable permit condition, or used to satisfy the requirements of a state or federal regulation, include a copy of the CEM's manufacturer specification sheet in the Information Used to Determine Emissions attachment. Unit and stack numbering must correspond throughout the application package. Use additional sheets if necessary.

Stack No.	Pollutant(s)	Manufacturer	Model No.	Serial No.	Sample Frequency	Averaging Time	Range	Sensitivity	Accuracy
N/A- No CEM Equipment at this facility									

Table 2-O: Parametric Emissions Measurement Equipment

Unit and stack numbering must correspond throughout the application package. Use additional sheets if necessary.

Unit No.	Parameter/Pollutant Measured	Location of Measurement	Unit of Measure	Acceptable Range	Frequency of Maintenance	Nature of Maintenance	Method of Recording	Averaging Time
N/A - No Parametric Emissions Measurement Equipment at this facility								

Table 2-P: Greenhouse Gas Emissions

Applications submitted under 20.2.70, 20.2.72, & 20.2.74 NMAC are required to complete this Table. Power plants, Title V major sources, and PSD major sources must report and calculate all GHG emissions for each unit. Applicants must report potential emission rates in short tons per year (see Section 6.a for assistance). Include GHG emissions during Startup, Shutdown, and Scheduled Maintenance in this table. For minor source facilities that are not power plants, are not Title V, or are not PSD, there are three options for reporting GHGs 1) report GHGs for each individual piece of equipment; 2) report all GHGs from a group of unit types, for example report all combustion source GHGs as a single unit and all venting GHG as a second separate unit; OR 3) check the following box ☐ By checking this box, the applicant acknowledges the total CO2e emissions are less than 75,000 tons per year.

		CO_2 ton/yr	N_2O ton/yr	CH_4 ton/yr	SF_6 ton/yr	PFC/HFC ton/yr[2]							Total GHG Mass Basis ton/yr[4]	Total CO_2e ton/yr[5]
Unit No.	**GWPs [1]**	**1**	**298**	**25**	**22,800**	**footnote 3**								
ENG-1	**mass GHG**	13,065.18	0.025	0.25	-	-							13,065.45	
	CO_2e	13,065.18	6.53	6.89	-	-								13,078.60
ENG-2	**mass GHG**	13,065.18	0.025	0.25	-	-							13,065.45	
	CO_2e	13,065.18	6.53	6.89	-	-								13,078.60
ENG-3	**mass GHG**	13,065.18	0.025	0.25	-	-							13,065.45	
	CO_2e	13,065.18	6.53	6.89	-	-								13,078.60
ENG-4	**mass GHG**	17,702.03	0.033	0.33	-	-							17,702.40	
	CO_2e	17,702.03	8.84	9.34	-	-								17,720.22
ENG-5	**mass GHG**	17,702.03	0.033	0.33	-	-							17,702.40	
	CO_2e	17,702.03	8.84	9.34	-	-								17,720.22
ENG-6	**mass GHG**	13,065.18	0.025	0.25	-	-							13,065.45	
	CO_2e	13,065.18	6.53	6.89	-	-								13,078.60
ENG-7	**mass GHG**	18,770.56	0.035	0.354	-	-							18,770.95	
	CO_2e	18,770.56	9.37	9.91	-	-								18,789.84
ENG-8	**mass GHG**	18,770.56	0.04	0.35	-	-							18,770.95	
	CO_2e	18,770.56	9.37	9.91	-	-								18,789.84
GEN-1	**mass GHG**	2,211.37	0.004	0.04	-	-							2,211.41	
	CO_2e	2,211.37	1.10	1.17	-	-								2,213.64
RBL-1	**mass GHG**	1,024.72	0.002	0.02	-	-							1,024.74	
	CO_2e	1,024.72	0.51	0.54	-	-								1,025.77
TK-405	**mass GHG**	-	-	-	-	-								
	CO_2e	-	-	-	-	-								
TK-406	**mass GHG**	-	-	-	-	-								
	CO_2e	-	-	-	-	-								
TK-406A	**mass GHG**	-	-	-	-	-								
	CO_2e	-	-	-	-	-								
TK-406B	**mass GHG**	-	-	-	-	-								
	CO_2e	-	-	-	-	-								
TK-406C	**mass GHG**	-	-	-	-	-								
	CO_2e	-	-	-	-	-								
TK-407	**mass GHG**	-	-	-	-	-								
	CO_2e	-	-	-	-	-								
DEHY-1	**mass GHG**	-	-	-	-	-								
	CO_2e	-	-	-	-	-								
ECD-1	**mass GHG**	3,964.66	0.007	0.07	-	-							3,964.74	
	CO2e	3,964.66	1.98	2.09	-	-								3,968.73
ECD-2	**mass GHG**	984.71	0.002	0.02	-	-							984.73	
	CO2e	984.71	0.49	0.52	-	-								985.72
LOAD-1	**mass GHG**	-	-	-	-	-								
	CO_2e	-	-	-	-	-								
FUG	**mass GHG**	-	-	-	-	-								
	CO2e	-	-	-	-	-								
SSM	**mass GHG**	-	-	-	-	-								
	CO_2e	-	-	-	-	-								
MALF	**mass GHG**	-	-	-	-	-								
	CO2e	-	-	-	-	-								
Total	**mass GHG**	133,391.34	0.25	2.51	-	-							133,394.11	
	CO_2e	133,391.34	66.62	70.39	-	-								133,528.36

[1] **GWP** (Global Warming Potential): Applicants must use the most current GWPs codified in Table A-1 of 40 CFR part 98. GWPs are subject to change, therefore, applicants need to check 40 CFR 98 to confirm GWP values.

[2] For **HFCs** or **PFCs** describe the specific HFC or PFC compound and use a separate column for each individual compound.

[3] For each new compound, enter the appropriate GWP for each HFC or PFC compound from Table A-1 in 40 CFR 98.

[4] Green house gas emissions on a **mass basis** is the ton per year green house gas emission before adjustment with its GWP.

[5] **CO_2e** means Carbon Dioxide Equivalent and is calculated by multiplying the TPY mass emissions of the green house gas by its GWP.

ONEOK, Inc. - Reveille Compressor Station

Emissions Summary

Emission Unit: All

Source Description: ONEOK, Inc. - Reveille Compressor Station - Maximum Uncontrolled and Controlled Emissions

Maximum Uncontrolled Emissions

Unit	NO_x		CO		VOC		SO_2		PM_{10}		$PM_{2.5}$		H_2S		Total HAP	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
ENG-1	2.48	10.86	25.22	110.44	9.34	40.92	0.14	0.63	0.01	0.03	0.01	0.03	-	-	1.94	8.51
ENG-2	2.48	10.86	25.22	110.44	9.34	40.92	0.14	0.63	0.01	0.03	0.01	0.03	-	-	1.94	8.51
ENG-3	2.48	10.86	25.22	110.44	9.34	40.92	0.14	0.63	0.01	0.03	0.01	0.03	-	-	1.94	8.51
ENG-4	3.31	14.48	26.24	114.91	11.24	49.25	0.19	0.85	0.01	0.05	0.01	0.05	-	-	3.59	15.72
ENG-5	3.31	14.48	26.24	114.91	11.24	49.25	0.19	0.85	0.01	0.05	0.01	0.05	-	-	3.59	15.72
ENG-6	2.48	10.86	25.22	110.44	9.34	40.92	0.14	0.63	0.01	0.03	0.01	0.03	-	-	1.94	8.51
ENG-7	3.64	15.93	26.07	114.19	1.94	8.50	0.21	0.90	0.01	0.05	0.01	0.05	-	-	1.75	7.65
ENG-8	3.64	15.93	26.07	114.19	1.94	8.50	0.21	0.90	0.01	0.05	0.01	0.05	-	-	1.75	7.65
GEN-1*	1.51	6.60	3.02	13.21	1.06	4.62	0.02	0.11	0.04	0.19	0.04	0.19	-	-	0.12	0.53
RBL-1	0.20	0.86	0.16	0.72	0.011	0.047	0.011	0.049	0.015	0.065	0.015	0.065	-	-	0.0037	0.016
TK-405	-	-	-	-	*	0.747	-	-	-	-	-	-	-	-	-	-
TK-406	-	-	-	-	*	0.747	-	-	-	-	-	-	-	-	-	-
TK-406A[1]	-	-	-	-	*	133.49	-	-	-	-	-	-	-	-	*	5.56
TK-406B[1]	-	-	-	-	*	133.49	-	-	-	-	-	-	-	-	*	5.56
TK-406C[1]	-	-	-	-	*	0.645	-	-	-	-	-	-	-	-	*	0.173
TK-407[1]	-	-	-	-	*	1132.76	-	-	-	-	-	-	-	-	*	53.29
DEHY-1[2]	-	-	-	-	217.08	950.80	-	-	-	-	-	-	-	-	60.91	266.79
ECD-1	0.0042	0.018	0.0084	0.037	-	-	1.71E-04	7.51E-04	-	-	-	-	-	-	-	-
ECD-2	0.0042	0.018	0.0084	0.037	-	-	1.71E-04	7.51E-04	-	-	-	-	-	-	-	-
LOAD-1[3]	-	-	-	-	5.02	22.00	-	-	-	-	-	-	-	-	0.21	0.90
FUG	-	-	-	-	2.65	11.61	-	-	-	-	-	-	-	-	0.19	0.85
COMP-1 FUG	-	-	-	-	0.05	0.21	-	-	-	-	-	-	-	-	0.001	0.004
COMP-2 FUG	-	-	-	-	0.05	0.21	-	-	-	-	-	-	-	-	0.001	0.004
COMP-3 FUG	-	-	-	-	0.05	0.21	-	-	-	-	-	-	-	-	0.001	0.004
COMP-4 FUG	-	-	-	-	0.05	0.21	-	-	-	-	-	-	-	-	0.001	0.004
COMP-5 FUG	-	-	-	-	0.05	0.21	-	-	-	-	-	-	-	-	0.001	0.004
COMP-6 FUG	-	-	-	-	0.05	0.21	-	-	-	-	-	-	-	-	0.001	0.004
COMP-7 FUG	-	-	-	-	0.05	0.21	-	-	-	-	-	-	-	-	0.001	0.004
COMP-8 FUG	-	-	-	-	0.05	0.21	-	-	-	-	-	-	-	-	0.001	0.004
SSM	-	-	-	-	*	10.00	-	-	-	-	-	-	-	-	*	1.00
MALF	-	-	-	-	*	10.00	-	-	-	-	-	-	-	-	*	1.00
Totals	***25.52***	***111.79***	***208.67***	***913.97***	***289.94***	***2691.83***	***1.40***	***6.15***	***0.13***	***0.59***	***0.13***	***0.59***	***0.000***	***0.00***	*******	***416.47***

Maximum Controlled Emissions

Unit	NO_x		CO		VOC		SO_2		PM_{10}		$PM_{2.5}$		H_2S		Total HAP		Formaldehyde	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
ENG-1	2.48	10.86	3.31	14.48	4.13	18.11	0.14	0.63	0.01	0.03	0.01	0.03	-	-	0.24	1.03	0.19	0.83
ENG-2	2.48	10.86	3.31	14.48	4.13	18.11	0.14	0.63	0.01	0.03	0.01	0.03	-	-	0.24	1.03	0.19	0.83
ENG-3	2.48	10.86	3.31	14.48	4.13	18.11	0.14	0.63	0.01	0.03	0.01	0.03	-	-	0.24	1.03	0.19	0.83
ENG-4	3.31	14.48	4.41	19.31	5.51	24.14	0.19	0.85	0.01	0.05	0.01	0.05	-	-	0.29	1.29	0.25	1.11
ENG-5	3.31	14.48	4.41	19.31	5.51	24.14	0.19	0.85	0.01	0.05	0.01	0.05	-	-	0.29	1.29	0.25	1.11
ENG-6	2.48	10.86	3.31	14.48	4.13	18.11	0.14	0.63	0.01	0.03	0.01	0.03	-	-	0.24	1.03	0.19	0.83
ENG-7	3.64	15.93	4.85	21.24	4.85	21.24	0.21	0.90	0.01	0.05	0.01	0.05	-	-	0.40	1.76	0.28	1.22
ENG-8	3.64	15.93	4.85	21.24	4.85	21.24	0.21	0.90	0.01	0.05	0.01	0.05	-	-	0.40	1.76	0.28	1.22
GEN-1*	0.45	1.98	1.06	4.62	0.45	1.98	0.02	0.11	0.04	0.19	0.04	0.19	-	-	0.02	0.09	0.02	0.07
RBL-1	0.20	0.86	0.16	0.72	0.011	0.047	0.011	0.049	0.015	0.065	0.015	0.065	-	-	0.0037	0.016	1.47E-04	6.44E-04
TK-405	-	-	-	-	*	0.747	-	-	-	-	-	-	-	-	-	-	-	-
TK-406	-	-	-	-	*	0.747	-	-	-	-	-	-	-	-	-	-	-	-
TK-406A[1]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TK-406B[1]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TK-406C[1]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TK-407[1]	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-
DEHY-1[2]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ECD-1	1.07	4.70	2.14	9.37	0.325	1.42	1.71E-04	7.51E-04	-	-	-	-	-	-	0.0149	0.065	-	-
ECD-2	0.27	1.18	0.54	2.36	1.944	8.51	1.71E-04	7.51E-04	-	-	-	-	-	-	0.4803	2.104		
LOAD-1[3]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FUG	-	-	-	-	2.65	11.61	-	-	-	-	-	-	-	-	0.19	0.85	-	-
COMP-1 FUG	-	-	-	-	0.05	0.21	-	-	-	-	-	-	-	-	0.001	0.004	-	-
COMP-2 FUG	-	-	-	-	0.05	0.21	-	-	-	-	-	-	-	-	0.001	0.004	-	-
COMP-3 FUG	-	-	-	-	0.05	0.21	-	-	-	-	-	-	-	-	0.001	0.004	-	-
COMP-4 FUG	-	-	-	-	0.05	0.21	-	-	-	-	-	-	-	-	0.001	0.004	-	-
COMP-5 FUG	-	-	-	-	0.05	0.21	-	-	-	-	-	-	-	-	0.001	0.004	-	-
COMP-6 FUG	-	-	-	-	0.05	0.21	-	-	-	-	-	-	-	-	0.001	0.004	-	-
COMP-7 FUG	-	-	-	-	0.05	0.21	-	-	-	-	-	-	-	-	0.001	0.004	-	-
COMP-8 FUG	-	-	-	-	0.05	0.21	-	-	-	-	-	-	-	-	0.001	0.004	-	-
SSM	-	-	-	-	*	10.00	-	-	-	-	-	-	-	-	*	1.00	-	-
MALF	-	-	-	-	*	10.00	-	-	-	-	-	-	-	-	*	1.00	-	-
Totals	***25.80***	***113.00***	***35.65***	***156.13***	***43.03***	***209.97***	***1.40***	***6.15***	***0.13***	***0.59***	***0.13***	***0.59***	***0.00***	***0.00***	***3.05***	***15.37***	*******	***8.06***
Total Without Fugitives	***25.80***	***113.00***	***35.65***	***156.13***	***39.99***	***196.65***	***1.40***	***6.15***	***0.13***	***0.59***	***0.13***	***0.59***	***0.00***	***0.00***	***2.85***	***14.50***	***1.84***	***8.06***

"*" Indicates that an hourly limit is not appropriate for this operating situation and is not being requested.

"-" Indicates emissions of this pollutant are not expected.

[1] The enclosed combustion unit controls TK-406A through TK-407 during VRU downtime with an assumed 95% DRE for VOC and HAPs.

[2] Flash tank emissions are sent to station suction, still column to BTEX, BTEX non-condensables are sent to enclosed combustion unit ECD-2.

[3] Emissions from truck loadout of condensate and PW are vapor-balanced back to their respective storage tanks and vented to enclosed combustion unit ECD-1.

*GEN-1 and GEN-2 will never operate at the same time, but both have the potential to operate 8,760 hours. The worst case emissions associated with **GEN-1** are reported on the summary tables.

ONEOK, Inc. - Reveille Compressor Station

Emission Calculation Inputs

Site-Wide		
Description	**Value**	**Unit**
Gas Throughput	170	MMscf/day
Annual Operating Hours	8,760	hr
Daily Operating Hours	24	hr
Site Elevation	3,037	ft MSL
Fuel Heat Value	1,020.0	Btu/scf

Condensate Storage Tanks			
	Value	**Unit**	**Notes**
Unit:	1000 bbl Condensate Tanks		
Number of Tanks	2		Facility Design
Volume	1,000	bbl	Facility Design
Height (Shell)	30	ft	Typical Design
Diameter	15	ft	Typical Design
Facility Throughput	500.00	bbl/day	Facility Design

Gunbarrel Separators			
Description	**Value**	**Unit**	**Notes**
Number of Tanks	1		Facility Design
Volume	750	bbl	Facility Design
Height (Shell)	35	ft	Typical Design
Diameter	12	ft	Typical Design
Facility Throughput	750	bbl/day	Facility Design

Produced Water Storage Tanks			
Description	**Value**	**Unit**	**Notes**
Number of Tanks	1		Facility Design
Volume	1,000	bbl	Facility Design
Height (Shell)	20	ft	Typical Design
Diameter	12	ft	Typical Design
Facility Throughput	250	bbl/day	Facility Design

Methanol Storage Tanks			
Description	**Value**	**Unit**	**Notes**
Number of Tanks	1		Facility Design
Volume	210	bbl	Facility Design
Height (Shell)	20	ft	Typical Design
Diameter	12	ft	Typical Design
Facility Throughput	2.38	bbl/day	Facility Design

Oil Storage Tanks			
Description	**Value**	**Unit**	**Notes**
Number of Tanks	2		Facility Design
Volume	210	bbl	Facility Design
Height (Shell)	20	ft	Typical Design
Diameter	12	ft	Typical Design
Facility Throughput	4.60	bbl/day	Facility Design

Coolant Storage Tank			
Description	**Value**	**Unit**	**Notes**
Number of Tanks	1		Facility Design
Volume	210	bbl	Facility Design
Height (Shell)	20	ft	Typical Design
Diameter	12	ft	Typical Design
Facility Throughput	4.60	bbl/day	Facility Design

Oil Storage Tanks			
Description	**Value**	**Unit**	**Notes**
Number of Tanks	4		Facility Design
Volume	1,000	gal	Facility Design
Height (Shell)	12	ft	Typical Design
Diameter	3.791	ft	Typical Design
Facility Throughput	2.09	bbl/day	Facility Design

Antifreeze Storage Tanks			
Description	**Value**	**Unit**	**Notes**
Number of Tanks	4		Facility Design
Volume	1,000	gal	Facility Design
Height (Shell)	12	ft	Typical Design
Diameter	3.791	ft	Typical Design
Facility Throughput	2.09	bbl/day	Facility Design

TEG Storage Tank			
Description	**Value**	**Unit**	**Notes**
Number of Tanks	1		Facility Design
Volume	1,000	gal	Facility Design
Height (Shell)	12	ft	Typical Design
Diameter	3.791	ft	Typical Design
Facility Throughput	0.52	bbl/day	Facility Design

Heated Separators Input Information			
Unit:	RBL-1		
Description:	DEHY Reboiler		
Heat input:	2.00	MMBtu/hr	Estimated heat input for two identical units (1.0 each)
Fuel heat value:	1,020	Btu/scf	Estimated heating value
Fuel sulfur content:	2	gr/100scf	Estimated for sweet field gas
Operating hours:	8760	hours/year	
Fuel Usage:	1960.8	scf/hr	

Engine Input Information			
Unit:	ENG-4, ENG-5		
Description:	Waukesha 16V275GL Compressor Engine		
Rating:	5000.0	hp	Manufacturer Specifications
Fuel heat value:	1,020	Btu/scf	Estimated heating value
Operating hours:	8760	hours/year	
Fuel Usage:	33872.5	scf/hr	
Unit:	ENG-1 thru ENG-3, ENG-6 thru ENG-8		
Description:	Caterpillar 3612A4 Compressor Engine		
Rating:	3750.0	hp	Manufacturer Specifications
Fuel heat value:	1,020	Btu/scf	Estimated heating value
Operating hours:	8760	hours/year	
Fuel Usage:	25000.0	scf/hr	
Unit:	ENG-7, ENG-8		
Description:	Caterpillar 3616 A4 Gen 2 Compressor Engine		
Rating:	5500.0	hp	Manufacturer Specifications
Fuel heat value:	1,020	Btu/scf	Estimated heating value
Operating hours:	8760	hours/year	
Fuel Usage:	35917.2	scf/hr	
Unit:	GEN-1		
Description:	Taylor TG400		
Rating:	684.0	hp	Manufacturer Specifications
Fuel heat value:	1,020	Btu/scf	Estimated heating value
Operating hours:	8760	hours/year	
Fuel Usage:	4231.4	scf/hr	
Unit:	GEN-2		
Description:	Aggreko H24SSE		
Rating:	530.0	hp	Manufacturer Specifications
Fuel heat value:	1,020	Btu/scf	Estimated heating value
Operating hours:	8760	hours/year	
Fuel Usage:	4416.7	scf/hr	

ONEOK, Inc. - Reveille Compressor Station
Compressor Engine Emissions

Unit:	ENG-4 through ENG-5		
Model:	Waukesha 16V275GL Compressor Engine		4SLB
	5000	hp	Mfg. specs
Fuel Consumption:	6910	Btu/hp-hr	Mfg. specs
Fuel Heating Value:	1020.00	Btu/scf	Facility Specific
Daily Fuel Usage:	812941	scf/day	Calculated
Hourly Fuel Usage:	33873	scf/hr	Hourly Fuel Consumption
Annual Fuel Usage:	296.72	MMscf/yr	Calculated

Uncontrolled Emissions

	NO_x[1]	CO[1]	VOC[1]	SO_2[2]	PM[3]	Formaldehyde[4]	Acetaldehyde[4]	Acrolein[4]	Benzene[4]	E-Benzene[4]	Toluene[4]	Xylene[4]	Total HAP	Units
Emission Factors	0.30	2.38	1.02			0.28								g/hp-hr
					3.10E-04		0.00836	0.00514	0.00044	0.0000397	0.000408	0.000184		lb/MMBtu
				0.020										gr/scf
Hourly Totals	3.31	26.24	11.24	0.19	1.07E-02	3.09	2.89E-01	1.78E-01	1.52E-02	1.37E-03	1.41E-02	6.36E-03	3.59	lb/hr
Annual Totals	14.48	114.91	49.25	0.85	4.69E-02	13.52	1.27E+00	7.78E-01	6.66E-02	6.01E-03	6.17E-02	2.78E-02	15.72	ton/yr

Controlled Emissions

	NO_x	CO	VOC	SO_2[2]	PM[3]	Formaldehyde[4]	Acetaldehyde[4]	Acrolein[4]	Benzene[4]	E-Benzene[4]	Toluene[4]	Xylene[4]	Total HAP	Units
Emission Factors	0.30	0.40	0.50			0.023								g/hp-hr
Percent Reduction	0%	83.2%	51.0%			91.8%	91.8%	91.8%	91.8%	91.8%	91.8%	91.8%		
					3.10E-04		0.00069	0.00042	0.00004	3.26E-06	0.00003	0.00002		lb/MMBtu
				0.020										gr/scf
Hourly Totals	3.31	4.41	5.51	0.194	1.07E-02	0.25	2.37E-02	1.46E-02	1.25E-03	1.13E-04	1.16E-03	5.22E-04	0.29	lb/hr
Annual Totals	14.48	19.31	24.14	0.85	4.69E-02	1.11	1.04E-01	6.39E-02	5.47E-03	4.93E-04	5.07E-03	2.29E-03	1.29	ton/yr

GHG Calculations

CO_2[5]	N_2O[5]	CH_4[5]	CO_2e[5]		
53.06	0.0001	0.001		kg/MMBtu	40 CFR 98 Subpart Tables
1	265	28		GWP	40 CFR 98 Table A-1
17702.03	0.03	0.33	17702.40	tpy	
17702.03	8.84	9.34	17720.22	tpy CO2e	

Notes

[1] Emissions factors are referenced from the catalyst spec sheet.

[2] SO_2 is calculated based on the default fuel sulfur content from AECT of 0.02 grains total sulfur per scf.

[3] Assumes PM_{10} = $PM_{2.5}$ (condensable and filterable particulate). PM emission factor from EPA spreadsheet "Final table with Natural Gas Adjustment factors Nov 21 2006.xls

[4] HAPs emissions factors are referenced from AP-42 Table 3.2-2.
HAPs include: Formaldehyde, Acetaldehyde, Acrolein, Benzene, Ethylbenzene, N-Hexane, Toluene, and Xylene
HAP emission factors were adjusted using the heat value of gas from site and standard 1020 Btu/scf

[5] N_2O, CH_4, and CO_2 tpy Emission Rate = EF * Fuel Usage * Fuel Heat Value *2.20462 lb/kg * 1 ton/2000 lb
CO_2e tpy Emission Rate = CO_2 Emission Rate + N_2O Emission Rate * GWP Factor + CH_4 Emission Rate * GWP Factor

ONEOK, Inc. - Reveille Compressor Station
Compressor Engine Emissions

Unit:	ENG-1 thru ENG-3, ENG-6		
Model:	Caterpillar 3612A4		4SLB
	3750	hp	Mfg. specs
Fuel Consumption:	6800	Btu/hp-hr	Mfg. specs
Fuel Heating Value:	1020.00	Btu/scf	Facility Specific
Daily Fuel Usage:	600000	scf/day	Calculated
Hourly Fuel Usage:	25000	scf/hr	Hourly Fuel Consumption
Annual Fuel Usage:	219.00	MMscf/yr	Calculated

Uncontrolled Emissions

	NO_x[1]	CO[1]	VOC[1]	SO_2[2]	PM[3]	Formaldehyde[4]	Acetaldehyde[4]	Acrolein[4]	Benzene[4]	E-Benzene[4]	Toluene[4]	Xylene[4]	Total HAP	Units
Emission Factors	0.30	3.05	1.13			0.19								g/hp-hr
					3.10E-04		0.00836	0.00514	0.00044	0.0000397	0.000408	0.000184		lb/MMBtu
				0.020										gr/scf
Hourly Totals	2.48	25.22	9.34	0.14	0.01	1.57	0.21	0.13	0.011	0.0010	0.010	0.0047	1.94	lb/hr
Annual Totals	10.86	110.44	40.92	0.63	0.03	6.88	0.93	0.57	0.049	0.0044	0.046	0.021	8.51	ton/yr

Controlled Emissions

	NO_x	CO	VOC	SO_2[2]	PM[3]	Formaldehyde[4]	Acetaldehyde[4]	Acrolein[4]	Benzene[4]	E-Benzene[4]	Toluene[4]	Xylene[4]	Total HAP	Units
Emission Factors	0.30	0.40	0.50			0.023								g/hp-hr
Percent Reduction	0%	86.9%	55.8%			87.9%	87.9%	87.9%	87.9%	87.9%	87.9%	87.9%		
					3.10E-04		0.00101	0.00062	0.00005	0.0000048	0.000049	0.000022		lb/MMBtu
				0.020										gr/scf
Hourly Totals	2.48	3.31	4.13	0.14	0.01	0.19	0.03	0.02	0.001	0.0001	0.001	0.0006	0.24	lb/hr
Annual Totals	10.86	14.48	18.11	0.63	0.03	0.83	0.11	0.07	0.006	0.0005	0.006	0.002	1.03	ton/yr

GHG Calculations

	CO_2[5]	N_2O[5]	CH_4[5]	CO_2e[5]		
	53.06	0.0001	0.001		kg/MMBtu	40 CFR 98 Subpart Tables
	1	265	28		GWP	40 CFR 98 Table A-1
	13065.18	0.02	0.25	13065.45	tpy	
	13065.18	6.53	6.89	13078.60	tpy CO2e	

Notes

[1] Emissions factors are referenced from the catalyst spec sheet.

[2] SO_2 is calculated based on the default fuel sulfur content from AECT of 0.02 grains total sulfur per scf.

[3] Assumes PM_{10} = $PM_{2.5}$ (condensable and filterable particulate). PM emission factor from EPA spreadsheet "Final table with Natural Gas Adjustment factors Nov 21 2006.xls

[4] HAPs emissions factors are referenced from AP-42 Table 3.2-2.
HAPs include: Formaldehyde, Acetaldehyde, Acrolein, Benzene, Ethylbenzene, N-Hexane, Toluene, and Xylene
HAP emission factors were adjusted using the heat value of gas from site and standard 1020 Btu/scf

[5] N_2O, CH_4, and CO_2 tpy Emission Rate = EF * Fuel Usage * Fuel Heat Value *2.20462 lb/kg * 1 ton/2000 lb
CO_2e tpy Emission Rate = CO_2 Emission Rate + N_2O Emission Rate * GWP Factor + CH_4 Emission Rate * GWP Factor

ONEOK, Inc. - Reveille Compressor Station
Compressor Engine Emissions

Unit:	ENG-7, ENG-8		
Model:	Caterpillar 3616A4 Gen 2		4SLB
	5500	hp	Mfg. specs
Fuel Consumption:	6661	Btu/hp-hr	Mfg. specs
Fuel Heating Value:	1020.00	Btu/scf	Facility Specific
Daily Fuel Usage:	862012	scf/day	Calculated
Hourly Fuel Usage:	35917	scf/hr	Hourly Fuel Consumption
Annual Fuel Usage:	314.63	MMscf/yr	Calculated

Uncontrolled Emissions

	NO_x[1]	CO[1]	VOC[1]	SO_2[2]	PM[3]	Formaldehyde[4]	Acetaldehyde[4]	Acrolein[4]	Benzene[4]	E-Benzene[4]	Toluene[4]	Xylene[4]	Total HAP	Units
Emission Factors	0.30	2.15	0.16			0.10								g/hp-hr
					3.10E-04		0.00836	0.00514	0.00044	0.0000397	0.000408	0.000184		lb/MMBtu
				0.020										gr/scf
Hourly Totals	3.64	26.07	1.94	0.21	0.01	1.21	0.31	0.19	0.016	0.0015	0.015	0.0067	1.75	lb/hr
Annual Totals	15.93	114.19	8.50	0.90	0.05	5.31	1.34	0.82	0.071	0.0064	0.065	0.030	7.65	ton/yr

Controlled Emissions

	NO_x	CO	VOC	SO_2[2]	PM[3]	Formaldehyde[4]	Acetaldehyde[4]	Acrolein[4]	Benzene[4]	E-Benzene[4]	Toluene[4]	Xylene[4]	Total HAP	Units
Emission Factors	0.30	0.40	0.40			0.023								g/hp-hr
Percent Reduction	0%	81.4%	-150.0%			77.0%	77.0%	77.0%	77.0%	77.0%	77.0%	77.0%		
					3.10E-04		0.00192	0.00118	0.00010	0.0000091	0.000094	0.000042		lb/MMBtu
				0.020										gr/scf
Hourly Totals	3.64	4.85	4.85	0.21	0.01	0.28	0.07	0.04	0.004	0.0003	0.003	0.0016	0.40	lb/hr
Annual Totals	15.93	21.24	21.24	0.90	0.05	1.22	0.31	0.19	0.016	0.0015	0.015	0.007	1.76	ton/yr

GHG Calculations

	CO_2[5]	N_2O[5]	CH_4[5]	CO_2e[5]		
	53.06	0.0001	0.001		kg/MMBtu	40 CFR 98 Subpart Tables
	1	265	28		GWP	40 CFR 98 Table A-1
	18770.56	0.04	0.35	18770.95	tpy	
	18770.56	9.37	9.91	18789.84	tpy CO2e	

Notes

[1] Emissions factors are referenced from the catalyst spec sheet.

[2] SO_2 is calculated based on the default fuel sulfur content from AECT of 0.02 grains total sulfur per scf.

[3] Assumes PM_{10} = $PM_{2.5}$ (condensable and filterable particulate). PM emission factor from EPA spreadsheet "Final table with Natural Gas Adjustment factors Nov 21 2006.xls

[4] HAPs emissions factors are referenced from AP-42 Table 3.2-2.
HAPs include: Formaldehyde, Acetaldehyde, Acrolein, Benzene, Ethylbenzene, N-Hexane, Toluene, and Xylene
HAP emission factors were adjusted using the heat value of gas from site and standard 1020 Btu/scf

[5] N_2O, CH_4, and CO_2 tpy Emission Rate = EF * Fuel Usage * Fuel Heat Value *2.20462 lb/kg * 1 ton/2000 lb
CO_2e tpy Emission Rate = CO_2 Emission Rate + N_2O Emission Rate * GWP Factor + CH_4 Emission Rate * GWP Factor

ONEOK, Inc. - Reveille Compressor Station
Generator Engine Emissions

Unit:	GEN-1		
Model:	Taylor TG400 21.9L		4SRB
	684	hp	Mfg. specs
Fuel Consumption:	6310	Btu/hp-hr	Mfg. specs
Fuel Heating Value:	1020.00	Btu/scf	Facility Specific
Daily Fuel Usage:	101554	scf/day	Calculated
Hourly Fuel Usage:	4231	scf/hr	Hourly Fuel Consumption
Annual Fuel Usage:	37.07	MMscf/yr	Calculated

Uncontrolled Emissions

	NO_x[1]	CO[1]	VOC[1]	SO_2[2]	PM[3]	Formaldehyde[4]	Acetaldehyde[4]	Acrolein[4]	Benzene[4]	E-Benzene[4]	Toluene[4]	Xylene[4]	Total HAP	Units
Emission Factors	1.00	2.00	0.70											g/hp-hr
					9.95E-03	0.0205	0.00279	0.00263	0.00158	0.0000248	0.000558	0.000195		lb/MMBtu
				0.020										gr/scf
Hourly Totals	1.51	3.02	1.06	0.02	4.29E-02	0.09	1.20E-02	1.14E-02	6.82E-03	1.07E-04	2.41E-03	8.42E-04	0.12	lb/hr
Annual Totals	6.60	13.21	4.62	0.11	1.88E-01	0.39	5.27E-02	4.97E-02	2.99E-02	4.69E-04	1.05E-02	3.69E-03	0.53	ton/yr

Controlled Emissions

	NO_x	CO	VOC	SO_2[2]	PM[3]	Formaldehyde[4]	Acetaldehyde[4]	Acrolein[4]	Benzene[4]	E-Benzene[4]	Toluene[4]	Xylene[4]	Total HAP	Units
Emission Factors	0.30	0.70	0.30			0.010								g/hp-hr
Percent Reduction	70.00%	65.00%	57.14%			83.0%	83.0%	83.0%	83.0%	83.0%	83.0%	83.0%		
					9.95E-03		0.00048	0.00045	0.00027	0.0000042	0.000095	0.000033		lb/MMBtu
				0.020										gr/scf
Hourly Totals	0.45	1.06	0.45	0.024	4.29E-02	0.015	2.05E-03	1.93E-03	1.16E-03	1.82E-05	4.10E-04	1.43E-04	0.02	lb/hr
Annual Totals	1.98	4.62	1.98	0.11	1.88E-01	0.07	8.99E-03	8.47E-03	5.09E-03	7.99E-05	1.80E-03	6.28E-04	0.09	ton/yr

GHG Calculations

	CO_2[5]	N_2O[5]	CH_4[5]	CO_2e[5]		
	53.06	0.0001	0.001		kg/MMBtu	40 CFR 98 Subpart Tables
	1	265	28		GWP	40 CFR 98 Table A-1
	2211.37	0.00	0.04	2211.41	tpy	
	2211.37	1.10	1.17	2213.64	tpy CO2e	

Notes

[1] Emissions factors are referenced from the EPA certification for pre catalyst emissions and post catayst is based on PSI performance data for 21.9L units.

[2] SO_2 is calculated based on the default fuel sulfur content from AECT of 0.02 grains total sulfur per scf.

[3] Assumes $PM_{10} = PM_{2.5}$ (condensable and filterable particulate), referenced from AP-42 Table 3.2-3.

[4] HAPs emissions factors are referenced from AP-42 Table 3.2-3.
HAPs include: Formaldehyde, Acetaldehyde, Acrolein, Benzene, Ethylbenzene, N-Hexane, Toluene, and Xylene
HAP emission factors were adjusted using the heat value of gas from site and standard 1020 Btu/scf

[5] N_2O, CH_4, and CO_2 tpy Emission Rate = EF * Fuel Usage * Fuel Heat Value *2.20462 lb/kg * 1 ton/2000 lb
CO_2e tpy Emission Rate = CO_2 Emission Rate + N_2O Emission Rate * GWP Factor + CH_4 Emission Rate * GWP Factor

ONEOK, Inc. - Reveille Compressor Station
Reboiler

Heater Input Information			
Unit(s):	RBL-1		
Description:	2 MMBtu/hr Heaters		
Heat input:	2.00	MMBtu/hr	Estimated heat input
Fuel heat value:	1,020	Btu/scf	
Fuel sulfur content:	2.0	gr S/100scf	Estimated for field gas
Operating hours:	8,760	hours/year	
Fuel Usage:	1,961	scf/hr	
	17.2	MMscf/yr	

Criteria Pollutant Emission Rates per Unit							
	NO_x	**CO**	**VOC**	**SO_2[1]**	**PM[2]**	**Units**	Notes
Emission Factors	100	84	5.5	-	7.6	lb/MMscf	AP-42 Table 1.4-1 & 2
	100.0	84.0	5.5	-	7.6	lb/MMscf	Adjusted EF, per footnote a in Tables 1.4-1 and 1.4-2
Emissions	0.20	0.16	0.011	0.011	0.015	lb/hr[3]	
	0.86	0.72	0.047	0.049	0.065	tons/year[4]	

HAP Emission Rates per Unit							
	Hexane	**Benzene**	**Toluene**	**HCHO**	**Total HAPs[5]**	**Units**	Notes
Emission Factors	1.8	2.10E-03	3.40E-03	0.075	-	lb/MMscf	AP-42 Table 1.4-3
	1.8	2.10E-03	3.40E-03	7.50E-02	-	lb/MMscf	Adjusted EF, per footnote a in Table 1.4-3
Emissions	0.0035	4.12E-06	6.67E-06	1.47E-04	0.0037	lb/hr[3]	
	0.015	1.80E-05	2.92E-05	6.44E-04	0.016	tons/year[4]	

GHG Calculations						
	CO_2[6]	**N_2O[6]**	**CH_4[6]**	**CO_2e[6]**		
	53.06	0.0001	0.001		kg/MMBtu	40 CFR 98 Subpart Tables
	1	265	28		GWP	40 CFR 98 Table A-1
	1024.72	0.0019	0.019	1024.74	tpy	
	1024.72	0.51	0.54	1025.77	tpy CO2e	

[1] SO_2 emissions based on fuel sulfur content of 2 gr S/100 scf or 0.00286 lb S/Mscf
0.00286 lb S/Mscf*fuel consumption (Mscf/hr)*64 lb SO_2/32 lb S = lb SO_2/hr
[2] Assumes PM_{10} = $PM_{2.5}$
[3] lb/hr emissions calculated using the following methods:
Criteria and HAPs lb/hr = EF (lb/MMscf) * Rating (MMBtu/hr) / Heat value (Btu/scf)
[4] For all non-HAP calculations, tons/year = lb/hr * Operating hours * 1ton/2000lb
[5] Total HAP emissions are the sum of all individual HAPs calculated.
[6] N2O, CH4, and CO2 tpy Emission Rate = EF * Fuel Usage * Fuel Heat Value *2.20462 lb/kg * 1 ton/2000 lb
CO2e tpy Emission Rate = CO2 Emission Rate + N2O Emission Rate * GWP Factor + CH4 Emission Rate * GWP Factor

Parameters	Value	Unit	Note
Input heat rate	2.00	MMBtu/hr	Estimated
Fuel heat value	1,020	Btu/scf	Estimated, nominal
Fuel rate	1.96	Mscf/hr	Input heat rate / fuel heat value
Annual fuel usage	17.18	MMscf/yr	8760 actual hrs/yr operation

Parameters	Value	Unit	Note
Input heat rate	2.00	MMBtu/hr	
Exhaust temp	1,400	°F	Engineering Estimate
Stack height	9	ft	Engineering Estimate
Stack diameter	0.80	ft	Engineering Estimate
Exhaust flow (Actual)	802	acfm	Flow (acfm) = Flow (scfm) * (Stack Temp + 460) / 528 * 29.92 / Site Bar. Pres. / (100% - Moisture%)
Exhaust flow (Actual)	13.37	acfs	Flow (acfs) - Flow (acfm) / 60s/min
Exhaust velocity	26.60	ft/sec	Exhaust flow / stack area
O_2 F factor	8,710	dscf/MMBtu	Method 9
Moisture	10	%	Nominal
Exhaust flow (Dry)	556.7	dscfm	Flow (dscfm) = heat input * O2 F * [20.9 / (20.9 - O2%)]
O_2 %	10	%	
Site Elevation	3,037	ft MSL	
Pressure at Elevation	26.78	in Hg	

ONEOK, Inc. - Reveille Compressor Station

Unpaved Haul Road Emissions

Exempt per 20.2.72.202.B.5

Haul Input Information	
Unit(s):	HAUL
Description:	Unpaved haul road emissions

Input Data		
Truck Size	7,560	Nominal (gal)
Total Loadout Volume[1]	11,497,500	gal/yr
Trips per Year[2]	1521	trips/year
Trips per hour	1	trips/hr
Empty vehicle weight[3]	16	tons
Load Out Density[4]	5.75	lb/gal
Load weight[5]	21.7	tons
Loaded vehicle[6]	37.7	tons
Mean vehicle weight[7]	26.86	tons
Round-trip distance	0.05	mile/trip
Loadout Spots	2	Assumed
Facility Operating Hours	8,760	Cumulative total
Surface silt content[8]	4.8	%
Annual wet days[9]	70	days/yr
Control Efficiency	0.44	--

Emission Factors and Constants		
Parameter	**PM_{10}**	**$PM_{2.5}$**
k, lb/VMT[10]	1.5	0.15
a, lb/VMT[10]	0.90	0.90
b, lb/VMT[10]	0.45	0.45
Hourly EF, lb/VMT[11]	1.76	0.18
Annual EF, lb/VMT[12]	1.43	0.14

Emission Rate Calculation					
VMT/hr[13]	**VMT/yr[13]**	**Hourly Emission Rate by Month (lb/hr)[14]**		**Annual Emission Rate (tons/yr)[14]**	
		PM_{10}	**$PM_{2.5}$**	**PM_{10}**	**$PM_{2.5}$**
0.05	79.4	0.05	0.005	0.03	0.003

[1] The facility will remove condensate and produced water via loadout. Loadout volume is based on facility design.

[2] Trips per Year = Total Loadout Volume (gal) / Truck Size (gal)

[3] Empty vehicle weight includes driver and occupants and full fuel load.

[4] Cargo, transported materials, etc. (Promax Loadout Density = Condensate density 43 (lb/scf)*1 scf / 7.480519 gal)

[5] Load weight (lb) = Truck Size (gal) * Oil Load Out Density (lb/gal)

[6] Loaded vehicle weight = Empty + Load Size

[7] Mean Vehicle weight = (Loaded Weight + Empty Weight) / 2

[8] AP-42 Table 13.2.2-1

[9] Per NMED Guidance

[10] Table 13.2.2-2, Industrial Roads

[11] AP-42 13.2.2, Equation 1a

[12] AP-42 13.2.2, Equation 2

[13] VMT/hr = 1 trip/hr * Round-trip distance (mi/trip)
VMT/yr = Trips per Year * Round-trip distance (mi/trip)

[14] Hourly Emission Rate (lb/hr) = Hourly EF (lb/VMT) * VMT/hr (mile/hr)
Annual Emission Rate (tpy) = Annual EF (lb/VMT) * VMT/yr (mile/yr) / 2000 lb/ton

ONEOK, Inc. - Reveille Compressor Station
Gunbarrel Separator

Gunbarrel Separator Input Information			
Unit(s):	TK-407		
Description:	750 bbl Gunbarrel Tank		
Number of Tanks:	1		
Facility Produced Water Throughput:	750	bbl/day	Facility Design
Produced Water Throughput:	750	bbl/day/tank	

Flash, Working and Breathing Emissions[1] (Uncontrolled)					Controlled Emissions	
Component	Flash Emissions (tpy)	Working and Breathing Losses (tpy)	Total Emissions (tpy)	Total Emissions Per Tank (tpy)	Total Emissions (tpy)	Total Emissions Per Tank (tpy)
Nitrogen	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Carbon Dioxide	7.82E-01	5.17E-03	7.87E-01	7.87E-01	0.00E+00	0.00E+00
Methane	95.15	0.66	95.81	95.81	0.00E+00	0.00E+00
Ethane	142.58	0.93	143.51	143.51	0.00E+00	0.00E+00
Propane	248.11	1.55	249.66	249.66	0.00E+00	0.00E+00
Isobutane	68.14	0.41	68.55	68.55	0.00E+00	0.00E+00
n-Butane	186.89	1.11	187.99	187.99	0.00E+00	0.00E+00
Isopentane	76.35	0.44	76.79	76.79	0.00E+00	0.00E+00
n-Pentane	95.19	0.54	95.73	95.73	0.00E+00	0.00E+00
n-Hexane	43.00	0.23	43.23	43.23	0.00E+00	0.00E+00
Cyclohexane	316.93	1.743	318.67	318.672	0.00E+00	0.00E+00
Heptane	77.91	0.40	78.31	78.31	0.00E+00	0.00E+00
Methylcyclohexane	0.00	0.000	0.00	0.00	0.00E+00	0.00E+00
2,2,4-Trimethylpentane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Benzene	2.87	0.016	2.89	2.89	0.00E+00	0.00E+00
Toluene	4.886	0.025	4.91	4.91	0.00E+00	0.00E+00
Ethylbenzene	1.45E-01	7.22E-04	1.46E-01	1.46E-01	0.00E+00	0.00E+00
o-Xylene	2.20E-01	1.09E-03	2.21E-01	2.21E-01	0.00E+00	0.00E+00
m-Xylene	1.2202	6.05E-03	1.2263	1.2263	0.00E+00	0.00E+00
p-Xylene	0.6625	3.29E-03	0.6658	0.6658	0.00E+00	0.00E+00
Octanes	3.3386	1.65E-02	3.3551	3.3551	0.00E+00	0.00E+00
Nonanes	0.3742	1.77E-03	0.3759	0.3759	0.00E+00	0.00E+00
Decanes	0.0359	1.63E-04	0.0360	0.0360	0.00E+00	0.00E+00
Water	21.93	0.11	22.04	22.04	0.00E+00	0.00E+00
Total VOC	**1,126.28**	**6.49**	**1,132.76**	**1,132.76**	**0.00**	**0.00**
Total HAP	**53.01**	**0.28**	**53.29**	**53.29**	**0.00**	**0.00**

[1] Flash, working, and breathing emissions are controlled by a VRU with an assumed 5% downtime. VRU Downtime is controlled by an enclosed combustion unit (ECD-1). Controlled emissions from the condensate tanks are represented at the ECD.

ONEOK, Inc. - Reveille Compressor Station
Condensate Storage Tanks

Oil Tank Input Information			
Unit(s):	TK-406A & TK-406B		
Description:	1000 bbl Condensate Storage Tank		
Number of Tanks:	2		
Facility condensate Throughput:	500.00	bbl/day	Facility Design
Condensate Throughput:	250.00	bbl/day/tank	

Flash, Working and Breathing Emissions[1] (Uncontrolled)					Controlled Emissions	
Component	Flash Emissions (tpy)	Working and Breathing Losses (tpy)	Total Emissions (tpy)	Total Emissions Per Tank (tpy)	Total Emissions (tpy)	Total Emissions Per Tank (tpy)
Nitrogen	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Carbon Dioxide	1.29E-01	3.21E-02	1.61E-01	8.03E-02	0.00E+00	0.00E+00
Methane	8.13	1.71	9.83	4.92	0.00E+00	0.00E+00
Ethane	31.67	7.76	39.44	19.72	0.00E+00	0.00E+00
Propane	57.79	13.55	71.34	35.67	0.00E+00	0.00E+00
Isobutane	14.06	3.17	17.23	8.61	0.00E+00	0.00E+00
n-Butane	36.95	8.22	45.17	22.59	0.00E+00	0.00E+00
Isopentane	14.05	3.03	17.09	8.54	0.00E+00	0.00E+00
n-Pentane	17.26	3.67	20.93	10.47	0.00E+00	0.00E+00
n-Hexane	7.51	1.52	9.03	4.52	0.00E+00	0.00E+00
Cyclohexane	55.71	11.50	67.21	33.60	0.00E+00	0.00E+00
Heptane	13.50	2.62	16.11	8.06	0.00E+00	0.00E+00
Methylcyclohexane	0.00	0.00	0.00	0.00	0.00E+00	0.00E+00
2,2,4-Trimethylpentane	0.00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Benzene	0.50	0.103	0.61	0.30	0.00E+00	0.00E+00
Toluene	0.85	0.165	1.01	0.51	0.00E+00	0.00E+00
Ethylbenzene	0.03	0.0047	0.0299	0.0150	0.00E+00	0.00E+00
o-Xylene	0.04	7.08E-03	4.53E-02	2.27E-02	0.00E+00	0.00E+00
m-Xylene	0.21	0.0394	0.251	0.1256	0.00E+00	0.00E+00
p-Xylene	0.11	0.02145	0.1364	0.0682	0.00E+00	0.00E+00
Octanes	0.58	0.10707	0.6842	0.3421	0.00E+00	0.00E+00
Nonanes	0.06	0.01144	0.0761	0.0380	0.00E+00	0.00E+00
Decanes	0.01	0.00106	0.0073	0.0036	0.00E+00	0.00E+00
Water	1.20	3.01E-01	1.50	0.75	0.00E+00	0.00E+00
Total VOC	**219.23**	**47.74**	**266.97**	**133.49**	**0.00**	**0.00**
Total HAP	**9.26**	**1.86**	**11.12**	**5.56**	**0.00**	**0.00**

[1] Flash, working, and breathing emissions from condensate tanks are controlled by a VRU with an assumed 5% downtime. VRU Downtime is controlled by an enclosed combustion unit (ECD-1). Controlled emissions from the condensate tanks are represented at the ECD.

ONEOK, Inc. - Reveille Compressor Station
Produced Water Storage Tanks

Produced Water Tank Input Information			
Unit(s):	TK-406C		
Description:	1000 bbl Produced Water Storage Tank		
Number of Tanks:	1		
Facility Produced Water Throughput:	250	bbl/day	Facility Design
Produced Water Throughput:	250	bbl/day/tank	

Flash, Working and Breathing Emissions[1] (Uncontrolled)					Controlled Emissions	
Component	Flash Emissions (tpy)	Working and Breathing Losses (tpy)	Total Emissions (tpy)	Total Emissions Per Tank (tpy)	Total Emissions (tpy)	Total Emissions Per Tank (tpy)
Nitrogen	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Carbon Dioxide	7.56E-04	2.39E-02	2.47E-02	2.47E-02	0.00E+00	0.00E+00
Methane	6.36E-02	1.03E-01	0.166	0.166	0.00E+00	0.00E+00
Ethane	8.56E-02	2.01E-01	0.287	0.287	0.00E+00	0.00E+00
Propane	9.38E-02	1.54E-01	0.248	0.248	0.00E+00	0.00E+00
Isobutane	1.74E-02	1.92E-02	0.0366	0.0366	0.00E+00	0.00E+00
n-Butane	4.74E-02	7.15E-02	0.119	0.119	0.00E+00	0.00E+00
Isopentane	1.50E-02	1.56E-02	0.0306	0.0306	0.00E+00	0.00E+00
n-Pentane	9.90E-03	4.33E-03	0.0142	0.0142	0.00E+00	0.00E+00
n-Hexane	3.11E-03	9.14E-04	0.0040	4.03E-03	0.00E+00	0.00E+00
Cyclohexane	1.47E-02	0.0026	0.0173	0.0173	0.00E+00	0.00E+00
Heptane	4.29E-03	9.08E-04	0.0052	5.20E-03	0.00E+00	0.00E+00
Methylcyclohexane	0.00E+00	0.0000	0.0000	0.0000	0.00E+00	0.00E+00
2,2,4-Trimethylpentane	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Benzene	1.04E-03	0.050	0.051	0.051	0.00E+00	0.00E+00
Toluene	1.66E-03	0.0805	0.0821	0.0821	0.00E+00	0.00E+00
Ethylbenzene	4.93E-05	2.28E-03	2.33E-03	2.33E-03	0.00E+00	0.00E+00
o-Xylene	7.39E-05	3.44E-03	3.51E-03	3.51E-03	0.00E+00	0.00E+00
m-Xylene	3.93E-04	1.91E-02	1.95E-02	1.95E-02	0.00E+00	0.00E+00
p-Xylene	2.16E-04	1.04E-02	1.06E-02	1.06E-02	0.00E+00	0.00E+00
Octanes	8.17E-05	7.51E-06	8.92E-05	8.92E-05	0.00E+00	0.00E+00
Nonanes	9.51E-06	8.21E-07	1.03E-05	1.03E-05	0.00E+00	0.00E+00
Decanes	2.70E-07	6.98E-09	2.77E-07	2.77E-07	0.00E+00	0.00E+00
Water	0.0084	0.3536	0.3621	0.3621	0.00E+00	0.00E+00
Total VOC	**0.21**	**0.44**	**0.64**	**0.64**	**0.00**	**0.00**
Total HAP	**0.01**	**0.17**	**0.17**	**0.17**	**0.00**	**0.00**

[1] Flash, working, and breathing emissions from the produced water tank are controlled by a VRU with an assumed 5% downtime. VRU Downtime is controlled by an enclosed combustion unit (ECD-1). Controlled emissions from the produced water tank are represented at the ECD.

ONEOK, Inc. - Reveille Compressor Station
Oil Storage Tanks

Oil Tank Input Information			
Unit(s):	TK-405, TK-406		
Description:	210 bbl Oil Storage Tanks		
Number of Tanks:	2		
Facility Throughput:	4.60	bbl/day	Facility Design
Throughput:	2.30	bbl/day/tank	

Flash, Working and Breathing Emissions[1] (Uncontrolled)				
Component	Flash Emissions (tpy)	Working and Breathing Losses (tpy)	Total Emissions (tpy)	Total Emissions Per Tank (tpy)
VOC	0.00E+00	1.49	1.49	0.75
Total VOC	**0.00**	**1.49**	**1.49**	**0.75**
Total HAP	**0.00**	**0.00**	**0.00**	**0.00**

ONEOK, Inc. - Reveille Compressor Station
Methanol Storage Tank - Exempt Equipment

Exempt per 20.2.72.202.B.5

Methanol Tank Input Information			
Unit(s):	TK-408		
Description:	210 bbl Methanol Storage Tank		
Number of Tanks:	1		
Facility Methanol Throughput:	2.38	bbl/day	Facility Design
Methanol Throughput:	2.38	bbl/day/tank	

Flash, Working and Breathing Emissions[1] (Uncontrolled)				
Component	Flash Emissions (tpy)	Working and Breathing Losses (tpy)	Total Emissions (tpy)	Total Emissions Per Tank (tpy)
Methanol	0.00E+00	0.18	0.18	0.18
Total VOC	**0.00**	**0.18**	**0.18**	**0.18**
Total HAP	**0.00**	**0.18**	**0.18**	**0.18**

[1] Flash, working, and breathing emissions from the methanol storage tank are below 0.5 tpy of VOC therefore this unit is exempt per 20.2.72.202.B.5 NMAC

ONEOK, Inc. - Reveille Compressor Station

Condensate Loading Emissions

Annual Operating Hours: 8760

Uncontrolled Loading Emissions						
	Condensate Loading (Unit LOAD)		Produced Water Loading (Unit LOAD)		Total	
Pollutant	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
VOC	5.01	21.95	0.01	0.05	5.02	22.00
n-Hexane	1.59E-01	6.94E-01	0.00E+00	0.00E+00	0.16	0.69
Benzene	1.08E-02	4.73E-02	3.95E-03	1.73E-02	0.01	0.06
Toluene	1.70E-02	7.46E-02	5.64E-03	2.47E-02	0.02	0.10
Ethylbenzene	4.78E-04	2.09E-03	1.50E-04	6.55E-04	0.00	0.00
m-Xylene	3.99E-03	1.75E-02	8.69E-04	3.81E-03	0.00	0.02
o-Xylene	7.17E-04	3.14E-03	2.66E-04	1.17E-03	0.00	0.00
p-Xylene	2.18E-03	9.54E-03	5.31E-04	2.32E-03	0.00	0.01
Total HAP	0.19	0.85	0.01	0.05	0.21	0.90

[1] Loading emissions are calculated using a BR&E ProMax simulation.

[2] Emissions from truck loadout of produced water and condensate are vapor-balanced back to the condensate storage tanks and 5% routed to ECD during VRU downtime.

ONEOK, Inc. - Reveille Compressor Station

Enclosed Combustor

Emission Unit: ECD-1

Source Description: Condensate Tanks, Produced Water Tank, Gunbarrel Tank, Condensate and PW Loading during VRU Downtime

VOC Heat Input and Flow Rate Calculation Per Unit

Parameters	Value	Unit	Notes
Number of ECDs	1	-	
VRU Downtime	5%		
VOC Emissions	71.12	tpy	Condensate Tanks, Produced Water Tank, Gunbarrel Tank, Condensate and PW Loading d
HAP Emissions	3.27	tpy	Condensate Tanks, Produced Water Tank, Gunbarrel Tank, Condensate and PW Loading d
Total Flared Gas Heating Value	2,452.98	Btu/scf	Weighted average heating value from all streams
Total Flared Gas Flow	3,154.54	scf/hr	Total flow from all streams to flare
Total Flared Gas Heating Rate	7.74	MMBtu/hr	Calculated based on heating value and steady-state flow
Flared Gas Flow Rate with Safety Factor	0%	%	Safety factor
	3154.54	scf/hr	Flow with safety factor
	27.63	MMscf/yr	
Short-Term Safety Factor	0%	-	Applied to emissions to account for variations in heat content.
Heating Rate	7.74	MMBtu/hr	
Flare pilot	30	scf/hr	Mfg. Spec Sheet
	0%		Safety factor
	30	scf/hr	Pilot flow with safety factor
	3.00E-05	MMscf/hr	
Pipeline Gas HHV	1020	Btu/scf	Facility specification
Flare Heat Input	0.031	MMBtu/hr	
	0.26	MMscf/yr	
Heating Rate + Pilot	7.77	MMBtu/hr	

Emission Rates Per Unit

	NO_X	CO	VOC[1]	SO_2[2]	H_2S	HAPs[1]	Units	Notes
Emission Factors	0.1380	0.2755					lb/MMBtu	TNRCC RG-109 (high Btu; other)
							lb H_2S/Mscf	
				8.57E-05			lb S/hr	
			71.12		-	3.274	tpy	Condensate Tanks, Produced Water
Pilot Emissions	0.0042	0.008	-	1.71E-04	-	-	lb/hr	
	0.018	0.037	-	7.51E-04	-	-	tpy	
Process Emissions	1.07	2.13	-	-	-	-	lb/hr	
			0.325	-	-	1.49E-02	lb/hr	
	4.68	9.34	1.422	-	-	6.55E-02	tpy	
Total Emissions	***1.07***	***2.14***	***0.32***	***0.00***	***-***	***0.01***	lb/hr	
	4.70	***9.37***	***1.42***	***0.00***	***-***	***0.07***	tpy	

GHG Calculations

CO_2[3]	N_2O[3]	CH_4[3]	CO_2e[3]		
53.06	0.0001	0.001		kg/MMBtu	40 CFR 98 Subpart Tables
1	265	28		GWP	40 CFR 98 Table A-1
3964.66	0.00747	0.0747	3964.74	tpy	
3964.66	1.98	2.09	3968.73	tpy CO2e	

[1] The ECD controls Condensate tanks, produced water tank, gunbarrel, condensate loading, and produced water loading emissions during downtime. 98.00% DRE

[2] Fuel sulfur content is assumed to be 2 gr/100 Scf

[3] N2O, CH4, and CO2 tpy Emission Rate = EF * Fuel Usage * Fuel Heat Value *2.20462 lb/kg * 1 ton/2000 lb

CO2e tpy Emission Rate = CO2 Emission Rate + N2O Emission Rate * GWP Factor + CH4 Emission Rate * GWP Factor

"-" Indicates emissions of this pollutant are not expected.

Parameters	Value	Unit	Note
Input heat rate	1.60	MMBtu/hr	
Exhaust temp	1,400	°F	Manufacturer spec
Stack height	25.00	ft	Manufacturer spec
Stack diameter	4.00	ft	Manufacturer spec
Exhaust flow (Actual)	1948	acfm	Flow (acfm) = Flow (scfm) * (Stack Temp + 460) / 528 * 29.92 / Site Bar. Pres. / (100% - Moisture%)
Exhaust flow (Actual)	32.46	acfs	Flow (acfs) - Flow (acfm) / 60s/min
Exhaust velocity	2.58	ft/sec	Exhaust flow / stack area
O_2 F factor	8,710	dscf/MMBtu	Method 9
Moisture	10	%	Nominal
Exhaust flow (Dry)	445.4	dscfm	Flow (dscfm) = heat input * O2 F * [20.9 / (20.9 - O2%)]
O_2 %	10	%	
Site Elevation	3,037	ft MSL	
Pressure at Elevation	26.78	in Hg	

ONEOK, Inc. - Reveille Compressor Station

Enclosed Combustor

Emission Unit: ECD-2

Source Description: Dehydrator BTEX Condenser Vent Gas Stream

VOC Heat Input and Flow Rate Calculation Per Unit

Parameters	Value	Unit	Notes
Number of ECDs	1	-	
VRU Downtime	0%		
VOC Emissions	425.69	tpy	Dehydrator BTEX Condenser Vent Gas Stream
HAP Emissions	105.19	tpy	Dehydrator BTEX Condenser Vent Gas Stream
Total Flared Gas Heating Value	2230.00	Btu/scf	Weighted average heating value from all streams
Total Flared Gas Flow	861.84	scf/hr	Total flow from all streams to flare
Total Flared Gas Heating Rate	1.922	MMBtu/hr	Calculated based on heating value and steady-state flow
Flared Gas Flow Rate with Safety Factor	0%	%	Safety factor
	861.84	scf/hr	Flow with safety factor
	7.55	MMscf/yr	
Short-Term Safety Factor	0%	-	Applied to emissions to account for variations in heat content.
Heating Rate	1.9219109	MMBtu/hr	
Flare pilot	30	scf/hr	Mfg. Spec Sheet
	0%		Safety factor
	30	scf/hr	Pilot flow with safety factor
	3.00E-05	MMscf/hr	
Pipeline Gas HHV	1020	Btu/scf	Facility specification
Flare Heat Input	0.031	MMBtu/hr	
	0.26	MMscf/yr	
Heating Rate + Pilot	1.95	MMBtu/hr	

Emission Rates Per Unit

	NO_X	CO	VOC[1]	SO_2[2]	H_2S	HAPs[1]	Units	Notes
Emission Factors	0.1380	0.2755					lb/MMBtu	TNRCC RG-109 (high Btu; other)
							lb H_2S/Mscf	
				8.57E-05			lb S/hr	
			425.69		-	105.194	tpy	Dehydrator BTEX Condenser Vent G
Pilot Emissions	0.0042	0.008	-	1.71E-04	-	-	lb/hr	
	0.018	0.037	-	7.51E-04	-	-	tpy	
Process Emissions	0.27	0.53	-	-	-	-	lb/hr	
			1.944	-	-	4.80E-01	lb/hr	
	1.16	2.32	8.514	-	-	2.10E+00	tpy	
Total Emissions	***0.27***	***0.54***	***1.94***	***1.71E-04***	***-***	***4.80E-01***	lb/hr	
	1.18	***2.36***	***8.51***	***7.51E-04***	***-***	***2.10E+00***	tpy	

GHG Calculations

CO_2[3]	N_2O[3]	CH_4[3]	CO_2e[3]		
53.06	0.0001	0.001		kg/MMBtu	40 CFR 98 Subpart Tables
1	265	28		GWP	40 CFR 98 Table A-1
984.71	0.00186	0.0186	984.73	tpy	
984.71	0.49	0.52	985.72	tpy CO2e	

[1] The ECD controls the dehydrator still vent emissions. 98.00% DRE

[2] Fuel sulfur content is assumed to be 2 gr/100 Scf

[3] N2O, CH4, and CO2 tpy Emission Rate = EF * Fuel Usage * Fuel Heat Value *2.20462 lb/kg * 1 ton/2000 lb

CO2e tpy Emission Rate = CO2 Emission Rate + N2O Emission Rate * GWP Factor + CH4 Emission Rate * GWP Factor

"-" Indicates emissions of this pollutant are not expected.

Parameters	Value	Unit	Note
Input heat rate	1.60	MMBtu/hr	
Exhaust temp	1,400	°F	Manufacturer spec
Stack height	25.00	ft	Manufacturer spec
Stack diameter	4.00	ft	Manufacturer spec
Exhaust flow (Actual)	1948	acfm	Flow (acfm) = Flow (scfm) * (Stack Temp + 460) / 528 * 29.92 / Site Bar. Pres. / (100% - Moisture%)
Exhaust flow (Actual)	32.46	acfs	Flow (acfs) - Flow (acfm) / 60s/min
Exhaust velocity	2.58	ft/sec	Exhaust flow / stack area
O_2 F factor	8,710	dscf/MMBtu	Method 9
Moisture	10	%	Nominal
Exhaust flow (Dry)	445.4	dscfm	Flow (dscfm) = heat input * O2 F * [20.9 / (20.9 - O2%)]
O_2 %	10	%	
Site Elevation	3,037	ft MSL	
Pressure at Elevation	26.78	in Hg	

ONEOK, Inc. - Reveille Compressor Station

Glycol Dehydrator Emissions

Unit: DEHY-1
Description: Glycol Dehydrator
Control Equipment: BTEX Condenser
Dry Gas Flow Rate: 170 MMscfd
Pump Circulation: 30.00 gpm

Uncontrolled Emissions[1]

Unit	VOC		H_2S		Methane		CO_2		Total HAP		n-Hexane		Benzene		Toluene		Ethylbenzene		Xylenes	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Dehy-1 (Flash Vent)	65.88	288.57	-	-	51.31	224.75	1.44	6.29	1.68	7.35	1.31	5.76	0.18	0.78	0.14	0.62	3.94E-03	0.02	0.04	0.17
Dehy-1 (Regenerator)	151.19	662.22	-	-	3.36	14.74	1.08	4.73	59.23	259.44	5.94	26.00	15.59	68.29	24.01	105.15	1.12	4.92	11.723	51.35
DEHY-1 Total	217.08	950.80	-	-	54.68	239.49	2.52	11.02	60.91	266.79	7.25	31.76	15.77	69.08	24.15	105.77	1.1268	4.935	11.762	51.52

Controlled Emissions[2]

Unit	VOC		H_2S		Methane		CO_2		Total HAP		n-Hexane		Benzene		Toluene		Ethylbenzene		Xylenes	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Dehy-1 (Flash Vent)[2]	0.00	0.00	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dehy-1 (Regenerator)[2]	1.94	8.51	-	-	0.07	0.29	332.69	1457.18	0.47	2.07	0.08	0.37	0.19	0.82	0.16	0.72	3.39E-03	0.01	0.03	0.15
DEHY-1 Total	1.94	8.51	-	-	0.07	0.29	332.69	1457.18	0.47	2.07	0.084	0.37	0.187	0.82	0.163	0.716	3.39E-03	0.01	0.03	0.15

Notes

[1] Emissions are calculated using BR&E ProMax.

[2] Still column BTEX non-condensables are sent to ECD-2 with a 98% DRE. Flash tank emissions are routed to inlet suction for recycle / recompression.

ONEOK, Inc. - Reveille Compressor Station

Fugitives

Unit: FUG

Annual Operating Hours: 8,760

Facility-wide Fugitive Emissions Per Piece of Equipment					
Subcomponent		**Emission Factor[1] (lb/hr/comp)**	**VOC Content[2] (wt%)**	**HAP Content[2] (wt%)**	**Subcomponent Counts[3]**
Valves	Gas	9.92E-03	28.00%	0.50%	393
	Light Oil	5.51E-03	99.84%	15.56%	136
	Water/Oil	2.16E-04	0.0035%	0.0035%	136
Flanges	Gas	8.60E-04	28.00%	0.50%	393
	Light Oil	2.43E-04	99.84%	15.56%	136
	Water/Oil	6.39E-06	0.0035%	0.0035%	136
Connectors	Gas	4.41E-04	28.00%	0.50%	2423
	Light Oil	4.63E-04	99.84%	15.56%	332
	Water/Oil	2.43E-04	0.0035%	0.0035%	332
Other	Gas	1.94E-02	28.00%	0.50%	0
	Light Oil	1.65E-02	99.84%	15.56%	0
	Water/Oil	3.09E-02	0.0035%	0.0035%	0
Pump Seals	Gas	5.29E-03	28.00%	0.50%	0
	Light Oil	2.87E-02	99.84%	15.56%	3
	Water/Oil	5.29E-05	0.0035%	0.0035%	3
Open Ended Lines	Gas	4.41E-03	28.00%	0.50%	87
	Light Oil	3.09E-03	99.84%	15.56%	12
	Water/Oil	5.51E-04	0.0035%	0.0035%	12
				Hourly VOC Emission Rate (lb/hr)[4]	2.65
				Annual VOC Emission Rate (tpy)[5]	11.61
				Hourly HAP Emission Rate (lb/hr)[4]	0.193
				Annual HAP Emission Rate (tpy)[5]	0.85

[1] Emission factors from Table 2-4 of EPA Protocol for Equipment Leak Emission Estimates, 1995.

[2] Weight percent of gas and liquid components from gas and liquid streams generated in a ProMax simulation of this facility.

[3] Component counts are based on estimated design.

[4] Hourly Emissions [lb/hr] = Emissions Factor [lb/hr/component] * Weight Content of Chemical Component [%] * Subcomponent Count.

[5] Annual Emissions [ton/yr] = Hourly Emissions [lb/hr] * Operating Hours [hr/yr] * 1/2000 [ton/lb].

ONEOK, Inc. - Reveille Compressor Station

Fugitives

Component	Number of Components[d]	Emission Factors [a] (lb/hr-component)	Annual Operating Hours (hr/yr)	Maximum VOC (wt%)	Maximum HAPs (wt%)	Maximum CO_2 (wt%)	Potential To Emit VOC Hourly [b] (lb/hr)	Potential To Emit VOC Annual [c] (T/yr)	Potential To Emit HAPs Annual [c] (T/yr)
Relief Valves									
Gas Stream (Inlet Gas)	48	0.0194	8,760	28.0000%	0.50%	10.00%	0.2607	1.1420	0.0204
Compressor Seals									
Gas Stream (Inlet Gas)	24	0.0194	8,760	28.0000%	0.50%	10.00%	0.1304	0.5710	0.0102
					Gas Streams Total:		0.3911	1.7130	0.0306
					COMP-1 FUG Total:		0.0489	0.2141	0.0038
					COMP-2 FUG Total:		0.0489	0.2141	0.0038
					COMP-3 FUG Total:		0.0489	0.2141	0.0038
					COMP-4 FUG Total:		0.0489	0.2141	0.0038
					COMP-5 FUG Total:		0.0489	0.2141	0.0038
					COMP-6 FUG Total:		0.0489	0.2141	0.0038
					COMP-7 FUG Total:		0.0489	0.2141	0.0038
					COMP-8 FUG Total:		0.0489	0.2141	0.0038

[a] Fugitive Emission Factors and Reduction Credits are per TCEQ Technical Guidance Document for Equipment Leak Fugitives, dated June 2018. The emission factors are for total hydrocarbon.

[b] Hourly VOC emission rates are calculated as follows:
(48 components) * (0.01940 lb/hr-component) * (28.00 % VOC) * (100% - 0.0 % reduction credit) = 0.2607 lb/hr

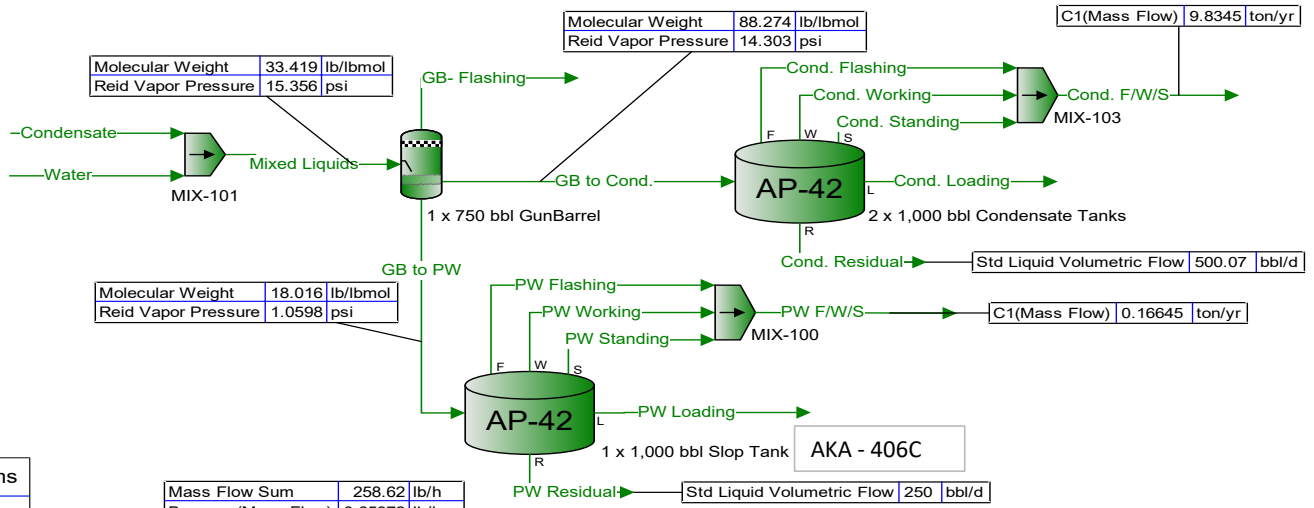
[c] Annual VOC emission rates are calculated as follows:
(48 components) * (0.01940 lb/hr-component) * (8,760 hr/yr) * (28.00 % VOC) * (100% - 0.0 % reduction credit) / (2,000 lb/T) = 1.1420 T/yr

[d] Emissions based on three (3) seals and six (6) relief vents per compressor.

Reveille Compressor Station
Tank Emissions Based On –
Reveille Condensate Analysis (10/15/2025)

Cond. TP: 500.00 bbl/d
PW TP: 250.00 bbl/d
Includes Safety Factor

"Cond. F/W/S" Component Sums		
BTEX	2.085	ton/yr
VOCs	267	ton/yr



"PW F/W/S" Component Sums		
BTEX	0.1694	ton/yr
VOCs	0.6445	ton/yr

"GB F/W/B" Component Sums		
BTEX	10.06	ton/yr
VOCs	1,133	ton/yr

Mass Flow Sum	258.62	lb/h
Benzene(Mass Flow)	0.65972	lb/h
Benzene(Mass Flow)	2.8896	ton/yr
C1(Mass Flow)	95.813	ton/yr

GB F, GB W, GB B → MIX-102 → GB F/W/B

Annual tank loss calculations for "Mixed Liquids".
Total working and breathing losses are 6.487 ton/yr.
Flashing losses are 1,126 ton/yr.
* Only Non-Exempt VOCs are reported.

Annual – 1 X 750 bbl Gunbarrel Tank

Process Streams		Cond. F/W/S	Cond. Flashing	Cond. Loading	Cond. Residual	Cond. Standing	Cond. Working	Condensate	GB B	GB F	GB F/W/B
Composition	Status:	Solved	Solved	Solved	Solved	Solved	Solved	Solved	Solved	Solved	Solved
Phase: Total	From Block:	MIX-103	2 x 1,000 bbl Condensate Tanks	2 x 1,000 bbl Condensate Tanks	2 x 1,000 bbl Condensate Tanks	2 x 1,000 bbl Condensate Tanks	2 x 1,000 bbl Condensate Tanks	--	--	--	MIX-102
	To Block:	--	MIX-103	--	--	MIX-103	MIX-103	MIX-101	MIX-102	MIX-102	--
Mole Fraction		%	%	%	%	%	%	%	%	%	%
Water		1.31943	1.29241	1.09273	0.0111953	1.43924	1.43924	0*	3.28671*	4.14096*	4.13574
H2S		0	0	0	0	0	0	0*	0*	0*	0
N2		0	0	0	0	0	0	0*	0*	0*	0
CO2		0.0578985	0.0567615	0.0439293	0.000398674	0.0629396	0.0629396	0.0075*	0.0651016*	0.0604654*	0.0604937
C1		9.72254	9.84475	0	0	9.18071	9.18071	2.3348*	22.8250*	20.1760*	20.1921
C2		20.8011	20.4735	22.0044	0.459211	22.2532	22.2532	2.2001*	17.1207*	16.1293*	16.1353
C3		25.6596	25.4751	30.0234	2.16518	26.4776	26.4776	3.6752*	19.4361*	19.1397*	19.1415
iC4		4.70073	4.70112	5.45708	1.13857	4.69900	4.69900	1.3263*	3.89539*	3.98789*	3.98732
nC4		12.3266	12.3581	14.1757	4.34273	12.1871	12.1871	4.7095*	10.5419*	10.9376*	10.9352
iC5		3.75598	3.78628	4.20130	3.11378	3.62167	3.62167	3.0718*	3.36615*	3.59994*	3.59852
nC5		4.60166	4.64966	5.07530	5.06183	4.38884	4.38884	4.9056*	4.14137*	4.48793*	4.48581
nC6		1.66225	1.69447	1.73162	6.58588	1.51941	1.51941	6.1359*	1.48831*	1.69723*	1.69596
Benzene		0.123361	0.125504	0.130244	0.469562	0.113859	0.113859	0.4388*	0.111033*	0.125154*	0.125068
iC6		12.3694	12.5646	13.1980	33.9598	11.5039	11.5039	31.8545*	11.2003*	12.5103*	12.5023
Toluene		0.174644	0.179150	0.174073	2.25281	0.154665	0.154665	2.0781*	0.152346*	0.180393*	0.180222
C7		2.55048	2.61829	2.52828	32.0992	2.24983	2.24983	29.5982*	2.22321*	2.64496*	2.64239
m-Xylene		0.0375147	0.0387659	0.0354253	1.66224	0.0319673	0.0319673	1.5277*	0.0315472*	0.0390966*	0.0390505
p-Xylene		0.0203726	0.0210406	0.0193171	0.867022	0.0174107	0.0174107	0.7969*	0.0171874*	0.0212270*	0.0212023
o-Xylene		0.00676794	0.00699871	0.00635617	0.338738	0.00574478	0.00574478	0.3113*	0.00566804*	0.00705664*	0.00704817
Ethylbenzene		0.00447403	0.00462173	0.00423544	0.177643	0.00381921	0.00381921	0.1633*	0.00376823*	0.00466031*	0.00465487
C8		0.0950019	0.0982101	0.0894420	3.79059	0.0807774	0.0807774	3.484*	0.0800147*	0.0994199*	0.0993015
C9		0.00940619	0.00979334	0.00838505	1.18907	0.00768967	0.00768967	1.0918*	0.00762772*	0.00992362*	0.00990961
C10		0.000811567	0.000850180	0.000688061	0.314517	0.000640368	0.000640368	0.2887*	0.000632622*	0.000857854*	0.000856479
Mass Flow		lb/h	lb/h	lb/h	lb/h	lb/h	lb/h	lb/h	lb/h	lb/h	lb/h
Water		0.342179	0.273488	0.0209097	0.111243	0.0117961	0.0568956	0*	0.00838699*	5.00703*	5.03144
H2S		0	0	0	0	0	0	0*	0*	0*	0
N2		0	0	0	0	0	0	0*	0*	0*	0
CO2		0.0366810	0.0293426	0.00205351	0.00967740	0.00126019	0.00607822	0.198364*	0.000405828*	0.178604*	0.179785
C1		2.24532	1.85513	0	0	0.0670058	0.323186	22.5100*	0.0518663*	21.7242*	21.8751
C2		9.00393	7.23120	0.702789	7.61599	0.304423	1.46831	39.7573*	0.0729195*	32.5517*	32.7638
C3		16.2882	13.1950	1.40621	52.6604	0.531177	2.56200	97.3939*	0.121397*	56.6460*	56.9993
iC4		3.93309	3.20953	0.336897	36.5003	0.124255	0.599312	46.3275*	0.0320699*	15.5569*	15.6502
nC4		10.3137	8.43708	0.875151	139.219	0.322260	1.55434	164.502*	0.0867889*	42.6679*	42.9205
iC5		3.90104	3.20878	0.321965	123.911	0.118878	0.573381	133.192*	0.0344006*	17.4326*	17.5327
nC5		4.77937	3.94047	0.388943	201.433	0.144060	0.694839	212.704*	0.0423231*	21.7327*	21.8558
nC6		2.06209	1.71520	0.158501	313.034	0.0595694	0.287319	317.773*	0.0181668*	9.81663*	9.86950
Benzene		0.138715	0.115153	0.0108062	20.2304	0.00404621	0.0195159	20.5987*	0.00122850*	0.656144*	0.659719
iC6		15.3447	12.7183	1.20806	1614.14	0.451019	2.17538	1649.72*	0.136716*	72.3584*	72.7562
Toluene		0.231645	0.193890	0.0170360	114.488	0.00648335	0.0312709	115.070*	0.00198827*	1.11558*	1.12136
C7		3.67897	3.08171	0.269090	1774.05	0.102563	0.494689	1782.37*	0.0315544*	17.7883*	17.8801
m-Xylene		0.0573337	0.0483425	0.00399476	97.3352	0.00154402	0.00744721	97.4708*	0.000474402*	0.278586*	0.279966
p-Xylene		0.0311355	0.0262385	0.00217830	50.7698	0.000840937	0.00405606	50.8441*	0.000258461*	0.151255*	0.152007
o-Xylene		0.0103434	0.00872765	0.000716758	19.8353	0.000277472	0.00133832	19.8617*	8.52349E-05*	0.0502826*	0.0505307
Ethylbenzene		0.00683766	0.00576346	0.000477612	10.4022	0.000184468	0.000889736	10.4189*	5.66660E-05*	0.0332074*	0.0333723
C8		0.156219	0.131774	0.0108521	238.823	0.00419787	0.0202474	239.171*	0.00129464*	0.762231*	0.765998
C9		0.0173666	0.0147538	0.00114229	84.1157	0.000448691	0.00216415	84.1537*	0.000138571*	0.0854247*	0.0858279
C10		0.00166227	0.00142088	0.000103985	24.6824	4.14518E-05	0.000199933	24.6860*	1.27496E-05*	0.00819221*	0.00822931

Process Streams		Cond. F/W/S	Cond. Flashing	Cond. Loading	Cond. Residual	Cond. Standing	Cond. Working	Condensate	GB B	GB F	GB F/W/B
Properties	**Status:**	Solved	Solved	Solved	Solved	Solved	Solved	Solved	Solved	Solved	Solved
Phase: Total	**From Block:**	MIX-103	2 x 1,000 bbl Condensate Tanks	2 x 1,000 bbl Condensate Tanks	2 x 1,000 bbl Condensate Tanks	2 x 1,000 bbl Condensate Tanks	2 x 1,000 bbl Condensate Tanks	--	--	--	MIX-102
	To Block:	--	MIX-103	--	--	MIX-103	MIX-103	MIX-101	MIX-102	MIX-102	--
Property	**Units**										
Temperature	°F	82.0781	82.0782	82.0782	82.0782	82.0782	82.0782	75*	81.5992	81.5992	81.5972
Pressure	psig	-1.81595	-1.81595	-1.81595	-1.81595	-1.81595	-1.81595	90*	0.0987595	-1.81595	-1.81595
Mole Fraction Vapor	%	100	100	99.7805	0	100	100	0	100	100	100
Mole Fraction Light Liquid	%	0	0	0.219517	100	0	0	100	0	0	0
Mole Fraction Heavy Liquid	%	0	0	0	0	0	0	0	0	0	0
Phase Mole Fraction	%	100	100	100	100	100	100	100	100	100	100
Molecular Weight	lb/lbmol	50.4188	50.6046	54.0202	89.2623	49.5950	49.5950	85.3401	45.3619	47.1710	47.1600
Mass Density	lb/ft^3	0.113714	0.114147	0.122427	41.6025	0.111796	0.111796	41.4117	0.117475	0.106239	0.106214
Molar Flow	lbmol/h	1.43955	1.17462	0.106217	55.1562	0.0454951	0.219435	60.0973	0.0141646	6.71179	6.75301
Mass Flow	lb/h	72.5805	59.4413	5.73788	4923.37	2.25633	10.8829	5128.71	0.642532	316.602	318.472
Vapor Volumetric Flow	ft^3/h	638.274	520.745	46.8679	118.343	20.1826	97.3457	123.847	5.46951	2980.10	2998.41
Liquid Volumetric Flow	gpm	79.5770	64.9241	5.84327	14.7545	2.51627	12.1366	15.4407	0.681913	371.545	373.828
Std Vapor Volumetric Flow	MMSCFD	0.0131109	0.0106980	0.000967388	0.502342	0.000414352	0.00199853	0.547344	0.000129006	0.0611284	0.0615038
Std Liquid Volumetric Flow	sgpm	0.272452	0.222678	0.0210306	14.5854	0.00854747	0.0412266	15.4295*	0.00248142	1.19581	1.20303
Compressibility		0.982279	0.982160	0.977540	0.00475339	0.982801	0.982801	0.0376020	0.983499	0.984535	0.984542
Specific Gravity		1.74083	1.74725		0.667041	1.71239	1.71239	0.663982	1.56623	1.62869	1.62831
API Gravity					77.0971			79.1166			
Enthalpy	Btu/h	-73298.5	-59927.7	-5591.99	-4.58965E+06	-2296.11	-11074.7	-4.86080E+06	-705.539	-345422	-347475
Mass Enthalpy	Btu/lb	-1009.89	-1008.18	-974.574	-932.218	-1017.63	-1017.63	-947.761	-1098.06	-1091.03	-1091.07
Mass Cp	Btu/(lb*°F)	0.409350	0.409309	0.406039	0.522464	0.409537	0.409537	0.521807	0.415866	0.413664	0.413673
Ideal Gas CpCv Ratio		1.10730	1.10688	1.10051	1.06048	1.10921	1.10921	1.06398	1.11862	1.11413	1.11416
Dynamic Viscosity	cP	0.00809811	0.00808757		0.308640	0.00814517	0.00814517	0.298658	0.00846316	0.00834640	0.00834704
Kinematic Viscosity	cSt	4.44580	4.42317		0.463140	4.54834	4.54834	0.450225	4.49744	4.90451	4.90605
Thermal Conductivity	Btu/(h*ft*°F)	0.0104930	0.0104838		0.0672981	0.0105340	0.0105340	0.0674300	0.0114897	0.0111759	0.0111777
Surface Tension	lbf/ft				0.00123890?			0.00117751?			
Net Ideal Gas Heating Value	Btu/ft^3	2609.28	2618.73	2791.74	4527.27	2567.38	2567.38	4334.46	2336.73	2417.87	2417.38
Net Liquid Heating Value	Btu/lb	19482.2	19481.1	19450.7	19088.7	19487.2	19487.2	19116.6	19391.9	19290.6	19291.2
Gross Ideal Gas Heating Value	Btu/ft^3	2831.62	2841.74	3027.14	4880.67	2786.75	2786.75	4674.55	2539.87	2626.93	2626.40
Gross Liquid Heating Value	Btu/lb	21155.9	21153.6	21104.5	20591.0	21165.9	21165.9	20628.8	21091.6	20972.7	20973.4

GB to Cond.	GB to PW	GB W	GB- Flashing	Mixed Liquids	PW F/W/S	PW Flashing	PW Loading	PW Residual	PW Standing	PW Working	Water
Solved	Solved	Solved	Solved	Solved	Solved	Solved	Solved	Solved	Solved	Solved	Solved
1 x 750 bbl GunBarrel	1 x 750 bbl GunBarrel	--	1 x 750 bbl GunBarrel	MIX-101	MIX-100	1 x 1,000 bbl Slop Tank	1 x 1,000 bbl Slop Tank	1 x 1,000 bbl Slop Tank	1 x 1,000 bbl Slop Tank	1 x 1,000 bbl Slop Tank	--
2 x 1,000 bbl Condensate Tanks	1 x 1,000 bbl Slop Tank	MIX-102	--	1 x 750 bbl GunBarrel	--	MIX-100	--	--	MIX-100	MIX-100	MIX-101
%	%	%	%	%	%	%	%	%	%	%	%
0.0444711	99.9960	3.28671*	1.96547	77.1200	38.8911	4.19643	93.9336	99.9995	48.4594	48.4594	100*
0	0	0*	0	0	0	0	0	0	0	0	0*
0	0	0*	0	0	0	0	0	0	0	0	0*
0.00186122	6.32924E-05	0.0651016*	0.0926628	0.00171600	1.08618	0.153706	0	0	1.34334	1.34334	0*
0.247299	0.00116996	22.8250*	35.1291	0.534203	20.0780	35.4649	0	0	15.8345	15.8345	0*
0.976620	0.00107461	17.1207*	21.3785	0.503384	18.4416	25.4961	0	0	16.4961	16.4961	0*
2.76278	0.000634723	19.4361*	17.9375	0.840887	10.8926	19.0417	0	0	8.64526	8.64526	0*
1.22918	7.09717E-05	3.89539*	2.82147	0.303458	1.21796	2.67642	0	0	0.815747	0.815747	0*
4.54580	0.000230633	10.5419*	7.16290	1.07754	3.95796	7.29382	0	0	3.03798	3.03798	0*
3.13011	4.78753E-05	3.36615*	2.07464	0.702829	0.821601	1.86337	0	0	0.534298	0.534298	0*
5.05013	2.22491E-05	4.14137*	2.50566	1.12240	0.381823	1.22853	0	0	0.148313	0.148313	0*
6.46065	5.26793E-06	1.48831*	0.865151	1.40390	0.0904044	0.323220	0	0	0.0261975	0.0261975	0*
0.460756	0.000303081	0.111033*	0.0647756	0.100398	1.26939	0.119610	2.38021	0.000229126	1.58648	1.58648	0*
33.4106	2.26075E-05	11.2003*	6.53850	7.28832	0.387973	1.52837	0	0	0.0734710	0.0734710	0*
2.19995	0.000309224	0.152346*	0.0886114	0.475470	1.72500	0.161529	2.88157	0.000208719	2.15618	2.15618	0*
31.3477	5.85165E-06	2.22321*	1.28946	6.77208	0.100422	0.383466	0	0	0.0223626	0.0223626	0*
1.62092	3.68529E-05	0.0315472*	0.0184794	0.349538	0.356095	0.0331079	0.385310	1.61039E-05	0.445169	0.445169	0*
0.845487	2.22466E-05	0.0171874*	0.0100577	0.182331	0.193679	0.0182212	0.235111	1.09613E-05	0.242068	0.242068	0*
0.330294	1.55221E-05	0.00566804*	0.00332413	0.0712256	0.0640561	0.00622918	0.117887	1.17902E-05	0.0800038	0.0800038	0*
0.173239	6.95754E-06	0.00376823*	0.00220635	0.0373631	0.0423891	0.00415723	0.0662699	4.48776E-06	0.0529328	0.0529328	0*
3.69659	8.80810E-08	0.0800147*	0.0466900	0.797141	0.00151158	0.00640447	0	0	0.000162201	0.000162201	0*
1.15907	9.08074E-09	0.00762772*	0.00447819	0.249804	0.000155837	0.000663608	0	0	1.58020E-05	1.58020E-05	0*
0.306538	2.19618E-10	0.000632622*	0.000377081	0.0660547	3.76892E-06	1.69961E-05	0	0	1.21088E-07	1.21088E-07	0*
lb/h	lb/h	lb/h	lb/h	lb/h	lb/h	lb/h	lb/h	lb/h	lb/h	lb/h	lb/h
0.453422	3647.55	0.0160193*	1.27085	3649.27	0.0826647	0.00192815	0.0359682	3647.47	0.0136856	0.0670509	3649.27*
0	0	0*	0	0	0	0	0	0	0	0	0*
0	0	0*	0	0	0	0	0	0	0	0	0*
0.0463584	0.00563995	0.000775139*	0.146366	0.198364	0.00563995	0.000172527	0	0	0.000926779	0.00454065	0*
2.24532	0.0380031	0.0990657*	20.2267	22.5100	0.0380031	0.0145107	0	0	0.00398217	0.0195102	0*
16.6199	0.0654256	0.139278*	23.0720	39.7573	0.0654256	0.0195530	0	0	0.00777582	0.0380967	0*
68.9486	0.0566705	0.231870*	28.3886	97.3939	0.0566705	0.0214152	0	0	0.00597611	0.0292792	0*
40.4334	0.00835228	0.0612541*	5.88579	46.3275	0.00835228	0.00396749	0	0	0.000743262	0.00364153	0*
149.533	0.0271420	0.165769*	14.9423	164.502	0.0271420	0.0108123	0	0	0.00276803	0.0135617	0*
127.812	0.00699388	0.0657058*	5.37228	133.192	0.00699388	0.00342885	0	0	0.000604306	0.00296073	0*
206.213	0.00325027	0.0808379*	6.48841	212.704	0.00325027	0.00226067	0	0	0.000167747	0.000821855	0*
315.096	0.000919181	0.0346990*	2.67586	317.773	0.000919181	0.000710398	0	0	3.53906E-05	0.000173392	0*
20.3691	0.0479350	0.00234646*	0.181600	20.5987	0.0116987	0.000238289	0.00395175	0.0362363	0.00194265	0.00951780	0*
1629.49	0.00394469	0.261129*	20.2232	1649.72	0.00394469	0.00335916	0	0	9.92530E-05	0.000486279	0*
114.719	0.0576889	0.00379763*	0.293034	115.070	0.0187525	0.000379587	0.00564322	0.0389364	0.00311437	0.0152585	0*
1777.73	0.00118722	0.0602696*	4.63737	1782.37	0.00118722	0.000979993	0	0	3.51271E-05	0.000172101	0*
97.3925	0.00792192	0.000906117*	0.0704135	97.4708	0.00446042	8.96464E-05	0.000869459	0.00346150	0.000740886	0.00362988	0*
50.8010	0.00478213	0.000493666*	0.0383236	50.8441	0.00242601	4.93376E-05	0.000530531	0.00235612	0.000402868	0.00197381	0*
19.8457	0.00333665	0.000162800*	0.0126662	19.8617	0.000802361	1.68668E-05	0.000266013	0.00253429	0.000133149	0.000652346	0*
10.4090	0.00149560	0.000108233*	0.00840703	10.4189	0.000530962	1.12565E-05	0.000149539	0.000964635	8.80949E-05	0.000431611	0*
238.979	2.03720E-05	0.00247278*	0.191419	239.171	2.03720E-05	1.86585E-05	0	0	2.90451E-07	1.42303E-06	0*
84.1330	2.35816E-06	0.000264674*	0.0206141	84.1537	2.35816E-06	2.17073E-06	0	0	3.17709E-08	1.55658E-07	0*
24.6841	6.32695E-08	2.43520E-05*	0.00192562	24.6860	6.32695E-08	6.16762E-08	0	0	2.70082E-10	1.32323E-09	0*

GB to Cond.	GB to PW	GB W	GB- Flashing	Mixed Liquids	PW F/W/S	PW Flashing	PW Loading	PW Residual	PW Standing	PW Working	Water
Solved	Solved	Solved	Solved	Solved	Solved	Solved	Solved	Solved	Solved	Solved	Solved
1 x 750 bbl GunBarrel	1 x 750 bbl GunBarrel	--	1 x 750 bbl GunBarrel	MIX-101	MIX-100	1 x 1,000 bbl Slop Tank	1 x 1,000 bbl Slop Tank	1 x 1,000 bbl Slop Tank	1 x 1,000 bbl Slop Tank	1 x 1,000 bbl Slop Tank	--
2 x 1,000 bbl Condensate Tanks	1 x 1,000 bbl Slop Tank	MIX-102	--	1 x 750 bbl GunBarrel	--	MIX-100	--	--	MIX-100	MIX-100	MIX-101
71.8346	71.8346	81.5992	71.8346	74.9370	79.2513	81.8875	81.8875	81.8875	81.8875	81.8875	75*
5	5	0.0987595	5*	90	-1.81595	-1.81595	-1.81595	-1.81595	-1.81595	-1.81595	90*
0	0	100	100	0	62.6398	100	0	0	51.9647	51.9647	0
100	100	0	0	22.8792	0.879436	0	6.06409	100	1.75553	1.75553	100
0	0	0	0	77.1208	36.4808	0	93.9359	0	46.2798	46.2798	0
100	100	100	100	100	100	100	100	100	100	100	100
88.2743	18.0162	45.3619	37.3764	33.4192	28.7228	32.8976	22.2908	18.0156	27.5714	27.5714	18.0153
41.8264	62.2625	0.117475	0.131161	48.1104	0.102928	0.0734830	59.9833	62.1626	0.118456	0.118456	62.2385
56.5958	202.478	0.0270546	3.58912	262.663	0.0117985	0.00255047	0.00212548	202.466	0.00156763	0.00768044	202.565
4995.95	3647.89	1.22725	134.148	8777.99	0.338887	0.0839043	0.0473787	3647.55	0.0432219	0.211761	3649.27
119.445	58.5889	10.4469	1022.77	182.455	3.29246	1.14182	0.000789865	58.6776	0.364878	1.78768	58.6336
14.8918	7.30459	1.30247	127.515	22.7477	0.410489	0.142357	9.84767E-05	7.31565	0.0454913	0.222879	7.31017
0.515453	1.84409	0.000246403	0.0326883	2.39223	0.000107457	2.32287E-05	1.93581E-05	1.84398	1.42774E-05	6.99505E-05	1.84489
14.8578	7.29303	0.00473956	0.573836	22.7247	0.00128468	0.000381398	9.79434E-05	7.29174	0.000153114	0.000750165	7.29516*
0.00728768	0.000999180	0.983499	0.984007	0.0126762	0.621469	0.992168	0.000823577	0.000642285	0.515835	0.515835	0.00528156
0.670632	0.998297	1.56623	1.29051	0.771386		1.13587	0.961753	0.996695			0.997912
77.6031	10.0025			50.3598			14.7589	9.99823			9.98734
-4.70065E+06	-2.48995E+07	-1347.59	-159434	-2.97596E+07	-831.742	-109.279	-243.933	-2.48628E+07	-122.464	-599.999	-2.48988E+07
-940.893	-6825.73	-1098.06	-1188.49	-3390.25	-2454.33	-1302.43	-5148.58	-6816.31	-2833.38	-2833.38	-6822.94
0.516664	0.978516	0.415866	0.421712	0.711528	0.538134	0.430141	0.836180	0.977746	0.576491	0.576491	0.978078
1.06220	1.32916	1.11862	1.14558	1.16895	1.20203	1.16416	1.28394	1.32883	1.21484	1.21484	1.32907
0.320793	0.972861	0.00846316	0.00889345	0.503788		0.00942164	0.782166	0.860429			0.936582
0.478798	0.975446	4.49744	4.23296	0.653714		8.00421	0.814044	0.864102			0.939433
0.0681378	0.347866	0.0114897	0.0125979	0.157981		0.0134379	0.278860	0.352478			0.349407
0.00125706?	0.00501820?			0.00240506?			0.00413458	0.00494356			0.00499487
4478.49	0.0840415	2336.73	1952.82	991.725	1111.38	1706.10	248.176	0.0192818	947.364	947.364	0
19094.4	-1057.90	19391.9	19685.1	10728.7	14322.4	19529.3	3376.76	-1059.33	12609.0	12609.0	-1059.76
4828.55	50.3984	2539.87	2128.25	1108.34	1226.63	1863.77	306.861	50.3299	1050.92	1050.92	50.3100
20599.2	1.89235	21091.6	21466.5	12052.8	15845.5	21348.6	4375.64	0.420352	14034.6	14034.6	0

ProMax Dehydration Emissions Report

Case Name:	Reveille - 20260816
File Name:	C:\Users\Admin\Resolute Compliance, LLC\Environmental Compliance - General\Env\Projects\Env-EnLink-0349\5.0 NSR Mod - Red Raider CS\5.2 Modeling\5.2.2 BRE ProMax-Other Simulation\Red Raider and Reveille Dehy NSR - 20260816.pmx
Date:	
Description:	

Dry Gas Flow Rate	167.31	MMSCFD
Dry Gas Water Content	1.26	lb/MMSCF
Glycol Circulation Rate	30.00	sgpm
Glycol Circulation Ratio	8.32	gal/lb
Annual Operating Hours	8760	hrs

INPUT SUMMARY:

Feed Stream Specifications	
Fraction of Water Saturaton (%)	100.00
Water Content (lbm/MMSCF)	30.97
Temperature (°F)	81.00
Pressure (psig)	1030.00
Flow Rate (MMSCFD)	170.00

Lean Glycol Specifications	
Glycol Circulation Rate (sgpm)	30.00

Regenerator Specifications	
Reboiler Temperature (°F)	400.000
Overhead Vapors	To Control Device
Is Reflux Coil Present?	Yes

Flash Tank Specifications	
Is Flash Tank Present?	Flash Tank Present
Temperature (°F)	110.00
Pressure (psig)	65.00
Flash Gas	FALSE

Stripping Gas Specifications	
Nitrogen (scfm)	Not In Use
Dry gas (scfm)	Not In Use

Kimray Pump Specifications	
Type	Electric/Pneumatic
Gas Injection Volume Ratio (scfm/gpm)	0.000

Methanol Specifications	
Is Methanol Present?	Not Present in Feed
MeOH Feed Mass Fraction (ppm)	0.00

BTEX Condenser Specifications	
Temperature (°F)	120.00
Pressure (psig)	-0.30
BTEX Emissions	To Flare

General Specifications	
Atmospheric Pressure (psia)	14.400
Flash Gas Flare Destruction Efficiency (%)	98.000
Regenerator Flare Destruction Efficiency (%)	98.000

Feed Composition Data (mol %)	
Carbon Dioxide	0.11
Hydrogen Sulfide	0.00
Nitrogen	0.91
Methane	77.37
Ethane	11.71
Propane	5.53
i-Butane	0.82
n-Butane	1.91
i-Pentane	0.49
n-Pentane	0.57
Cyclopentane	0.03
n-Hexane	0.18
Cyclohexane	0.08
n-Heptane	0.16
Methylcyclohexane	0.08
2,2,4-Trimethylpentane	0.01
Benzene	0.01
Toluene	0.01
Ethylbenzene	0.00
o-Xylene	0.00
m-Xylene	0.00
p-Xylene	0.00
Triethylene Glycol	0.00
Ethylene Glycol	0.00
Water	0.00
Methanol	0.00
O2	0.00
SO2	0.00
Total	100.00

EMISSIONS REPORTS:

CONTROLLED REGENERATOR EMISSIONS

Component	lbs/hr	lbs/day	tons/yr
Carbon Dioxide	332.69	7984.53	1457.18
Hydrogen Sulfide	0.00	0.00	0.00
Nitrogen	3409.17	81820.18	14932.18
Methane	0.07	1.61	0.29
Ethane	0.18	4.37	0.80
Propane	0.32	7.79	1.42
i-Butane	0.08	1.94	0.35
n-Butane	0.34	8.18	1.49
i-Pentane	0.14	3.29	0.60
n-Pentane	0.21	4.95	0.90
Cyclopentane	0.07	1.66	0.30
n-Hexane	0.08	2.02	0.37
Cyclohexane	0.13	3.16	0.58
n-Heptane	0.08	1.96	0.36
Methylcyclohexane	0.09	2.20	0.40
2,2,4-Trimethylpentane	0.01	0.20	0.04
Benzene	0.19	4.48	0.82
Toluene	0.16	3.92	0.72
Ethylbenzene	0.00	0.08	0.01
o-Xylene	0.00	0.12	0.02
m-Xylene	0.02	0.41	0.08
p-Xylene	0.01	0.29	0.05
Triethylene Glycol	0.00	0.00	0.00
Ethylene Glycol	0.00	0.00	0.00
Water	156.48	3755.49	685.38
Methanol	0.00	0.00	0.00
O2	659.44	15826.49	2888.33
SO2	0.00	0.00	0.00
Total Emissions	4559.97	109439.33	19972.68
Total HC Emissions	2.19	52.63	9.61
Total VOC Emissions	1.94	46.65	8.51
Total HAP Emissions	0.48	11.53	2.10
Total GHG Emissions	332.76	7986.14	1457.47

UNCONTROLLED REGENERATOR EMISSIONS

Component	lbs/hr	lbs/day	tons/yr
Carbon Dioxide	1.08	25.89	4.73
Hydrogen Sulfide	0.00	0.00	0.00
Nitrogen	0.00	0.10	0.02
Methane	3.36	80.76	14.74
Ethane	9.15	219.51	40.06
Propane	16.44	394.65	72.02
i-Butane	4.16	99.93	18.24
n-Butane	17.79	427.01	77.93
i-Pentane	7.60	182.33	33.28
n-Pentane	11.71	281.01	51.29
Cyclopentane	4.33	103.81	18.95
n-Hexane	5.94	142.48	26.00
Cyclohexane	10.71	257.03	46.91
n-Heptane	8.83	211.84	38.66
Methylcyclohexane	10.34	248.23	45.30
2,2,4-Trimethylpentane	0.85	20.45	3.73
Benzene	15.59	374.21	68.29
Toluene	24.01	576.18	105.15
Ethylbenzene	1.12	26.95	4.92
o-Xylene	1.74	41.88	7.64
m-Xylene	5.90	141.66	25.85
p-Xylene	4.08	97.80	17.85
Triethylene Glycol	0.05	1.16	0.21
Ethylene Glycol	0.00	0.00	0.00
Water	207.28	4974.82	907.91
Methanol	0.00	0.00	0.00
O2	0.00	0.00	0.00
SO2	0.00	0.00	0.00
Total Emissions	372.07	8929.71	1629.67
Total HC Emissions	163.70	3928.89	717.02
Total VOC Emissions	151.19	3628.63	662.22
Total HAP Emissions	59.23	1421.61	259.44
Total GHG Emissions	4.44	106.65	19.46

CONTROLLED FLASH TANK EMISSIONS

Component	lbs/hr	lbs/day	tons/yr
Carbon Dioxide	0.00	0.00	0.00
Hydrogen Sulfide	0.00	0.00	0.00
Nitrogen	0.00	0.00	0.00
Methane	0.00	0.00	0.00
Ethane	0.00	0.00	0.00
Propane	0.00	0.00	0.00
i-Butane	0.00	0.00	0.00
n-Butane	0.00	0.00	0.00
i-Pentane	0.00	0.00	0.00
n-Pentane	0.00	0.00	0.00
Cyclopentane	0.00	0.00	0.00
n-Hexane	0.00	0.00	0.00
Cyclohexane	0.00	0.00	0.00
n-Heptane	0.00	0.00	0.00
Methylcyclohexane	0.00	0.00	0.00
2,2,4-Trimethylpentane	0.00	0.00	0.00
Benzene	0.00	0.00	0.00
Toluene	0.00	0.00	0.00
Ethylbenzene	0.00	0.00	0.00
o-Xylene	0.00	0.00	0.00
m-Xylene	0.00	0.00	0.00
p-Xylene	0.00	0.00	0.00
Triethylene Glycol	0.00	0.00	0.00
Ethylene Glycol	0.00	0.00	0.00
Water	0.00	0.00	0.00
Methanol	0.00	0.00	0.00
O2	0.00	0.00	0.00
SO2	0.00	0.00	0.00
Total Emissions	0.00	0.00	0.00
Total HC Emissions	0.00	0.00	0.00
Total VOC Emissions	0.00	0.00	0.00
Total HAP Emissions	0.00	0.00	0.00
Total GHG Emissions	0.00	0.00	0.00

UNCONTROLLED FLASH TANK OFF GAS

Component	lbs/hr	lbs/day	tons/yr
Carbon Dioxide	1.44	34.49	6.29
Hydrogen Sulfide	0.00	0.00	0.00
Nitrogen	0.29	6.98	1.27
Methane	51.31	1231.52	224.75
Ethane	35.42	849.98	155.12
Propane	31.03	744.70	135.91
i-Butane	5.58	133.97	24.45
n-Butane	15.67	376.00	68.62
i-Pentane	4.07	97.70	17.83
n-Pentane	5.10	122.45	22.35
Cyclopentane	0.43	10.25	1.87
n-Hexane	1.31	31.54	5.76
Cyclohexane	0.72	17.37	3.17
n-Heptane	0.96	23.07	4.21
Methylcyclohexane	0.54	13.08	2.39
2,2,4-Trimethylpentane	0.10	2.34	0.43
Benzene	0.18	4.29	0.78
Toluene	0.14	3.39	0.62
Ethylbenzene	0.00	0.09	0.02
o-Xylene	0.00	0.11	0.02
m-Xylene	0.02	0.48	0.09
p-Xylene	0.01	0.36	0.07
Triethylene Glycol	0.00	0.02	0.00
Ethylene Glycol	0.00	0.00	0.00
Water	0.16	3.94	0.72
Methanol	0.00	0.00	0.00
O2	0.00	0.00	0.00
SO2	0.00	0.00	0.00
Total Emissions	154.51	3708.12	676.73
Total HC Emissions	152.61	3662.71	668.45
Total VOC Emissions	65.88	1581.21	288.57
Total HAP Emissions	1.78	42.61	7.78
Total GHG Emissions	52.75	1266.02	231.05

COMBINED REGENERATOR VENT/FLASH GAS EMISSIONS

Component	lbs/hr	lbs/day	tons/yr
Carbon Dioxide	332.69	7984.53	1457.18
Hydrogen Sulfide	0.00	0.00	0.00
Nitrogen	3409.17	81820.18	14932.18
Methane	0.07	1.61	0.29
Ethane	0.18	4.37	0.80
Propane	0.32	7.79	1.42
i-Butane	0.08	1.94	0.35
n-Butane	0.34	8.18	1.49
i-Pentane	0.14	3.29	0.60
n-Pentane	0.21	4.95	0.90
Cyclopentane	0.07	1.66	0.30
n-Hexane	0.08	2.02	0.37
Cyclohexane	0.13	3.16	0.58
n-Heptane	0.08	1.96	0.36
Methylcyclohexane	0.09	2.20	0.40
2,2,4-Trimethylpentane	0.01	0.20	0.04
Benzene	0.19	4.48	0.82
Toluene	0.16	3.92	0.72
Ethylbenzene	0.00	0.08	0.01
o-Xylene	0.00	0.12	0.02
m-Xylene	0.02	0.41	0.08
p-Xylene	0.01	0.29	0.05
Triethylene Glycol	0.00	0.00	0.00
Ethylene Glycol	0.00	0.00	0.00
Water	156.48	3755.49	685.38
Methanol	0.00	0.00	0.00
O2	659.44	15826.49	2888.33
SO2	0.00	0.00	0.00
Total Emissions	4559.97	109439.33	19972.68
Total HC Emissions	2.19	52.63	9.61
Total VOC Emissions	1.94	46.65	8.51
Total HAP Emissions	0.48	11.53	2.10
Total GHG Emissions	332.76	7986.14	1457.47

EQUIPMENT REPORTS:

BTEX CONDENSER

Condenser Outlet Temperature:	120.00	deg. F
Condenser Pressure:	14.10	psia
Condenser Duty:	-0.23	MMBTU/hr
Hydrocarbon Recovery:	4.60	bbls/day
Produced Water:	13.88	bbls/day
VOC Control Efficiency:	35.70	%
HAP Control Efficiency:	59.45	%
BTEX Control Efficiency:	63.03	%
Dissolved Hydrocarbons in Water:	601.90	mg/L

Component	Emitted (wt. %)	Condensed (wt. %)
Carbon Dioxide	99.60	0.40
Hydrogen Sulfide	0.00	0.00
Nitrogen	99.97	0.03
Methane	99.91	0.09
Ethane	99.54	0.46
Propane	98.68	1.32
i-Butane	97.09	2.91
n-Butane	95.78	4.22
i-Pentane	90.28	9.72
n-Pentane	88.00	12.00
Cyclopentane	79.97	20.03
n-Hexane	70.92	29.08
Cyclohexane	61.46	38.54
n-Heptane	46.25	53.75
Methylcyclohexane	44.24	55.76
2,2,4-Trimethylpentane	49.20	50.80
Benzene	59.86	40.14
Toluene	34.05	65.95
Ethylbenzene	15.12	84.88
o-Xylene	14.15	85.85
m-Xylene	14.53	85.47
p-Xylene	14.85	85.15
Triethylene Glycol	0.00	100.00
Ethylene Glycol	0.00	0.00
Water	2.37	97.63
Methanol	0.00	0.00
O2	0.00	0.00
SO2	0.00	0.00

ABSORBER

Absorber Stages:	3.00	
Dry Gas Dew Point:	1.26	lb H2O/MMSCF
Temperature:	90.99	deg. F
Pressure:	1049.40	psia
Dry Gas Flow Rate:	167.31	MMSCFD
TEG Losses with Dry Gas:	0.79	lb/hr
Wet Gas Water Content:	30.97	lb H2O/MMSCF
Lean Glycol Recirc. Ratio:	8.32	gal/lb H2O

Component	In Dry Gas (%)	Absorbed in Glycol (%)
Carbon Dioxide	99.72	0.28
Hydrogen Sulfide	-	-
Nitrogen	99.99	0.01
Methane	99.98	0.02
Ethane	99.93	0.07
Propane	99.89	0.11
i-Butane	99.88	0.12
n-Butane	99.82	0.18
i-Pentane	99.79	0.21
n-Pentane	99.73	0.27
Cyclopentane	98.65	1.35
n-Hexane	99.63	0.37
Cyclohexane	98.55	1.45
n-Heptane	99.37	0.63
Methylcyclohexane	98.51	1.49
2,2,4-Trimethylpentane	99.44	0.56
Benzene	87.40	12.60
Toluene	80.77	19.23
Ethylbenzene	74.24	25.76
o-Xylene	67.77	32.23
m-Xylene	75.87	24.13
p-Xylene	77.68	22.32
Triethylene Glycol	0.00	100.00
Ethylene Glycol	-	-
Water	2.43	97.57
Methanol	-	-
O2	-	-
SO2	-	-

FLASH TANK

Flash Temperature:	110	deg. F
Flash Pressure:	65	psig

Component	Flashed (wt. %)	Left in Glycol (wt. %)
Carbon Dioxide	57.12	42.88
Hydrogen Sulfide	0.00	0.00
Nitrogen	98.52	1.48
Methane	93.85	6.15
Ethane	79.48	20.52
Propane	65.36	34.64
i-Butane	57.28	42.72
n-Butane	46.82	53.18
i-Pentane	34.89	65.11
n-Pentane	30.35	69.65
Cyclopentane	8.99	91.01
n-Hexane	18.12	81.88
Cyclohexane	6.33	93.67
n-Heptane	9.82	90.18
Methylcyclohexane	5.00	95.00
2,2,4-Trimethylpentane	10.27	89.73
Benzene	1.13	98.87
Toluene	0.57	99.43
Ethylbenzene	0.32	99.68
o-Xylene	0.22	99.78
m-Xylene	0.31	99.69
p-Xylene	0.34	99.66
Triethylene Glycol	0.00	100.00
Ethylene Glycol	0.00	0.00
Water	0.05	99.95
Methanol	0.00	0.00
O2	0.00	0.00
SO2	0.00	0.00

REGENERATOR

Component	Recovered in Glycol (%)	Distilled Overhead (%)
Carbon Dioxide	0.00	100.00
Hydrogen Sulfide	-	-
Nitrogen	0.00	100.00
Methane	0.00	100.00
Ethane	0.00	100.00
Propane	0.00	100.00
i-Butane	0.00	100.00
n-Butane	0.00	100.00
i-Pentane	0.00	100.00
n-Pentane	0.00	100.00
Cyclopentane	0.01	99.99
n-Hexane	0.00	100.00
Cyclohexane	0.02	99.98
n-Heptane	0.00	100.00
Methylcyclohexane	0.04	99.96
2,2,4-Trimethylpentane	0.00	100.00
Benzene	0.54	99.46
Toluene	2.23	97.77
Ethylbenzene	7.19	92.81
o-Xylene	13.40	86.60
m-Xylene	7.48	92.52
p-Xylene	6.80	93.20
Triethylene Glycol	100.00	0.00
Ethylene Glycol	-	-
Water	41.46	58.54
Methanol	-	-
O2	-	-
SO2	-	-

STREAM REPORTS:

WET GAS STREAM

Temperature:	80.99	deg F
Pressure:	1044.40	psia
Flow Rate:	167.49	MMSCFD

Component	Conc. (mol%)	Mass Flow (lb/h)
Carbon Dioxide	0.11	904.12
Hydrogen Sulfide	0.00	0.00
Nitrogen	0.92	4753.01
Methane	78.05	230274.43
Ethane	11.66	64486.59
Propane	5.39	43747.89
i-Butane	0.77	8219.16
n-Butane	1.76	18864.75
i-Pentane	0.42	5619.41
n-Pentane	0.48	6308.38
Cyclopentane	0.03	353.05
n-Hexane	0.13	1984.97
Cyclohexane	0.05	789.00
n-Heptane	0.08	1554.19
Methylcyclohexane	0.04	732.15
2,2,4-Trimethylpentane	0.01	169.36
Benzene	0.01	125.73
Toluene	0.01	127.87
Ethylbenzene	0.00	4.62
o-Xylene	0.00	5.99
m-Xylene	0.00	26.05
p-Xylene	0.00	19.36
Triethylene Glycol	0.00	0.00
Ethylene Glycol	0.00	0.00
Water	0.07	216.27
Methanol	0.00	0.00
O2	0.00	0.00
SO2	0.00	0.00
Total Components	100.00	389286.34

DRY GAS STREAM

Temperature:	81.85	deg F
Pressure:	1039.40	psia
Flow Rate:	167.31	MMSCFD

Component	Conc. (mol%)	Mass Flow (lb/h)
Carbon Dioxide	0.11	901.60
Hydrogen Sulfide	0.00	0.00
Nitrogen	0.92	4752.71
Methane	78.12	230219.76
Ethane	11.67	64442.03
Propane	5.39	43700.42
i-Butane	0.77	8209.41
n-Butane	1.76	18831.29
i-Pentane	0.42	5607.74
n-Pentane	0.47	6291.57
Cyclopentane	0.03	348.30
n-Hexane	0.12	1977.72
Cyclohexane	0.05	777.56
n-Heptane	0.08	1544.40
Methylcyclohexane	0.04	721.26
2,2,4-Trimethylpentane	0.01	168.41
Benzene	0.01	109.96
Toluene	0.01	103.73
Ethylbenzene	0.00	3.50
o-Xylene	0.00	4.25
m-Xylene	0.00	20.13
p-Xylene	0.00	15.27
Triethylene Glycol	0.00	0.79
Ethylene Glycol	0.00	0.00
Water	0.00	8.81
Methanol	0.00	0.00
O2	0.00	0.00
SO2	0.00	0.00
Total Components	100.00	388760.60

LEAN GLYCOL STREAM

Temperature:	90.99	deg F
Pressure:	1049.40	psia
Flow Rate:	30.00	sgpm

Component	Conc. (wt%)	Mass Flow (lb/h)
Carbon Dioxide	0.00	0.00
Hydrogen Sulfide	0.00	0.00
Nitrogen	0.00	0.00
Methane	0.00	0.00
Ethane	0.00	0.00
Propane	0.00	0.00
i-Butane	0.00	0.00
n-Butane	0.00	0.00
i-Pentane	0.00	0.00
n-Pentane	0.00	0.00
Cyclopentane	0.00	0.00
n-Hexane	0.00	0.00
Cyclohexane	0.00	0.00
n-Heptane	0.00	0.00
Methylcyclohexane	0.00	0.00
2,2,4-Trimethylpentane	0.00	0.00
Benzene	0.00	0.09
Toluene	0.00	0.55
Ethylbenzene	0.00	0.09
o-Xylene	0.00	0.27
m-Xylene	0.00	0.48
p-Xylene	0.00	0.30
Triethylene Glycol	99.12	16783.63
Ethylene Glycol	0.00	0.00
Water	0.87	146.82
Methanol	0.00	0.00
O2	0.00	0.00
SO2	0.00	0.00
Total Components	100.00	16932.22

RICH GLYCOL STREAM

Temperature:	81.80	deg F
Pressure:	1044.40	psia
Flow Rate:	31.71	sgpm

Component	Conc. (wt%)	Mass Flow (lb/h)
Carbon Dioxide	0.01	2.52
Hydrogen Sulfide	0.00	0.00
Nitrogen	0.00	0.30
Methane	0.31	54.68
Ethane	0.26	44.56
Propane	0.27	47.47
i-Butane	0.06	9.75
n-Butane	0.19	33.46
i-Pentane	0.07	11.67
n-Pentane	0.10	16.81
Cyclopentane	0.03	4.75
n-Hexane	0.04	7.25
Cyclohexane	0.07	11.44
n-Heptane	0.06	9.79
Methylcyclohexane	0.06	10.89
2,2,4-Trimethylpentane	0.01	0.95
Benzene	0.09	15.86
Toluene	0.14	24.70
Ethylbenzene	0.01	1.21
o-Xylene	0.01	2.02
m-Xylene	0.04	6.40
p-Xylene	0.03	4.39
Triethylene Glycol	96.13	16782.84
Ethylene Glycol	0.00	0.00
Water	2.03	354.27
Methanol	0.00	0.00
O2	0.00	0.00
SO2	0.00	0.00
Total Components	100.00	17457.97

FLASH TANK OFF GAS STREAM

Temperature:	110.00	deg F
Pressure:	79.40	psia
Flow Rate:	2153.62	scfh

Component	Conc. (mol%)	Mass Flow (lb/h)
Carbon Dioxide	0.58	1.44
Hydrogen Sulfide	0.00	0.00
Nitrogen	0.18	0.29
Methane	56.36	51.31
Ethane	20.75	35.42
Propane	12.40	31.03
i-Butane	1.69	5.58
n-Butane	4.75	15.67
i-Pentane	0.99	4.07
n-Pentane	1.25	5.10
Cyclopentane	0.11	0.43
n-Hexane	0.27	1.31
Cyclohexane	0.15	0.72
n-Heptane	0.17	0.96
Methylcyclohexane	0.10	0.54
2,2,4-Trimethylpentane	0.02	0.10
Benzene	0.04	0.18
Toluene	0.03	0.14
Ethylbenzene	0.00	0.00
o-Xylene	0.00	0.00
m-Xylene	0.00	0.02
p-Xylene	0.00	0.01
Triethylene Glycol	0.00	0.00
Ethylene Glycol	0.00	0.00
Water	0.16	0.16
Methanol	0.00	0.00
O2	0.00	0.00
SO2	0.00	0.00
Total Components	100.00	154.51

FLASH TANK GLYCOL STREAM

Temperature:	110.00	deg F
Pressure:	79.40	psia
Flow Rate:	30.92	sgpm

Component	Conc. (wt%)	Mass Flow (lb/h)
Carbon Dioxide	0.01	1.08
Hydrogen Sulfide	0.00	0.00
Nitrogen	0.00	0.00
Methane	0.02	3.36
Ethane	0.05	9.15
Propane	0.10	16.44
i-Butane	0.02	4.16
n-Butane	0.10	17.79
i-Pentane	0.04	7.60
n-Pentane	0.07	11.71
Cyclopentane	0.03	4.33
n-Hexane	0.03	5.94
Cyclohexane	0.06	10.71
n-Heptane	0.05	8.83
Methylcyclohexane	0.06	10.35
2,2,4-Trimethylpentane	0.00	0.85
Benzene	0.09	15.68
Toluene	0.14	24.56
Ethylbenzene	0.01	1.21
o-Xylene	0.01	2.01
m-Xylene	0.04	6.38
p-Xylene	0.03	4.37
Triethylene Glycol	96.99	16782.84
Ethylene Glycol	0.00	0.00
Water	2.05	354.11
Methanol	0.00	0.00
O2	0.00	0.00
SO2	0.00	0.00
Total Components	100.00	17303.46

REGENERATOR OVERHEADS STREAM

Temperature:	202.55	deg F
Pressure:	14.10	psia
Flow Rate:	5351.89	scfh

Component	Conc. (mol%)	Mass Flow (lb/h)
Carbon Dioxide	0.17	1.08
Hydrogen Sulfide	0.00	0.00
Nitrogen	0.00	0.00
Methane	1.49	3.36
Ethane	2.16	9.15
Propane	2.64	16.44
i-Butane	0.51	4.16
n-Butane	2.17	17.79
i-Pentane	0.75	7.60
n-Pentane	1.15	11.71
Cyclopentane	0.44	4.33
n-Hexane	0.49	5.94
Cyclohexane	0.90	10.71
n-Heptane	0.62	8.83
Methylcyclohexane	0.75	10.34
2,2,4-Trimethylpentane	0.05	0.85
Benzene	1.42	15.59
Toluene	1.85	24.01
Ethylbenzene	0.07	1.12
o-Xylene	0.12	1.74
m-Xylene	0.39	5.90
p-Xylene	0.27	4.08
Triethylene Glycol	0.00	0.05
Ethylene Glycol	0.00	0.00
Water	81.59	207.28
Methanol	0.00	0.00
O2	0.00	0.00
SO2	0.00	0.00
Total Components	100.00	372.07

BTEX CONDENSER VENT GAS STREAM

Temperature:	120.00	deg F
Pressure:	14.10	psia
Flow Rate:	861.84	scfh

Component	Conc. (mol%)	Mass Flow (lb/h)
Carbon Dioxide	1.08	1.07
Hydrogen Sulfide	0.00	0.00
Nitrogen	0.01	0.00
Methane	9.23	3.36
Ethane	13.33	9.10
Propane	16.20	16.23
i-Butane	3.06	4.04
n-Butane	12.91	17.04
i-Pentane	4.19	6.86
n-Pentane	6.29	10.30
Cyclopentane	2.17	3.46
n-Hexane	2.15	4.21
Cyclohexane	3.44	6.58
n-Heptane	1.79	4.08
Methylcyclohexane	2.05	4.58
2,2,4-Trimethylpentane	0.16	0.42
Benzene	5.26	9.33
Toluene	3.91	8.17
Ethylbenzene	0.07	0.17
o-Xylene	0.10	0.25
m-Xylene	0.36	0.86
p-Xylene	0.25	0.60
Triethylene Glycol	0.00	0.00
Ethylene Glycol	0.00	0.00
Water	11.99	4.90
Methanol	0.00	0.00
O2	0.00	0.00
SO2	0.00	0.00
Total Components	100.00	115.64

BTEX CONDENSER RECOVERED OIL STREAM

Temperature:	120.00	deg F
Pressure:	14.10	psia
Flow Rate:	0.13	sgpm

Component	Conc. (mol%)	Mass Flow (lb/h)
Carbon Dioxide	0.01	0.00
Hydrogen Sulfide	0.00	0.00
Nitrogen	0.00	0.00
Methane	0.03	0.00
Ethane	0.23	0.04
Propane	0.82	0.22
i-Butane	0.35	0.12
n-Butane	2.16	0.75
i-Pentane	1.71	0.74
n-Pentane	3.25	1.40
Cyclopentane	2.06	0.87
n-Hexane	3.35	1.73
Cyclohexane	8.20	4.13
n-Heptane	7.92	4.74
Methylcyclohexane	9.82	5.77
2,2,4-Trimethylpentane	0.63	0.43
Benzene	13.26	6.19
Toluene	28.64	15.79
Ethylbenzene	1.50	0.95
o-Xylene	2.36	1.50
m-Xylene	7.94	5.04
p-Xylene	5.46	3.47
Triethylene Glycol	0.00	0.00
Ethylene Glycol	0.00	0.00
Water	0.32	0.03
Methanol	0.00	0.00
O2	0.00	0.00
SO2	0.00	0.00
Total Components	100.00	53.92

BTEX CONDENSER PRODUCED WATER STREAM

Temperature:	120.00	deg F
Pressure:	14.10	psia
Flow Rate:	0.40	sgpm

Component	Conc. (mol%)	Mass Flow (lb/h)
Carbon Dioxide	0.00	0.00
Hydrogen Sulfide	0.00	0.00
Nitrogen	0.00	0.00
Methane	0.00	0.00
Ethane	0.00	0.00
Propane	0.00	0.00
i-Butane	0.00	0.00
n-Butane	0.00	0.00
i-Pentane	0.00	0.00
n-Pentane	0.00	0.00
Cyclopentane	0.00	0.00
n-Hexane	0.00	0.00
Cyclohexane	0.00	0.00
n-Heptane	0.00	0.00
Methylcyclohexane	0.00	0.00
2,2,4-Trimethylpentane	0.00	0.00
Benzene	0.01	0.06
Toluene	0.00	0.04
Ethylbenzene	0.00	0.00
o-Xylene	0.00	0.00
m-Xylene	0.00	0.00
p-Xylene	0.00	0.00
Triethylene Glycol	0.00	0.05
Ethylene Glycol	0.00	0.00
Water	99.98	202.35
Methanol	0.00	0.00
O2	0.00	0.00
SO2	0.00	0.00
Total Components	100.00	202.52