



June 12, 2015

NSR Program Manager - O&G Production Facilities
Wyoming Department of Environmental Quality
Air Quality Division
Herschler Building, 2-E
122 West 25th Street
Cheyenne, Wyoming 82002

**RE: Ultra Resources, Inc. – Chapter 6, Section 2 Well Air Permit Application
Warbonnet 12-2 Production Facility
Sublette County, Wyoming**

Dear Program Manager:

Ultra Resources, Inc. (Ultra) is pleased to submit the enclosed air permit application the Warbonnet (WB) 12-2 Pad (Facility), an existing, single-well pad. This application adheres to the requirements of Wyoming Air Quality Standards and Regulations (WAQSR) Chapter 6, Section 2 (C6 S2), and follows the Presumptive BACT permitting guidance for JPAD facilities, outlined in the Wyoming Air Quality Division (WAQD) Oil and Gas Production Facilities Permitting Guidance (March 2013).

Production equipment associated with one (1) existing gas well (WB 12d1-2) has been modified. Updates to production equipment and associated emissions are detailed in the enclosed application.

As required under Wyoming Air Quality Standards and Regulations (WAQSR) Chapter 6, Section 2(c)(ii), Ultra submits this demonstration that the modification and use of the WB 12-2 Facility will not prevent the attainment or maintenance of the Ozone Standard (75 ppb). As described in the Interim Policy (issued July 21, 2008), the reduction of VOC and NOx emissions is an acceptable demonstration option. The emissions reductions resulting from the modification of the Facility are outlined below:

	Emissions (TPY)			
	VOCs	Total HAPs	NOx	CO
Emissions per MD-14715, issued October 15, 2013	0.8	0.2	1.2	0.7
Current Emissions as of 6/20/2015	0.4	0.1	0.9	0.6
Emissions Offsets	-0.4		-0.3	

Ultra respectfully requests that the existing permit for the Facility, along with Ultra's emission offset bank, be updated.

If you have any questions in regards to this application submittal, please contact me at (303) 645-9809.

Sincerely,

Ms. Kelly Bott
Regulatory and Environmental Manager

PROCESS DESCRIPTION

The Warbonnet (WB) 12-2 Pad ("Facility") is an existing pad located in the Jonah and Pinedale Anticline (JPAD). The Facility treats gas production from one (1) existing gas well (WB 12d1-2). The WB 12-2 pad production process and equipment is visually depicted in the attached process flow diagram.

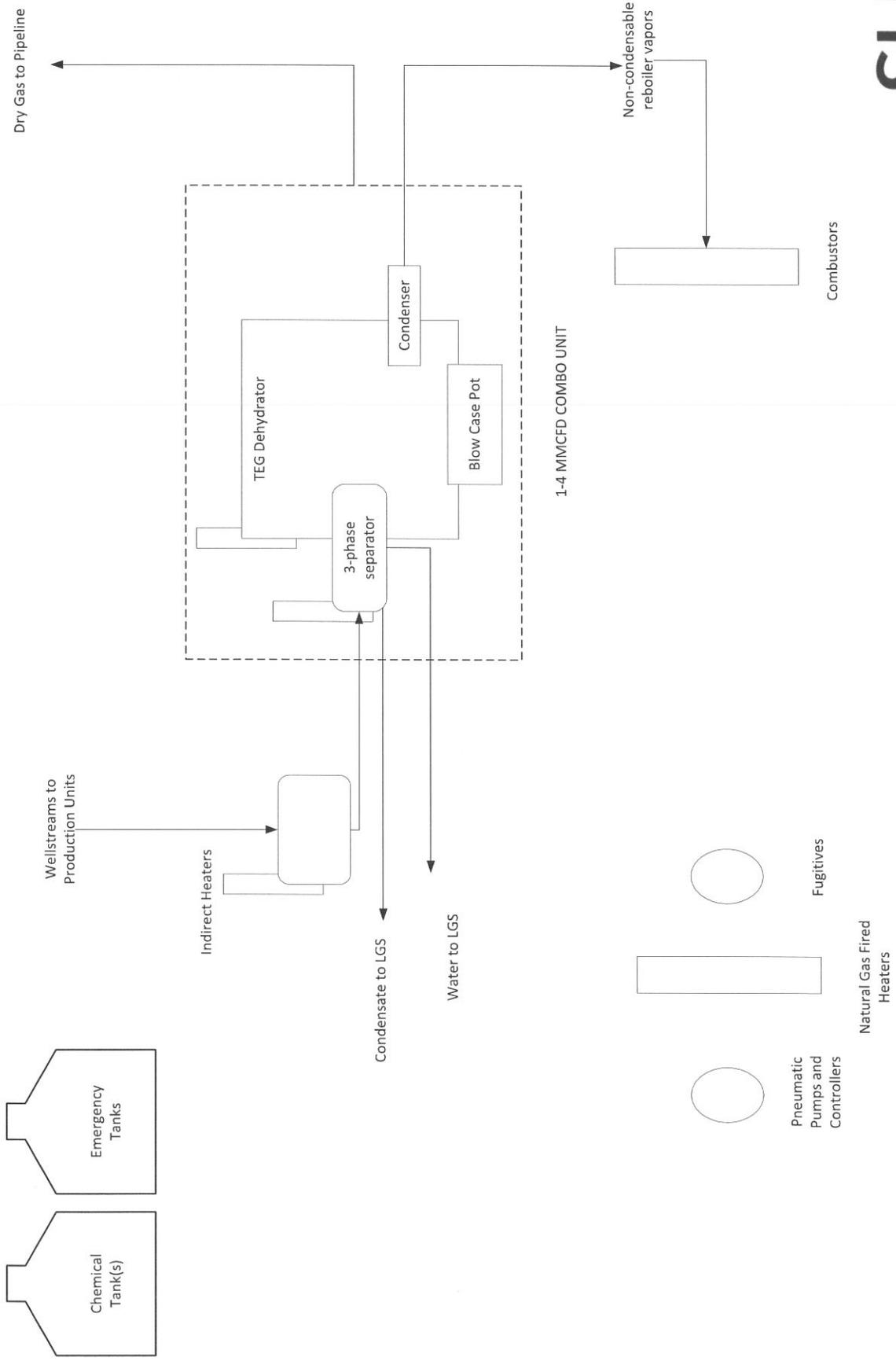
The WB 12-2 pad consists of a single production train. Natural gas from one (1) producing gas well is treated onsite. The produced gas enters heater treaters and one or multiple production units ("Combo Units"), each containing a 3-phase separator and a triethylene glycol (TEG) dehydration unit, including a lean TEG-wet gas contactor and TEG regeneration reboiler. Within each Combo Unit, gas first enters the 3-phase separator to separate the multiphase inlet stream into wet gas, hydrocarbon liquid condensate, and water outlet streams. One of two combo units located at the Facility is currently out of service; therefore all production is routed through one Combo Unit.

The wet gas discharged from the separator enters a lean TEG-wet gas contactor where the wet gas countercurrently contacts lean TEG. Dry gas meeting contract specifications for water vapor content is discharged from the contactor to a meter and sales pipeline. Rich TEG exits the contactor and is regenerated/recycled using a natural gas-fired reboiler. The regenerated lean TEG is circulated back to the contactor. In addition to water, the lean TEG has an affinity for certain hydrocarbons, including regulated volatile organic compounds (VOC) and hazardous air pollutants (HAPs), including benzene, toluene, ethyl benzene, and xylene (collectively BTEX). Water and VOC/HAP, to the extent present in the wet gas, is absorbed by the lean TEG. The rich TEG is heated in the reboiler whereby the water and hydrocarbon vapor is boiled off and vented via the reboiler still vent. The still vent stream is routed to a condenser to cool the stream and allow water and condensable hydrocarbons to drop out and the non-condensable vapor stream is routed to a combustor to oxidize organic vapors (VOC/HAP).

The hydrocarbon condensate and produced water liquid streams discharged from the 3-phase separator are each routed offsite to a separate centralized liquids gathering facility (CGF), specifically CGF #3.

The heater treater, reboiler, and line heater burners are fueled with treated natural gas. The Facility also contains pneumatic pumps and controllers that use natural gas as fuel. Two emergency tanks are on site and available to accommodate liquids from emergency or maintenance blowdown of pressurized process vessels. One small chemical tank is on site to store methanol.

Process Flow Diagram Warbonnet 12-2 Pad Facility



Warbonnet 12-2
Equipment Modification Summary
Production routed through the Warbonnet 12-2

EXISTING, permitted production equipment at the site owned, leased or operated by the applicant.	
Equipment Description	Site Rating (Hp, MMBtu/hr, bbl, MMSCFD, etc.)
2 4.0 MMSCFD TEG Dehydration Unit(s)	4.0 MMSCFD
2 Kimray 4015PV Glycol Pump(s)	0.67 gpm
2 Dehy Reboiler Heaters(s)	0.085 MMBtu/hr
2 3-Phase Separator w/ Separator Heaters(s)	0.75 MMBtu/hr
6 Liquid Level Controllers (Intermittent Bleed)	1.75 scfh
1 J.W. William BTEX Combustion Device	16" OD
1 Pneumatic Heat Trace Pump(s)	60 scfh
1 Pneumatic Methanol Injection Pump(s)	25 scfh
2 Tanks (Emergency Use Only)	300 bbl
NEW production equipment at the site owned, leased, or operated by the applicant.	
Equipment Description	Site Rating (Hp, MMBtu/hr, bbl, MMSCFD, etc.)
1 Line Heater Secondary Burner Control	0.75 MMBtu/hr
1 Chemical Tank(s)	225 gal
1 4.0 MMSCFD TEG Dehydration Unit(s) (OOS)	4.0 MMSCFD
1 Kimray 4015PV Glycol Pump(s) (OOS)	0.67 gpm
1 Dehy Reboiler Heaters(s) (OOS)	0.085 MMBtu/hr
1 3-Phase Separator w/ Separator Heaters(s) (OOS)	0.75 MMBtu/hr
3 Liquid Level Controllers (Intermittent Bleed) (OOS)	1.75 scfh
Production equipment which has been removed from the site.	
Equipment Description	Site Rating (Hp, MMBtu/hr, bbl, MMSCFD, etc.)
1 4.0 MMSCFD TEG Dehydration Unit(s)	4.0 MMSCFD
1 Kimray 4015PV Glycol Pump(s)	0.67 gpm
1 Dehy Reboiler Heaters(s)	0.085 MMBtu/hr
1 3-Phase Separator w/ Separator Heaters(s)	0.75 MMBtu/hr
3 Liquid Level Controllers (Intermittent Bleed)	1.75 scfh

6/12/2015

SUMMARY EQUIPMENT LIST - Warbonnet 12-2	
Equipment Description	Site Rating (Hp, MMBtu/hr, bbl, MMSCFD, etc.)
1 4.0 MMSCFD TEG Dehydration Unit(s)	4.0 MMSCFD
1 Kimray 4015PV Glycol Pump(s)	0.67 gpm
1 Dehy Reboiler Heaters(s)	0.085 MMBtu/hr
1 3-Phase Separator w/ Separator Heaters(s)	0.75 MMBtu/hr
3 Liquid Level Controllers (Intermittent Bleed)	1.75 scfh
1 J.W. William BTEX Combustion Device	16" OD
1 Line Heater Secondary Burner Control	0.75 MMBtu/hr
1 Pneumatic Heat Trace Pump(s)	60 scfh
1 Pneumatic Methanol Injection Pump(s)	25 scfh
2 Tanks (Emergency Use Only)	300 bbl
1 Chemical Tank(s)	225 gal
1 4.0 MMSCFD TEG Dehydration Unit(s) (OOS)	4.0 MMSCFD
1 Kimray 4015PV Glycol Pump(s) (OOS)	0.67 gpm
1 Dehy Reboiler Heaters(s) (OOS)	0.085 MMBtu/hr
1 3-Phase Separator w/ Separator Heaters(s) (OOS)	0.75 MMBtu/hr
3 Liquid Level Controllers (Intermittent Bleed) (OOS)	1.75 scfh

Ultra Resources, Inc.
 Equipment ID List
 Warbonnet 12-2

Emission Unit ID	Control Equip ID	Release Point ID	Equipment Description
DHY001		VER001	4.0 MM DEHY
DHY002		VER001	4.0 MM DEHY (OOS)
FLR001	FLA001	VER001	16" BTEX Combustor
FUG001		AVL005	Equipment Fugitive Emissions
HET001		VER003	0.085 MMBtu/hr Reboiler Heater
HET002		VER008	0.085 MMBtu/hr Reboiler Heater (OOS)
HET003		VER004	0.75 MMBtu/hr Separator Heater
HET004		VER009	0.75 MMBtu/hr Separator Heater (OOS)
HET005	OTH001	VER 006	0.75 MMBtu/hr Line Heater Secondary Burner Control
PNE001		VER 006	(1) 60 scfh Heat Trace Pump
PNE002		VER 006	(1) 25 scfh Methanol Injection Pump
PNE003		AVL001	(6) 1.75 scfh Intermittent-bleed LLCs (3 OOS)
SEP001			3-Phase Separator
SEP002			3-Phase Separator (OOS)
TNK001		ALV002	500 gal Methanol Tank
TNK002		AVL003	Emergency Tank 1
TNK003		AVL004	Emergency Tank 2

Ultra Resources, Inc.
Warbonnet 12-2

Uncontrolled Emissions (TPY)

EMISSIONS SOURCE	VOCs	Total HAPs	NOx	CO
4.0 MMSCFD TEG Dehydration Unit(s)	13.17	6.09	0.00	0.00
Dehy Combustor(s)	0.00	0.00	0.00	0.00
Process Heaters	0.02	0.00	0.36	0.30
Pneumatic & Chemical Pumps	1.10	0.01	0.00	0.00
Line Heater Secondary Burner Control Unit(s)	0.02	0.00	0.32	0.27
Fugitives	0.09	0.01	0.00	0.00
Liquid Level Controllers (Intermittent-Bleed)	0.07	0.001	0.00	0.00
TOTALS	14.47	6.11	0.68	0.57

Controlled Emissions (TPY)

EMISSIONS SOURCE	VOCs	Total HAPs	NOx	CO
4.0 MMSCFD TEG Dehydration Unit(s)	0.21	0.10	0.00	0.00
Dehy Combustor(s)	0.00	0.00	0.11	0.03
Process Heaters	0.02	0.00	0.36	0.30
Pneumatic & Chemical Pumps	0.02	0.00	0.00	0.00
Line Heater Secondary Burner Control Unit(s)	0.02	0.00	0.39	0.29
Fugitives	0.09	0.01	0.00	0.00
Liquid Level Controllers (Intermittent-Bleed)	0.07	0.001	0.00	0.00
TOTALS	0.43	0.11	0.86	0.62

Change in Emissions (TPY)

	VOCs	Total HAPs	NOx	CO
Emissions per MD-14715, issued October 15, 2013	0.8	0.2	1.2	0.7
Emissions as of: 6/20/2015	0.4	0.1	0.9	0.6
Change in Emissions	-0.4	-0.1	-0.3	-0.1

Notes

1. Pad connected to the CGF #3 by December 31, 2009, therefore tank and truck loading emissions do not occur at the production pad.

Ultra Resources, Inc.
Total Well Production

Facility Name	Warbonnet 12-2							
Production Timeframe ¹	Number of Existing Wells	CDP Name	Oil Bbls ¹	Gas Mcf ¹	Produced Water ¹	Days	Gas (MMSCF/day)	Oil (BPD)
March 2015	1	WB 12-2 CDP	217	15,310	935	31	0.49	7.00
Totals:			217	15,310	935		0.49	7.00

Pad Production Rates - Existing Wells; no decline factor	
Gas MMSCFD	Oil (BPD)
0.49	7.00
CDP	
	WB 12-2 CDP

Estimated Production/Dehy Unit	
Dehys	MMSCFD
4.0	0.49
4.0	0.00
CDP	
	WB 12-2 CDP
	WB 12-2 CDP

Dehy is out of service (OOS)

Notes

1. Gas and oil production data obtained from WOGCC.



Ultra Resources, Inc.
Dehy Combustor Emission Calculations

Emission Assumptions¹

CDP	16" BTEX	NOx Emission Factor =	0.14 lb/MMBtu	[WDEQ O&G Guidance]
		CO Emission Factor =	0.035 lb/MMBtu	[WDEQ O&G Guidance]
WB 12-2 CDP	16" BTEX	Combustor Waste Gas Throughput =	129 scf/hr	[Gas Throughput based on GlyCalc Model]
		Combustor Pilot Gas =	40 scf/hr	[Conservative Estimate]
		Natural Gas Heating Value =	1020 Btu/scf	[AP-42 Average Value]

Emissions Per Unit

CDP	16" BTEX	NOx	CO
		(lb/hr)	(lb/hr)
		(tpy)	(tpy)
WB 12-2 CDP	16" BTEX	Combustor Emissions =	0.018
		Pilot Gas Emissions =	0.006
		Total Emissions Per Combustor	0.024
			0.081
			0.025
			0.106
			0.005
			0.001
			0.006
			0.020

Total Dehy Combustor Emissions

WB 12-2 CDP	16" BTEX	NOx	CO
		(tpy)	(tpy)
		Number of Combustors	1
			0.106
		Total Combustor Emissions =	0.106
			0.026

Notes

1. Emission factors for NOx and CO from combustors from WDEQ O&G Guidance, September 2013



Ultra Resources, Inc.
Process Heater Emission Calculations

Emission Assumptions¹

NOx Emission Factor =	100 lb/MMscf	[AP-42, Table 1.4-1]
CO Emission Factor =	84 lb/MMscf	[AP-42, Table 1.4-1]
VOC Emission Factor =	5.5 lb/MMscf	[AP-42, Table 1.4-2]
Natural Gas Heating Value =	1020 Btu/scf	[AP-42 Average Value]
NOx Efficiency Standard =	0.098 lb/MMBtu	
CO Efficiency Standard =	0.082 lb/MMBtu	
VOC Efficiency Standard =	0.005 lb/MMBtu	

Emissions Per Unit

	VOC (lb/hr)	VOC (tpy)	NOx (lb/hr)	NOx (tpy)	CO (lb/hr)	CO (tpy)
Dehy Reboiler Heater =	0.085 MMBtu/hr	0.0005	0.0083	0.0037	0.0070	0.031
Indirect Heater / Separator Heater =	0.75 MMBtu/hr	0.0040	0.0735	0.322	0.0618	0.271

Total Heater Emissions

	Number of Units	VOC (tpy)	NOx (tpy)	CO (tpy)
Dehy Reboiler Heater =	1	0.002	0.037	0.031
Indirect Heater / Separator Heater =	1	0.018	0.322	0.271
Total Process Heater Emissions =		0.02	0.36	0.30

Notes

1. Emission factors from AP-42 Chapter 1, Tables 1.4-1 and 1.4-2.



Ultra Resources, Inc.
Pneumatic Pump Emission Calculations

Emission Assumptions^{1, 2}

Pneumatic Heat Trace Pump Gas Throughput =	60 scf/hr	
Pneumatic Methanol Injection Pump Gas Throughput =	25 scf/hr	
Estimated Motive (Field) Gas Density =	21.80 scf/lb	
VOC Content =	6.411%	
HAP Content =	0.055%	
NOx Emission Factor =	0.14 lb/MMBtu	[WDEQ O&G Guidance]
CO Emission Factor =	0.035 lb/MMBtu	[WDEQ O&G Guidance]
Natural Gas Heating Value =	1020 Btu/scf	[AP-42 Average Value]

Uncontrolled Pneumatic Pump Emissions

	Waste Gas Throughput (scf/hr)	Total Gas Vented ³ (tpy)	VOC		HAPs	
			(lb/hr)	(tpy)	(lb/hr)	(tpy)
Pneumatic Heat Trace Pump =	60	12.06	0.1765	0.773	0.0015	0.007
Pneumatic Methanol Pump =	25	5.02	0.0735	0.322	0.0006	0.003

Total Uncontrolled Pneumatic Pump Emissions

	Number of Units	VOC (tpy)	HAPs (tpy)
Pneumatic Heat Trace Pump =	1	0.773	0.007
Pneumatic Methanol Pump =	1	0.322	0.003
Total Uncontrolled Pneumatic Pump Emissions =		1.10	0.01

Controlled Pneumatic Pump Emissions Per Pump⁴

Control Device = Line Heater Secondary Burner Control (0.75 MMBtu/hr)

	VOC		HAPs	
	(lb/hr)	(tpy)	(lb/hr)	(tpy)
Pneumatic Heat Trace Pump =	0.0035	0.015	0.00003	0.0001
Pneumatic Methanol Pump =	0.0015	0.006	0.00001	0.0001

Total Controlled Pneumatic Pump Emissions

	Number of Units	VOC (tpy)	HAPs (tpy)
Pneumatic Heat Trace Pump =	1	0.015	0.000
Pneumatic Methanol Pump =	1	0.006	0.000
Total Pneumatic Pump Emissions =		0.0219	0.0002

Notes

- VOC and HAP content was calculated by converting wet gas molecular percentages to weight percentages using the WDEQ wet gas composite for Pinedale (2014).
- Emission factors for NOx and CO from combustors from WDEQ O&G Guidance, September 2013
- Gas Vented (tpy) = Pump Rate (scf/hr) s / 21.8 scf/lb * 8760 hr/yr / 2000 lbs/ton
- All pneumatic heat trace, heat medium, glycol circulation, and chemical pumps are routed through combustor or an equivalent device to achieve 98% destruction efficiency.



Ultra Resources, Inc.
Condensate Truck Loading Calculations

Emission Assumptions

$L_L = 12.46 \text{ SPM} / T$ [AP-42, Chapter 5.2 - Transportation and Marketing of Petroleum Liquids]

Where:

- LL = Loading Loss, lb/1000 gals of liquid loaded
- S = Saturation Factor
- P = True Vapor Pressure of Liquid Loaded, psia
- M = Molecular Weight of Vapors, lb/lb-mol
- T = Temperature of Bulk Liquid Loaded, °R

Condensate Truck Loading Assumptions

- $L_L = 3.78$ Loading Losses, lb/1000 gal liquid loaded
- S = 0.6 submerged loading, dedicated normal service
7.0 Reid Vapor Pressure, psia
- P = 3.79 True Vapor Pressure, psia
- M = 68.0 Mol Wt of Vapors, lb/lbmol
- T = 510 Temp of liquid loaded, °R, (50 + 460) = 510 °R

- Average Daily Loadout = 0 bbls/day
- Annual Production = 0 bbls/year
- Annual Production = 0 gals/year
- Annual Production = 0 1,000 gals/year

Truck Loading Emissions¹

	VOC		HAPs	
	(lb/hr)	(tpy)	(lb/hr)	(tpy)
Truck Loading =	0.0	0.0	0.0	0.0

Notes

1. Pad connected to the CGF #3 by December 31, 2009, therefore tank and truck loading emissions do not occur at the production pad.

Equipment Leak Emission Factors

Equipment Type	Equipment Service	Speciated Fugitive Emission Factors (Estimated Weight Fractions) ²							Total HAP
		Average Total Hydrocarbon Emission Factors ¹ (lb/component-day)	VOC	C6+	Benzene	Toluene	Ethylbenzene	Xylenes	
Valves	Gas	0.2400	3.50E-02	3.38E-03	2.30E-04	3.90E-04	2.00E-05	1.00E-04	4.12E-03
	Heavy Oil	0.00044	3.00E-02	7.52E-03	9.35E-03	3.44E-03	5.10E-04	3.72E-03	2.45E-02
	Light Oil	0.1300	2.92E-01	2.43E-02	2.70E-04	7.50E-04	1.70E-04	3.60E-04	2.59E-02
	Water/Oil	0.0052	N/A	N/A	6.24E-06	1.66E-06	5.20E-08	2.08E-07	8.16E-06
Pump Seals	Gas	0.1300	3.50E-02	3.38E-03	2.30E-04	3.90E-04	2.00E-05	1.00E-04	4.12E-03
	Heavy Oil	NA	NA	NA	NA	NA	NA	NA	NA
	Light Oil	0.6900	2.92E-01	2.43E-02	2.70E-04	7.50E-04	1.70E-04	3.60E-04	2.59E-02
	Water/Oil	0.0013	N/A	N/A	1.56E-06	4.18E-07	1.30E-08	5.20E-08	2.04E-06
Orriers, pressure relief valves, compressors, instruments, diaphragms, drains, hatches, meters, seal-vents	Gas	0.4700	3.50E-02	3.38E-03	2.30E-04	3.90E-04	2.00E-05	1.00E-04	4.12E-03
	Heavy Oil	0.0017	3.00E-02	7.52E-03	9.35E-03	3.44E-03	5.10E-04	3.72E-03	2.45E-02
	Light Oil	0.4000	2.92E-01	2.43E-02	2.70E-04	7.50E-04	1.70E-04	3.60E-04	2.59E-02
	Water/Oil	0.7400	N/A	N/A	8.98E-04	2.37E-04	7.40E-06	2.96E-05	1.16E-03
Connectors	Gas	0.0170	3.50E-02	3.38E-03	2.30E-04	3.90E-04	2.00E-05	1.00E-04	4.12E-03
	Heavy Oil	0.0004	3.00E-02	7.52E-03	9.35E-03	3.44E-03	5.10E-04	3.72E-03	2.45E-02
	Light Oil	0.0170	2.92E-01	2.43E-02	2.70E-04	7.50E-04	1.70E-04	3.60E-04	2.59E-02
	Water/Oil	0.0058	N/A	N/A	1.66E-06	1.66E-06	5.20E-08	2.08E-07	8.16E-06
Flanges	Gas	0.0210	3.50E-02	3.38E-03	2.30E-04	3.90E-04	2.00E-05	1.00E-04	4.12E-03
	Heavy Oil	0.00021	3.00E-02	7.52E-03	9.35E-03	3.44E-03	5.10E-04	3.72E-03	2.45E-02
	Light Oil	0.0058	2.92E-01	2.43E-02	2.70E-04	7.50E-04	1.70E-04	3.60E-04	2.59E-02
	Water/Oil	0.00115	N/A	N/A	1.80E-07	4.80E-08	1.50E-09	6.00E-09	2.36E-07
Open-Ended Lines	Gas	0.1100	3.50E-02	3.38E-03	2.30E-04	3.90E-04	2.00E-05	1.00E-04	4.12E-03
	Heavy Oil	0.0074	3.00E-02	7.52E-03	9.35E-03	3.44E-03	5.10E-04	3.72E-03	2.45E-02
	Light Oil	0.0740	2.92E-01	2.43E-02	2.70E-04	7.50E-04	1.70E-04	3.60E-04	2.59E-02
	Water/Oil	0.0130	N/A	N/A	1.56E-05	4.18E-06	1.30E-07	5.20E-07	2.04E-05

Speciated Fugitive Emission Factors (Estimated weight fractions of THC emissions in each category)

Equipment Service	Speciated Fugitive Emission Factors (Estimated weight fractions of THC emissions) ⁴						
	Methane	NMHC	VOC	C6+	Benzene	Toluene	Ethylbenzene
Gas Production	0.92	0.08	0.035	0.00338	0.00223	0.00339	0.00082
Heavy Oil	0.942	0.059	0.03	0.00752	0.00935	0.00344	0.00051
Light Oil	0.613	0.387	0.282	0.0243	0.00027	0.00075	0.00017

HAP (BTEX) Fugitive Emission Speciation Factors Used for Water/Oil

Compound	Speciation Factor ⁵ (lb HAP/lb TOC)
Benzene	0.0012
Toluene	0.00032
Ethylbenzene	0.00001
Xylenes (m.p.o)	0.00004

Sample Calculations: VOC emissions (tpy) = (N, (Component Count)) * (THC EF per equipment type and service category, (lb/component-day)) * (365, (days in a year)) / (2000, (lbs/ton))
 VOC emissions (tpy) = [(TOC emissions per equipment service, (tpy)) * (VOC Speciated Fugitive EF per equipment service, (weight fraction))]
 HAP emissions (tpy) = [(TOC emissions per equipment service, (tpy)) * (Sum of HAP speciated EF's per equipment service, (sum of weight fractions))]

Notes:

1. EPA Protocol for Equipment Leak Emission Estimates, November 1995 (EPA-453/R-95-017), Table 2-4, Page 2-15.
2. EPA Protocol for Equipment Leak Emission Estimates, November 1995 (EPA-453/R-95-017), Table 2-10, Page 2-27.
3. Estimates using average component count per well head.
4. Oil and Gas Production Facilities, Chapter 6, Section 2 Permitting Guidance, WDEC, Air Quality Division, Fugitive Emissions Pg. 70 of 76
5. Gas Research Institute (GRI) Technical Reference Manual for GRI-HAP-Calc, Software for Estimating Emissions of Hazardous Air Pollutants and Criteria Air Pollutants from Natural Gas Industry Operations, GRI-96-0346

Equipment Leak Emissions

Component Count	Total Hydrocarbon Emissions			Total VOC Emissions			Total HAP Emissions		
	lb/hr	lb/mo.	ton/yr	lb/hr	lb/mo.	ton/yr	lb/hr	lb/mo.	ton/yr
9	0.05	36.50	0.22	0.00	1.28	0.008	0.00	0.15	0.001
1	0.01	3.95	0.02	0.00	1.15	0.007	0.00	0.10	0.000
1	0.00	0.16	0.00	N/A	N/A	N/A	0.00	0.00	0.000
1	0.01	3.95	0.02	0.00	0.14	0.001	0.00	0.02	0.000
10	0.20	142.95	0.86	0.01	5.00	0.030	0.00	0.59	0.004
2	0.03	24.33	0.15	0.01	7.11	0.043	0.00	0.63	0.004
2	0.06	45.02	0.27	N/A	N/A	N/A	0.00	0.05	0.000
20	0.01	6.69	0.04	0.00	0.23	0.001	0.00	0.03	0.000
5	0.00	1.67	0.01	0.00	0.49	0.003	0.00	0.04	0.000
5	0.00	0.88	0.01	N/A	N/A	N/A	0.00	0.00	0.000
2	0.00	1.28	0.01	0.00	0.04	0.000	0.00	0.01	0.000
1	0.00	0.18	0.00	0.00	0.05	0.000	0.00	0.00	0.000
1	0.00	0.00	0.00	N/A	N/A	N/A	0.00	0.00	0.000
Total	0.4	267.6	1.6	0.02	15.50	0.09	0.002	1.62	0.01



Ultra Resources, Inc.
Liquid Level Controller Emission Calculations

Emission Assumptions¹

Sandpiper Intermittent-Bleed Liquid Level Controller Gas Throughput Rate = 1.75 scf/hr
 Estimated Motive (Field) Gas Density = 21.80 scf/lb

VOC Content = 6.411%
 HAP Content = 0.055%

Liquid Level Controller Emissions

	Number of Units	Waste Gas Throughput (scf/hr)	Total Gas Vented ² (tpy)	VOC (lb/hr)	HAPs (lb/hr)
Sandpiper Intermittent-Bleed Liquid Level Controller(s) =	3	5.25	1.05	0.015	0.0001
Sandpiper Intermittent-Bleed Liquid Level Controller(s) =	3			0.068	0.001
Total LLC Emissions =				0.068	0.001

Notes

- VOC and HAP content was calculated by converting wet gas molecular percentages to weight percentages using the WDEQ wet gas composite for Pinedale (2014).
- Gas Vented (tpy) = Pump Rate (scf/hr) * Number of Pumps / 21.8 scf/lb * 8760 hr/yr / 2000 lbs/ton



Ultra Resources, Inc.
Estimated Release Point Flow Rate For 16" Combustor
Smokeless Combustion Device

Fuel Gas Components	Moles of Component / 100 Moles Fuel @ 100% Total Air	Required for Combustion		Stack Height (Ft)
		O2	Dry Air	28.58
				Stack Diameter (In)
				16
O2	0.00			Stack Diameter (Feet)
CO2	1.83			1.33
CH4	74.10	148.20	706.02	Stack Area (Square Feet)
C2H6	4.60	16.10	76.71	1.40
C3H8	1.77	8.85	42.16	Stack Velocity (Std.Ft/Sec)
C4H10	1.10	7.13	33.97	0.8
C5H12	0.49	3.95	18.83	Stack Velocity (Ft/Sec)
C6H14	2.61	24.81	118.22	2.32
N2	0.10			
SUM	86.6	209.0	995.9	
Less O2 in Fuel (deduct)		0.00	0.00	
Required @ 100% air		209.0	995.9	
Fuel Gas Density	326.68	scf/mole fuel gas		
Calculated HHV	1060.19	btu/scf		
Percent Excess Air (%)	Required for Combustion			
	O2	Dry Air		
100	209.05	995.91		
Excess Air	--	0.00		
Excess O2	0.00	--		
Stack Temp (°F)	1,400			
Flue Gas Components	Moles Air / 100 Moles Fuel @ Percent Excess Air	% by Volume Dry Basis		
CO2	113.0	12.6		
H2O	216.7			
N2	786.9	87.4		
O2	0.0	0.0		
Wet	1116.5			
Dry	899.8	100.0		
Conditions:	Ambient	Standard	Units	
Temp	34.4	60.0	°F	
Pressure (Elevation)	11.3	14.7	psia	
Fuel Rate		Moles fuel Per Hour	Flue Gas Flow Rate	
Load (MMBtu / hr)	(scf / hr) @ calc. HHV btu/scf		Moles Dry Air Per Hour	dscf / min @ 60 degrees F
0.50	472	1.44	13	71
Fuel Usage:	4.13	MMSCF/YR Fuel		Actual Flow Rate acf/min
				194.65

Notes:

All calculations and constants are from Babcock & Wilcox "STEAM / it's generation and use"
 Fuel gas composition calculated using GlyCalc (condenser vent stream)
 Ambient conditions representative of annual averages for Pinedale, WY
 Load (MMBtu/hr) calculated assuming max capacity of 8 Mscfd at 1500 Btu/scf



Ultra Resources, Inc.
Estimated Release Point Flow Rate For Process Heater
0.085 MMBtu/hr Reboiler Heater

Fuel Gas Components	Moles of Component / 100 Moles Fuel @ 100% Total Air	Required for Combustion		Stack Height (Ft)
		O2	Dry Air	15.42
				Stack Diameter (In)
				6.625
O2	0.00			Stack Diameter (Feet)
CO2	0.76			0.55
CH4	92.82	185.65	884.43	Stack Area (Square Feet)
C2H6	4.23	14.79	70.47	0.24
C3H8	1.18	5.89	28.06	Stack Velocity (Std.Ft/Sec)
C4H10	0.50	3.23	15.38	0.8
C5H12	0.17	1.35	6.41	
C6H14	0.11	1.02	4.86	
N2	0.12			
SUM	99.9	211.9	1,009.6	Stack Velocity (Ft/Sec)
Less O2 in Fuel (deduct)		0.00	0.00	1.18
Required @ 100% air		211.9	1,009.6	
Fuel Gas Density	376.96	scf/mole fuel gas		
Calculated HHV	1075.32	btu/scf		
Percent Excess Air (%)	Required for Combustion			
	O2	Dry Air		
100	211.92	1,009.61		
Excess Air	--	0.00		
Excess O2	0.00	--		
Stack Temp (°F)	500			
Flue Gas Components	Moles Air / 100 Moles Fuel @ Percent Excess Air	% by Volume Dry Basis		
CO2	109.0	12.0		
H2O	228.4			
N2	797.7	88.0		
O2	0.0	0.0		
Wet	1135.2			
Dry	906.8	100.0		
Conditions:	Ambient	Standard	Units	
Temp	34.4	60.0	°F	
Pressure (Elevation)	11.3	14.7	psia	
Fuel Rate		Moles fuel Per Hour	Flue Gas Flow Rate	
Load (MMBtu / hr)	(scf / hr) @ calc. HHV btu/scf		Moles Dry Air Per Hour	dscf / min @ 60 degrees F
0.085	79	0.21	2	12
Fuel Usage:	0.69	MMSCF/YR Fuel		Actual Flow Rate
				ac/min
				16.95

Notes:

All calculations and constants are from Babcock & Wilcox "STEAM / it's generation and use"
 Fuel gas composition represented by WDEQ average wet gas analysis (Pinedale 2015)
 Ambient conditions representative of annual averages for Pinedale, WY



Ultra Resources, Inc.
Estimated Release Point Flow Rate For Process Heater
0.75 MMBtu/hr Separator Heater

Fuel Gas Components	Moles of Component / 100 Moles Fuel @ 100% Total Air	Required for Combustion		Stack Height (Ft)
		O2	Dry Air	13.58
				Stack Diameter (In)
				10
O2	0.00			Stack Diameter (Feet)
CO2	0.76			0.83
CH4	92.82	185.65	884.43	Stack Area (Square Feet)
C2H6	4.23	14.79	70.47	0.55
C3H8	1.18	5.89	28.06	Stack Velocity (Std.Ft/Sec)
C4H10	0.50	3.23	15.38	3.2
C5H12	0.17	1.35	6.41	
C6H14	0.11	1.02	4.86	
N2	0.12			
SUM	99.9	211.9	1,009.6	Stack Velocity (Ft/Sec)
Less O2 in Fuel (deduct)		0.00	0.00	4.57
Required @ 100% air		211.9	1,009.6	
Fuel Gas Density	376.96	scf/mole fuel gas		
Calculated HHV	1075.32	btu/scf		
Percent Excess Air (%)		Required for Combustion		
		O2	Dry Air	
100		211.92	1,009.61	
Excess Air		--	0.00	
Excess O2		0.00	--	
Stack Temp (°F)		500		
Flue Gas Components	Moles Air / 100 Moles Fuel @ Percent Excess Air	% by Volume Dry Basis		
CO2	109.0	12.0		
H2O	228.4			
N2	797.7	88.0		
O2	0.0	0.0		
Wet	1135.2			
Dry	906.8	100.0		
Conditions:	Ambient	Standard	Units	
Temp	34.4	60.0	°F	
Pressure (Elevation)	11.3	14.7	psia	
Fuel Rate		Moles fuel Per Hour	Flue Gas Flow Rate	
Load (MMBtu / hr)	(scf / hr) @ calc. HHV btu/scf		Moles Dry Air Per Hour	dscf / min @ 60 degrees F
0.75	697	1.85	17	105
Fuel Usage:	6.11	MMSCFYR Fuel		Actual Flow Rate
				ac/min
				149.59

Notes:

All calculations and constants are from Babcock & Wilcox "STEAM / it's generation and use"
 Fuel gas composition represented by WDEQ average wet gas analysis (Pinedale 2015)
 Ambient conditions representative of annual averages for Pinedale, WY



Ultra Resources, Inc.
Estimated Release Point Flow Rate For Process Heater
0.75 MMBtu/hr Line Heater

Fuel Gas Components	Moles of Component / 100 Moles Fuel @ 100% Total Air	Required for Combustion		Stack Height (Ft)
		O2	Dry Air	11.49
O2	0.00			Stack Diameter (In)
CO2	0.76			10
CH4	92.82	185.65	884.43	Stack Diameter (Feet)
C2H6	4.23	14.79	70.47	0.83
C3H8	1.18	5.89	28.06	Stack Area (Square Feet)
C4H10	0.50	3.23	15.38	0.55
C5H12	0.17	1.35	6.41	Stack Velocity (Std.Ft/Sec)
C6H14	0.11	1.02	4.86	3.2
N2	0.12			
SUM	99.9	211.9	1,009.6	Stack Velocity (Ft/Sec)
Less O2 in Fuel (deduct)		0.00	0.00	4.57
Required @ 100% air		211.9	1,009.6	
Fuel Gas Density	376.96	scf/mole fuel gas		
Calculated HHV	1075.32	btu/scf		
Percent Excess Air (%)	Required for Combustion			
	O2	Dry Air		
100	211.92	1,009.61		
Excess Air	--	0.00		
Excess O2	0.00	--		
Stack Temp (°F)	500			
Flue Gas Components	Moles Air / 100 Moles Fuel @ Percent Excess Air	% by Volume Dry Basis		
CO2	109.0	12.0		
H2O	228.4			
N2	797.7	88.0		
O2	0.0	0.0		
Wet	1135.2			
Dry	906.8	100.0		
Conditions:	Ambient	Standard	Units	
Temp	34.4	60.0	°F	
Pressure (Elevation)	11.3	14.7	psia	
Fuel Rate	Moles fuel Per Hour		Flue Gas Flow Rate	
Load (MMBtu / hr)	(scf / hr) @ calc. HHV btu/scf		Moles Dry Air Per Hour	dscf / min @ 60 degrees F
0.75	697	1.85	17	105
Fuel Usage:	6.11	MMSCF/YR Fuel		Actual Flow Rate
				acf/min
				149.59

Notes:

All calculations and constants are from Babcock & Wilcox "STEAM / it's generation and use"
 Fuel gas composition represented by WDEQ average wet gas analysis (Pinedale 2015)
 Ambient conditions representative of annual averages for Pinedale, WY



GRI-GLYCalc VERSION 4.0 - SUMMARY OF INPUT VALUES

Case Name: WB 12-2 Pad Facility
 File Name: N:\Fort Collins\Ultra\Wyoming\1 - WY Well Air Permitting\@IMPACT System\Round
 6_May 2015\WB 12-2\GlyCalc\WB 12-2 Pad_4_May2015.ddf
 Date: May 25, 2015

DESCRIPTION:

Description: WB 12-2 CDP
 4.0 MMSCFD dehy units (2 Units Total, 1
 OOS)
 Total of 1 well
 March 2015 Production Data

Annual Hours of Operation: 8760.0 hours/yr

WET GAS:

Temperature: 75.00 deg. F
 Pressure: 400.00 psig
 Wet Gas Water Content: Saturated

Component	Conc. (vol %)
Carbon Dioxide	0.7632
Nitrogen	0.1238
Methane	92.8245
Ethane	4.2258
Propane	1.1781
Isobutane	0.2639
n-Butane	0.2328
Isopentane	0.1027
n-Pentane	0.0656
n-Hexane	0.0776
Cyclohexane	0.0185
Heptanes	0.0440
Methylcyclohexane	0.0279
2,2,4-Trimethylpentane	0.0027
Benzene	0.0112
Toluene	0.0157
Ethylbenzene	0.0005
Xylenes	0.0055
C8+ Heavies	0.0152

DRY GAS:

Flow Rate: 0.5 MMSCF/day
 Water Content: 5.0 lbs. H2O/MMSCF

LEAN GLYCOL:

Glycol Type: TEG
 Water Content: 1.5 wt% H2O
 Flow Rate: 0.7 gpm

PUMP:

Glycol Pump Type: Gas Injection
Gas Injection Pump Volume Ratio: 0.080 acfm gas/gpm glycol

REGENERATOR OVERHEADS CONTROL DEVICE:

Control Device: Condenser
Temperature: 100.0 deg. F
Pressure: 11.3 psia

Control Device: Combustion Device
Destruction Efficiency: 98.0 %
Excess Oxygen: 20.0 %
Ambient Air Temperature: 36.0 deg. F

GRI-GLYCalc VERSION 4.0 - AGGREGATE CALCULATIONS REPORT

Case Name: WB 12-2 Pad Facility

File Name: N:\Fort Collins\Ultra\Wyoming\1 - WY Well Air Permitting\@IMPACT System\Round 6_May 2015\WB 12-2\GlyCalc\WB 12-2 Pad_4_May2015.ddf

Date: May 25, 2015

DESCRIPTION:

Description: WB 12-2 CDP
 4.0 MMSCFD dehy units (2 Units Total, 1 OOS)
 Total of 1 well
 March 2015 Production Data

Annual Hours of Operation: 8760.0 hours/yr

EMISSIONS REPORTS:

CONTROLLED REGENERATOR EMISSIONS

Component	lbs/hr	lbs/day	tons/yr
Methane	0.0824	1.979	0.3611
Ethane	0.0098	0.234	0.0428
Propane	0.0055	0.131	0.0240
Isobutane	0.0022	0.052	0.0094
n-Butane	0.0024	0.057	0.0104
Isopentane	0.0014	0.035	0.0063
n-Pentane	0.0011	0.027	0.0050
n-Hexane	0.0028	0.067	0.0121
Cyclohexane	0.0024	0.058	0.0106
Heptanes	0.0035	0.084	0.0154
Methylcyclohexane	0.0050	0.121	0.0221
2,2,4-Trimethylpentane	0.0001	0.003	0.0005
Benzene	0.0060	0.144	0.0262
Toluene	0.0105	0.251	0.0459
Ethylbenzene	0.0003	0.008	0.0015
Xylenes	0.0036	0.087	0.0159
C8+ Heavies	0.0003	0.006	0.0012
Total Emissions	0.1393	3.344	0.6103
Total Hydrocarbon Emissions	0.1393	3.344	0.6103
Total VOC Emissions	0.0471	1.131	0.2065
Total HAP Emissions	0.0233	0.560	0.1021
Total BTEX Emissions	0.0204	0.490	0.0895

UNCONTROLLED REGENERATOR EMISSIONS

Component	lbs/hr	lbs/day	tons/yr
Methane	4.1222	98.932	18.0551
Ethane	0.4882	11.718	2.1384
Propane	0.2739	6.573	1.1996
Isobutane	0.1082	2.596	0.4739
n-Butane	0.1189	2.853	0.5207
Isopentane	0.0730	1.752	0.3198
n-Pentane	0.0579	1.389	0.2534
n-Hexane	0.1432	3.436	0.6270

Cyclohexane	0.1263	3.031	0.5531
Heptanes	0.1913	4.592	0.8380
Methylcyclohexane	0.2764	6.634	1.2106
2,2,4-Trimethylpentane	0.0064	0.154	0.0280
Benzene	0.3142	7.540	1.3761
Toluene	0.6143	14.744	2.6907
Ethylbenzene	0.0250	0.600	0.1095
Xylenes	0.2885	6.923	1.2635
C8+ Heavies	0.3904	9.370	1.7101

Total Emissions	7.6182	182.837	33.3678

Total Hydrocarbon Emissions	7.6182	182.837	33.3678
Total VOC Emissions	3.0078	72.187	13.1742
Total HAP Emissions	1.3915	33.397	6.0949
Total BTEX Emissions	1.2420	29.807	5.4399

EQUIPMENT REPORTS:

CONDENSER AND COMBUSTION DEVICE

Condenser Outlet Temperature: 100.00 deg. F
 Condenser Pressure: 11.30 psia
 Condenser Duty: 3.65e-002 MM BTU/hr
 Hydrocarbon Recovery: 0.05 bbls/day
 Produced Water: 0.04 bbls/day
 Ambient Temperature: 36.00 deg. F
 Excess Oxygen: 20.00 %
 Combustion Efficiency: 98.00 %
 Supplemental Fuel Requirement: 3.65e-002 MM BTU/hr

Component	Emitted	Destroyed
Methane	2.00%	98.00%
Ethane	2.00%	98.00%
Propane	2.00%	98.00%
Isobutane	1.99%	98.01%
n-Butane	1.99%	98.01%
Isopentane	1.98%	98.02%
n-Pentane	1.98%	98.02%
n-Hexane	1.94%	98.06%
Cyclohexane	1.91%	98.09%
Heptanes	1.83%	98.17%
Methylcyclohexane	1.82%	98.18%
2,2,4-Trimethylpentane	1.83%	98.17%
Benzene	1.90%	98.10%
Toluene	1.71%	98.29%
Ethylbenzene	1.33%	98.67%
Xylenes	1.26%	98.74%
C8+ Heavies	0.07%	99.93%

ABSORBER

NOTE: Because the Calculated Absorber Stages was below the minimum allowed, GRI-GLYCalc has set the number of Absorber Stages to 1.25

and has calculated a revised Dry Gas Dew Point.

Calculated Absorber Stages: 1.25
 Calculated Dry Gas Dew Point: 1.81 lbs. H₂O/MMSCF
 Temperature: 75.0 deg. F
 Pressure: 400.0 psig
 Dry Gas Flow Rate: 0.4900 MMSCF/day
 Glycol Losses with Dry Gas: 0.0007 lb/hr
 Wet Gas Water Content: Saturated
 Calculated Wet Gas Water Content: 55.64 lbs. H₂O/MMSCF
 Calculated Lean Glycol Recirc. Ratio: 36.54 gal/lb H₂O

Component	Remaining in Dry Gas	Absorbed in Glycol
Water	3.25%	96.75%
Carbon Dioxide	98.87%	1.13%
Nitrogen	99.93%	0.07%
Methane	99.93%	0.07%
Ethane	99.73%	0.27%
Propane	99.47%	0.53%
Isobutane	99.14%	0.86%
n-Butane	98.82%	1.18%
Isopentane	98.62%	1.38%
n-Pentane	98.18%	1.82%
n-Hexane	96.47%	3.53%
Cyclohexane	85.39%	14.61%
Heptanes	92.39%	7.61%
Methylcyclohexane	81.72%	18.28%
2,2,4-Trimethylpentane	96.59%	3.41%
Benzene	33.80%	66.20%
Toluene	21.63%	78.37%
Ethylbenzene	13.01%	86.99%
Xylenes	8.76%	91.24%
C8+ Heavies	72.46%	27.54%

REGENERATOR

No Stripping Gas used in regenerator.

Component	Remaining in Glycol	Distilled Overhead
Water	83.62%	16.38%
Carbon Dioxide	0.00%	100.00%
Nitrogen	0.00%	100.00%
Methane	0.00%	100.00%
Ethane	0.00%	100.00%
Propane	0.00%	100.00%
Isobutane	0.00%	100.00%
n-Butane	0.00%	100.00%
Isopentane	0.38%	99.62%
n-Pentane	0.40%	99.60%
n-Hexane	0.44%	99.56%
Cyclohexane	3.11%	96.89%
Heptanes	0.47%	99.53%
Methylcyclohexane	3.91%	96.09%
2,2,4-Trimethylpentane	1.33%	98.67%
Benzene	4.97%	95.03%
Toluene	7.86%	92.14%
Ethylbenzene	10.35%	89.65%

Xylenes	12.85%	87.15%
C8+ Heavies	11.84%	88.16%

STREAM REPORTS:

WET GAS STREAM

Temperature: 75.00 deg. F
 Pressure: 414.70 psia
 Flow Rate: 2.05e+004 scfh

Component	Conc. (vol%)	Loading (lb/hr)
Water	1.17e-001	1.14e+000
Carbon Dioxide	7.62e-001	1.81e+001
Nitrogen	1.24e-001	1.87e+000
Methane	9.27e+001	8.02e+002
Ethane	4.22e+000	6.85e+001
Propane	1.18e+000	2.80e+001
Isobutane	2.64e-001	8.26e+000
n-Butane	2.33e-001	7.29e+000
Isopentane	1.03e-001	3.99e+000
n-Pentane	6.55e-002	2.55e+000
n-Hexane	7.75e-002	3.60e+000
Cyclohexane	1.85e-002	8.39e-001
Heptanes	4.39e-002	2.38e+000
Methylcyclohexane	2.79e-002	1.48e+000
2,2,4-Trimethylpentane	2.70e-003	1.66e-001
Benzene	1.12e-002	4.71e-001
Toluene	1.57e-002	7.79e-001
Ethylbenzene	4.99e-004	2.86e-002
Xylenes	5.49e-003	3.15e-001
C8+ Heavies	1.52e-002	1.40e+000
Total Components	100.00	9.53e+002

DRY GAS STREAM

Temperature: 75.00 deg. F
 Pressure: 414.70 psia
 Flow Rate: 2.04e+004 scfh

Component	Conc. (vol%)	Loading (lb/hr)
Water	3.82e-003	3.70e-002
Carbon Dioxide	7.56e-001	1.79e+001
Nitrogen	1.24e-001	1.87e+000
Methane	9.29e+001	8.02e+002
Ethane	4.22e+000	6.83e+001
Propane	1.17e+000	2.78e+001
Isobutane	2.62e-001	8.19e+000
n-Butane	2.30e-001	7.20e+000
Isopentane	1.01e-001	3.94e+000
n-Pentane	6.45e-002	2.50e+000
n-Hexane	7.50e-002	3.48e+000
Cyclohexane	1.58e-002	7.16e-001

Heptanes	4.07e-002	2.20e+000
Methylcyclohexane	2.28e-002	1.21e+000
2,2,4-Trimethylpentane	2.61e-003	1.61e-001
Benzene	3.79e-003	1.59e-001
Toluene	3.40e-003	1.69e-001
Ethylbenzene	6.51e-005	3.72e-003
Xylenes	4.83e-004	2.76e-002
C8+ Heavies	1.10e-002	1.01e+000

Total Components	100.00	9.49e+002

LEAN GLYCOL STREAM

Temperature: 75.00 deg. F
Flow Rate: 6.69e-001 gpm

Component	Conc. (wt%)	Loading (lb/hr)
TEG	9.85e+001	3.71e+002
Water	1.50e+000	5.65e+000
Carbon Dioxide	5.42e-012	2.04e-011
Nitrogen	3.50e-014	1.32e-013
Methane	4.82e-018	1.82e-017
Ethane	2.29e-008	8.62e-008
Propane	1.61e-009	6.06e-009
Isobutane	5.68e-010	2.14e-009
n-Butane	5.68e-010	2.14e-009
Isopentane	7.36e-005	2.77e-004
n-Pentane	6.20e-005	2.34e-004
n-Hexane	1.69e-004	6.39e-004
Cyclohexane	1.07e-003	4.05e-003
Heptanes	2.41e-004	9.08e-004
Methylcyclohexane	2.98e-003	1.12e-002
2,2,4-Trimethylpentane	2.29e-005	8.62e-005
Benzene	4.36e-003	1.64e-002
Toluene	1.39e-002	5.24e-002
Ethylbenzene	7.67e-004	2.89e-003
Xylenes	1.13e-002	4.25e-002
C8+ Heavies	1.39e-002	5.24e-002

Total Components	100.00	3.77e+002

RICH GLYCOL AND PUMP GAS STREAM

Temperature: 75.00 deg. F
Pressure: 414.70 psia
Flow Rate: 6.89e-001 gpm
NOTE: Stream has more than one phase.

Component	Conc. (wt%)	Loading (lb/hr)
TEG	9.61e+001	3.71e+002
Water	1.75e+000	6.76e+000
Carbon Dioxide	7.39e-002	2.85e-001
Nitrogen	2.50e-003	9.66e-003
Methane	1.07e+000	4.12e+000
Ethane	1.27e-001	4.88e-001
Propane	7.10e-002	2.74e-001
Isobutane	2.80e-002	1.08e-001

n-Butane	3.08e-002	1.19e-001
Isopentane	1.90e-002	7.33e-002
n-Pentane	1.51e-002	5.81e-002
n-Hexane	3.73e-002	1.44e-001
Cyclohexane	3.38e-002	1.30e-001
Heptanes	4.98e-002	1.92e-001
Methylcyclohexane	7.46e-002	2.88e-001
2,2,4-Trimethylpentane	1.68e-003	6.49e-003
Benzene	8.57e-002	3.31e-001
Toluene	1.73e-001	6.67e-001
Ethylbenzene	7.23e-003	2.79e-002
Xylenes	8.58e-002	3.31e-001
C8+ Heavies	1.15e-001	4.43e-001

Total Components	100.00	3.86e+002

REGENERATOR OVERHEADS STREAM

Temperature: 212.00 deg. F
 Pressure: 14.70 psia
 Flow Rate: 1.43e+002 scfh

Component	Conc. (vol%)	Loading (lb/hr)

Water	1.63e+001	1.11e+000
Carbon Dioxide	1.72e+000	2.85e-001
Nitrogen	9.14e-002	9.66e-003
Methane	6.81e+001	4.12e+000
Ethane	4.30e+000	4.88e-001
Propane	1.65e+000	2.74e-001
Isobutane	4.93e-001	1.08e-001
n-Butane	5.42e-001	1.19e-001
Isopentane	2.68e-001	7.30e-002
n-Pentane	2.13e-001	5.79e-002
n-Hexane	4.40e-001	1.43e-001
Cyclohexane	3.98e-001	1.26e-001
Heptanes	5.06e-001	1.91e-001
Methylcyclohexane	7.46e-001	2.76e-001
2,2,4-Trimethylpentane	1.49e-002	6.40e-003
Benzene	1.07e+000	3.14e-001
Toluene	1.77e+000	6.14e-001
Ethylbenzene	6.24e-002	2.50e-002
Xylenes	7.20e-001	2.88e-001
C8+ Heavies	6.07e-001	3.90e-001

Total Components	100.00	9.02e+000

CONDENSER PRODUCED WATER STREAM

Temperature: 100.00 deg. F
 Flow Rate: 1.17e-003 gpm

Component	Conc. (wt%)	Loading (lb/hr)	(ppm)

Water	1.00e+002	5.87e-001	999717.
Carbon Dioxide	1.60e-003	9.38e-006	16.
Nitrogen	1.23e-006	7.21e-009	0.
Methane	1.06e-003	6.24e-006	11.
Ethane	1.52e-004	8.93e-007	2.

Propane	7.43e-005	4.36e-007	1.
Isobutane	1.64e-005	9.63e-008	0.
n-Butane	2.45e-005	1.44e-007	0.
Isopentane	1.09e-005	6.38e-008	0.
n-Pentane	9.38e-006	5.51e-008	0.
n-Hexane	1.97e-005	1.16e-007	0.
Cyclohexane	1.04e-004	6.08e-007	1.
Heptanes	1.42e-005	8.36e-008	0.
Methylcyclohexane	1.05e-004	6.19e-007	1.
2,2,4-Trimethylpentane	3.13e-007	1.84e-009	0.
Benzene	8.05e-003	4.72e-005	80.
Toluene	1.21e-002	7.08e-005	121.
Ethylbenzene	3.00e-004	1.76e-006	3.
Xylenes	4.65e-003	2.73e-005	46.
C8+ Heavies	6.22e-007	3.65e-009	0.

Total Components	100.00	5.87e-001	1000000.

CONDENSER RECOVERED OIL STREAM

Temperature: 100.00 deg. F
Flow Rate: 1.53e-003 gpm

Component	Conc. (wt%)	Loading (lb/hr)

Water	2.54e-002	1.66e-004
Carbon Dioxide	5.15e-003	3.36e-005
Nitrogen	4.10e-005	2.67e-007
Methane	2.88e-002	1.87e-004
Ethane	2.03e-002	1.32e-004
Propane	6.02e-002	3.92e-004
Isobutane	4.87e-002	3.17e-004
n-Butane	7.37e-002	4.80e-004
Isopentane	1.19e-001	7.78e-004
n-Pentane	1.00e-001	6.53e-004
n-Hexane	6.89e-001	4.49e-003
Cyclohexane	8.81e-001	5.74e-003
Heptanes	2.44e+000	1.59e-002
Methylcyclohexane	3.72e+000	2.43e-002
2,2,4-Trimethylpentane	8.38e-002	5.46e-004
Benzene	2.32e+000	1.51e-002
Toluene	1.39e+001	9.04e-002
Ethylbenzene	1.28e+000	8.32e-003
Xylenes	1.64e+001	1.07e-001
C8+ Heavies	5.79e+001	3.77e-001

Total Components	100.00	6.51e-001

CONDENSER VENT STREAM

Temperature: 100.00 deg. F
Pressure: 11.30 psia
Flow Rate: 1.29e+002 scfh

Component	Conc. (vol%)	Loading (lb/hr)

Water	8.50e+000	5.20e-001
Carbon Dioxide	1.91e+000	2.85e-001
Nitrogen	1.02e-001	9.66e-003

Methane	7.57e+001	4.12e+000
Ethane	4.78e+000	4.88e-001
Propane	1.83e+000	2.73e-001
Isobutane	5.46e-001	1.08e-001
n-Butane	6.00e-001	1.18e-001
Isopentane	2.95e-001	7.22e-002
n-Pentane	2.33e-001	5.72e-002
n-Hexane	4.74e-001	1.39e-001
Cyclohexane	4.22e-001	1.21e-001
Heptanes	5.15e-001	1.75e-001
Methylcyclohexane	7.56e-001	2.52e-001
2,2,4-Trimethylpentane	1.51e-002	5.86e-003
Benzene	1.13e+000	2.99e-001
Toluene	1.67e+000	5.24e-001
Ethylbenzene	4.63e-002	1.67e-002
Xylenes	5.04e-001	1.82e-001
C8+ Heavies	2.33e-002	1.35e-002

Total Components	100.00	7.78e+000

COMBUSTION DEVICE OFF GAS STREAM

Temperature: 1000.00 deg. F
 Pressure: 14.70 psia
 Flow Rate: 2.31e+000 scfh

Component	Conc. (vol%)	Loading (lb/hr)
Methane	8.45e+001	8.24e-002
Ethane	5.34e+000	9.76e-003
Propane	2.04e+000	5.47e-003
Isobutane	6.11e-001	2.16e-003
n-Butane	6.70e-001	2.37e-003
Isopentane	3.29e-001	1.44e-003
n-Pentane	2.61e-001	1.14e-003
n-Hexane	5.29e-001	2.77e-003
Cyclohexane	4.71e-001	2.41e-003
Heptanes	5.76e-001	3.51e-003
Methylcyclohexane	8.45e-001	5.04e-003
2,2,4-Trimethylpentane	1.69e-002	1.17e-004
Benzene	1.26e+000	5.98e-003
Toluene	1.87e+000	1.05e-002
Ethylbenzene	5.17e-002	3.34e-004
Xylenes	5.64e-001	3.64e-003
C8+ Heavies	2.61e-002	2.70e-004

Total Components	100.00	1.39e-001

ANNUAL AIR-COOLED CONDENSER PERFORMANCE:

ANNUAL AIR-COOLED CONDENSER PERFORMANCE

Nearest Site for Air Temperature Data: Rock Springs, WY

Ambient Air		Condenser Outlet
Dry Bulb		Temperature (deg. F)
Temperature	Frequency (%)	Temperature (deg. F)
(deg. F)	62.28	<=90
<=50		

51-55	7.96	91-95
56-60	7.20	96-100
61-65	6.61	101-105
66-70	5.47	106-110
71-75	4.33	111-115
76-80	3.31	116-120
81-85	2.22	121-125
86-90	0.54	126-130
91-95	0.06	131-135
96-100	0.00	136-140
>100	0.00	>140

Condenser outlet temperature approach to ambient: 40.00 deg. F

 Annual air-cooled condenser emissions and control efficiency:

	Uncontrolled emissions tons/year	Controlled emissions tons/year	% Control
Benzene	2.215	2.215	0.00
BTEX	10.419	10.419	0.00
Total HAP	11.081	11.081	0.00
VOC	18.582	18.582	0.00

NSR Application A0000949

Warbonnet 12-2 PAD

F022944

July 07, 2015

If I am claiming any information in this submission is a trade secret, I hereby swear or affirm that the trade secret request meets the requirements of Wyoming Air Quality Standards and Regulations and that the justification submitted with the trade secret request sets forth the basis for claiming that the information should be considered a trade secret as defined in Wyoming Air Quality Standards and Regulations.

a) I am the Authorized Representative identified in applicable Wyoming Air Quality Standards and Regulations as authorized to sign this document; and

b) Based on information and belief formed after reasonable inquiry, I hereby affirm that all factual statements in this transmittal are true, accurate and complete to the best of my knowledge and that all judgments and estimates have been made in good faith.

Account: tmrudolph

Date/time submitted: Jul 7 2015, 14:03:59

Air Quality Division
Application for NSR Permit

Jul 7 2015, 14:03:59

- **NSR Application**

This information should be filled out for each New Source Review (NSR) application. An NSR permit is required for all air contaminant sources (emissions units) installed or modified after January 1, 1974. See the application instructions for additional information.

- **Purpose of Application**

Please summarize the reason this permit is being applied for.

Equipment modification

Has the facility changed location or is it a new/greenfield facility? No

Does production at this facility contain H2S? No

- **Federal Rules Applicability - Facility Level**

Prevention of Significant Deterioration (PSD) Not affected

These rules are found under WAQSR Chapter 6, Section 4.

Non-Attainment New Source Review Not affected

These rules are found under WAQSR Chapter 6, Section 13.

- **Trade Secret Information** - One or more Emissions Units in this application contains trade secret information.

No

- **Permit Application Contact** - Newly created contacts and application contact changes will be saved when the application is saved.

Kelly Bott	Regulatory and Environmental Manager	Ultra Resources, Inc.
Name	Title	Company
116 Inverness Drive East, Suite #400	Englewood, CO	80112
Street Address	City/Township, State	Zip Code
(303) 645-9809		kbott@ultrapetroleum.com
Phone	Fax	E-mail

- **Modeling Section**

Ambient Air Quality Impact Analysis: WAQSR Chapter 6, Section 2(c)(ii) requires that permit applicants demonstrate that a proposed facility will not prevent the attainment or maintenance of any ambient air quality standard.

Has the applicant contacted AQD to determine if modeling is required? No

Is a modeling analysis part of this application? No

Is the proposed project subject to Prevention of Significant Deterioration (PSD) requirements? No

- **Application Attachments**

Required Attachment	Public Document Id	Attachment Type	Description
X	4803	Process Flow Diagram	WB 12-2 Process Flow Diagram
X	4804	Emissions Calculations	WB 12-2 Emission Calculations
X	4805	Cover Letter/Project Description	WB 12-2 Cover Letter and Project Description
X	4806	Equipment List	WB 12-2 Equipment List

Section II - Specific Air Contaminant Source Information

AQD EU ID: DHY001

AQD EU description:

Company EU ID: DHY001

Company EU Description: 4M Dehydrator

- **Source Installation or Modification Schedule** – Select reason(s) for this emissions unit being included in this application (must be completed regardless of date of installation or modification):

Modification

When will you begin to modify the air contaminant source?

04/21/2015

- **Emission Unit Type Specific Information**

Emission Unit Type : Dehydration Unit

Temperature of Wet Gas (F): 75

Water Content of Dry Gas 5.00
(lbs H2O/MMscf):

Pressure of Wet Gas (psig): 400.00

Manufacturer Name of Glycol Circulation Pump: Kimray

Water Content of Wet Gas (lbs H2O/MMscf):

Model Name and Number of Glycol Circulation Pump: 4015PV

Flow Rate of Dry Gas 0.49
(MMscfd):

Type of Glycol Circulation Pump: Gas

Pump Volume Ratio 0.08
(acfm/gpm):

Actual LEAN Glycol Circulation Rate (gallons/minute): 0.6700

Maximum LEAN Glycol Circulation Rate (gallons/minute): 0.6700

Source of Motive Gas for Pump: Field gas

Additional Gas Stripping: No

Include Glycol Flash Tank/Separator: No

- **Potential Operating Schedule** – Provide the operating schedule for this emissions unit

Hours/day :

Hours/year :

- **Emissions Information** "Potential to emit" means the maximum capacity of a source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored or processed, shall be treated as part of its design if the limitation is enforceable by the EPA and the Division. This term does not alter or affect the use of this term for any other purposes under the Act, or the term "capacity factor" as used in Title IV of the Act or the regulations promulgated thereunder.

Basis for Determination Options:

- *Manufacturer Data*
- *Test results for this source*
- *Similar source test results*
- *GRICalc*
- *Tanks Program*
- *AP-42*

- Other. If this is selected, attach a document with a description of the method used.

Criteria Pollutants :

Pollutant	Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (PTE) (lbs/hr)*	Potential to Emit (PTE) (tons/yr)*	Basis for Determination*
		Potential to Emit (PTE)*	Units*			
Particulate emissions (PE/PM) (formerly particulate matter, PM)	0	0		0	0	
PM # 10 microns in diameter (PE/PM10)	0	0		0	0	
PM # 2.5 microns in diameter (PE/PM2.5)	0	0		0	0	
Sulfur dioxide (SO2)	0	0		0	0	
Nitrogen oxides (NOx)	0	0		0	0	
Carbon monoxide (CO)	0	0		0	0	
Volatile organic compounds (VOC)	13.1742	0		0.0471	0.2065	GRI GlyCalc
Lead (Pb)	0	0		0	0	
Total Hazardous Air Pollutants (HAPs)	6.0949	0		0.56	0.1021	GRI GlyCalc
Fluoride (F)	0	0		0	0	
Hydrogen Sulfide (H2S)	0	0		0	0	
Mercury (Hg)	0	0		0	0	
Total Reduced Sulfur (TRS)	0	0		0	0	
Sulfuric Acid Mist (SAM)	0	0		0	0	

Hazardous Air Pollutants (HAPs) and Toxic Air Contaminants:

Pollutant	Pollutant Category	Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (PTE) (lbs/hr)*	Potential to Emit (PTE) (tons/yr)*	Basis for Determination*
			Potential to Emit (PTE)*	Units*			

Greenhouse Gases (GHGs):

Pollutant	Pollutant Category	Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (PTE) (lbs/hr)*	Potential to Emit (PTE) (tons/yr)*	Basis for Determination*
			Potential to Emit (PTE)*	Units*			

* Provide your calculations as an attachment and explain how all process variables and emissions factors were selected. Note the emission factor(s) employed and document origin. Example: AP-42, Table 4.4-3 (8/97); stack test, Method 5, 4/96; mass balance based on MSDS; etc.

** AQD Calculated - See 'Help' for more information.

- Best Available Control Technology (BACT)

Was a BACT Analysis completed for this unit? No

- Lowest Achievable Emission Rate (LAER)

Was a LAER Analysis completed for this unit? No

- **Federal and State Rule Applicability**

New Source Performance Standards (NSPS) Not affected
New Source Performance Standards are listed under 40 CFR 60 - Standards of Performance for New Stationary Sources.

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 61) Not affected
National Emissions Standards for Hazardous Air Pollutants (NESHAP Part 61) are listed under 40 CFR 61. (These include asbestos, benzene, beryllium, mercury, and vinyl chloride).

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 63) Not affected
National Emission Standards for Hazardous Air Pollutants (NESHAP Part 63) standards are listed under 40 CFR 63.

Prevention of Significant Deterioration (PSD) Not Affected
These rules are found under WAQSR Chapter 6, Section 4.

Non-Attainment New Source Review Not Affected
These rules are found under WAQSR Chapter 6, Section 13.

- **Emission Unit Attachments**

Required Attachment	Public Document Id	Attachment Type	Description
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Section II - Specific Air Contaminant Source Information

AQD EU ID: DHY002

AQD EU description:

Company EU ID: DHY002

Company EU Description: 4M Dehydrator
(Currently OOS)

- **Source Installation or Modification Schedule** – Select reason(s) for this emissions unit being included in this application (must be completed regardless of date of installation or modification):

Modification

When will you begin to modify the air contaminant source?

04/21/2015

- **Emission Unit Type Specific Information**

Emission Unit Type : Dehydration Unit

Temperature of Wet Gas (F): 75

Water Content of Dry Gas 5.00
(lbs H2O/MMscf):

Pressure of Wet Gas (psig): 400.00

Manufacturer Name of Glycol Circulation Pump: Kimray

Water Content of Wet Gas
(lbs H2O/MMscf):

Model Name and Number of Glycol Circulation Pump: 4015PV

Flow Rate of Dry Gas 0.01
(MMscfd):

Type of Glycol Circulation Pump: Gas

Pump Volume Ratio 0.08
(acfm/gpm):

Actual LEAN Glycol Circulation Rate
(gallons/minute): 0.6700

Maximum LEAN Glycol Circulation Rate
(gallons/minute): 0.6700

Source of Motive Gas for Pump: Field gas

Additional Gas Stripping: No

Include Glycol Flash Tank/Separator: No

- **Potential Operating Schedule** – Provide the operating schedule for this emissions unit

Hours/day :

Hours/year :

- **Emissions Information** "Potential to emit" means the maximum capacity of a source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored or processed, shall be treated as part of its design if the limitation is enforceable by the EPA and the Division. This term does not alter or affect the use of this term for any other purposes under the Act, or the term "capacity factor" as used in Title IV of the Act or the regulations promulgated thereunder.

Basis for Determination Options:

- *Manufacturer Data*
- *Test results for this source*
- *Similar source test results*
- *GRICalc*
- *Tanks Program*

- AP-42
- Other. If this is selected, attach a document with a description of the method used.

Criteria Pollutants :

Pollutant	Pre- Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (PTE) (lbs/hr)*	Potential to Emit (PTE) (tons/yr)*	Basis for Determinati on*
		Potential to Emit (PTE)*	Units*			
Particulate emissions (PE/PM) (formerly particulate matter, PM)	0	0		0	0	
PM # 10 microns in diameter (PE/PM10)	0	0		0	0	
PM # 2.5 microns in diameter (PE/PM2.5)	0	0		0	0	
Sulfur dioxide (SO2)	0	0		0	0	
Nitrogen oxides (NOx)	0	0		0	0	
Carbon monoxide (CO)	0	0		0	0	
Volatile organic compounds (VOC)	0	0		0	0	
Lead (Pb)	0	0		0	0	
Total Hazardous Air Pollutants (HAPs)	0	0		0	0	
Fluoride (F)	0	0		0	0	
Hydrogen Sulfide (H2S)	0	0		0	0	
Mercury (Hg)	0	0		0	0	
Total Reduced Sulfur (TRS)	0	0		0	0	
Sulfuric Acid Mist (SAM)	0	0		0	0	

Hazardous Air Pollutants (HAPs) and Toxic Air Contaminants:

Pollutant	Pollutant Category	Pre- Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (PTE) (lbs/hr)*	Potential to Emit (PTE) (tons/yr)*	Basis for Determinati on*
			Potential to Emit (PTE)*	Units*			

Greenhouse Gases (GHGs):

Pollutant	Pollutant Category	Pre- Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (PTE) (lbs/hr)*	Potential to Emit (PTE) (tons/yr)*	Basis for Determinati on*
			Potential to Emit (PTE)*	Units*			

* Provide your calculations as an attachment and explain how all process variables and emissions factors were selected. Note the emission factor(s) employed and document origin. Example: AP-42, Table 4.4-3 (8/97); stack test, Method 5, 4/96; mass balance based on MSDS; etc.

** AQD Calculated - See 'Help' for more information.

- Best Available Control Technology (BACT)

Was a BACT Analysis completed for this unit? No

- **Lowest Achievable Emission Rate (LAER)**

Was a LAER Analysis completed for this unit? No

- **Federal and State Rule Applicability**

New Source Performance Standards (NSPS) Not affected
New Source Performance Standards are listed under 40 CFR 60 - Standards of Performance for New Stationary Sources.

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 61) Not affected
National Emissions Standards for Hazardous Air Pollutants (NESHAP Part 61) are listed under 40 CFR 61. (These include asbestos, benzene, beryllium, mercury, and vinyl chloride).

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 63) Not affected
National Emission Standards for Hazardous Air Pollutants (NESHAP Part 63) standards are listed under 40 CFR 63.

Prevention of Significant Deterioration (PSD) Not Affected
These rules are found under WAQSR Chapter 6, Section 4.

Non-Attainment New Source Review Not Affected
These rules are found under WAQSR Chapter 6, Section 13.

- **Emission Unit Attachments**

Required Attachment	Public Document Id	Attachment Type	Description
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Section II - Specific Air Contaminant Source Information

AQD EU ID: FLR001

AQD EU description:

Company EU ID: FLR001

Company EU Description: Combustor 1 16"
BTEX

- **Source Installation or Modification Schedule** – Select reason(s) for this emissions unit being included in this application (must be completed regardless of date of installation or modification):

Modification

When will you begin to modify the air contaminant source?

04/21/2015

- **Emission Unit Type Specific Information**

Emission Unit Type : Flare

Emergency Flare Only : No

Btu Content (Btu/scf) : 1,020.00

Assist Gas Utilized : No

Waste Gas Volume : 129.00

Installation Date : 01/02/2009

Continuously Monitored : Yes

Describe Continuous Monitoring : Pilot only

Ignition Device Type : Pilot

Smokeless Design : Yes

Units : scf/hr

- **Potential Operating Schedule** – Provide the operating schedule for this emissions unit

Hours/day :

Hours/year :

- **Emissions Information** "Potential to emit" means the maximum capacity of a source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored or processed, shall be treated as part of its design if the limitation is enforceable by the EPA and the Division. This term does not alter or affect the use of this term for any other purposes under the Act, or the term "capacity factor" as used in Title IV of the Act or the regulations promulgated thereunder.

Basis for Determination Options:

- *Manufacturer Data*
- *Test results for this source*
- *Similar source test results*
- *GRICalc*
- *Tanks Program*
- *AP-42*
- *Other. If this is selected, attach a document with a description of the method used.*

Criteria Pollutants :

Pollutant	Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (PTE) (lbs/hr)*	Potential to Emit (PTE) (tons/yr)*	Basis for Determination*
		Potential to Emit (PTE)*	Units*			
Particulate emissions (PE/PM) (formerly	0	0		0	0	

particulate matter, PM)						
PM # 10 microns in diameter (PE/PM10)	0	0		0	0	
PM # 2.5 microns in diameter (PE/PM2.5)	0	0		0	0	
Sulfur dioxide (SO2)	0	0		0	0	
Nitrogen oxides (NOx)	0	0.14	lb/MMBtu	0.024	0.106	AP-42
Carbon monoxide (CO)	0	0.035	lb/MMBtu	0.006	0.026	AP-42
Volatile organic compounds (VOC)	0	0		0	0	
Lead (Pb)	0	0		0	0	
Total Hazardous Air Pollutants (HAPs)	0	0		0	0	
Fluoride (F)	0	0		0	0	
Hydrogen Sulfide (H2S)	0	0		0	0	
Mercury (Hg)	0	0		0	0	
Total Reduced Sulfur (TRS)	0	0		0	0	
Sulfuric Acid Mist (SAM)	0	0		0	0	

Hazardous Air Pollutants (HAPs) and Toxic Air Contaminants:

Pollutant	Pollutant Category	Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (PTE) (lbs/hr)*	Potential to Emit (PTE) (tons/yr)*	Basis for Determination*
			Potential to Emit (PTE)*	Units*			

Greenhouse Gases (GHGs):

Pollutant	Pollutant Category	Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (PTE) (lbs/hr)*	Potential to Emit (PTE) (tons/yr)*	Basis for Determination*
			Potential to Emit (PTE)*	Units*			

* Provide your calculations as an attachment and explain how all process variables and emissions factors were selected.

Note the emission factor(s) employed and document origin. Example: AP-42, Table 4.4-3 (8/97); stack test, Method 5, 4/96; mass balance based on MSDS; etc.

** AQD Calculated - See 'Help' for more information.

- Best Available Control Technology (BACT)

Was a BACT Analysis completed for this unit? No

- Lowest Achievable Emission Rate (LAER)

Was a LAER Analysis completed for this unit? No

- Federal and State Rule Applicability

New Source Performance Standards (NSPS)

New Source Performance Standards are listed under 40 CFR 60 - Standards of Performance for New Stationary Sources.

Not affected

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 61)

Not affected

National Emissions Standards for Hazardous Air Pollutants (NESHAP Part 61) are listed under 40 CFR 61. (These include asbestos, benzene, beryllium, mercury, and vinyl chloride).

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 63) Not affected
National Emission Standards for Hazardous Air Pollutants (NESHAP Part 63) standards are listed under 40 CFR 63.

Prevention of Significant Deterioration (PSD) Not Affected
These rules are found under WAQSR Chapter 6, Section 4.

Non-Attainment New Source Review Not Affected
These rules are found under WAQSR Chapter 6, Section 13.

- **Emission Unit Attachments**

Required Attachment	Public Document Id	Attachment Type	Description
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Section II - Specific Air Contaminant Source Information

AQD EU ID: FUG001

AQD EU description:

Company EU ID: FUG001

Company EU Description: Equipment Fugitive Leaks - All Equipment (Valves, Flanges, Connections, Seals, Drains)

- **Source Installation or Modification Schedule** – Select reason(s) for this emissions unit being included in this application (must be completed regardless of date of installation or modification):

Modification

When will you begin to modify the air contaminant source?

04/21/2015

- **Emission Unit Type Specific Information**

Emission Unit Type : Fugitive

Type of Fugitive Emission : Fugitive Leaks at O&G

Equipment and Service Type	Number of Each Equipment Type	Leak Rate (ppm)	Percent VOC
Valve; Gas	5	0.99	
Valve; Light Oil	1	0.99	
Valve; Water/Light Oil	1	0.99	
Pump; Gas	1	0.99	
Other; Gas	10	0.99	
Other; Light Oil	2	0.99	
Other; Water/Light Oil	2	0.99	
Connector; Gas	20	0.99	
Connector; Light Oil	5	0.99	
Connector; Water/Light Oil	5	0.99	
Flange; Gas	2	0.99	
Flange; Light Oil	1	0.99	
Flange; Water/Light Oil	1	0.99	

- **Potential Operating Schedule** – Provide the operating schedule for this emissions unit

Hours/day :

Hours/year :

- **Emissions Information** "Potential to emit" means the maximum capacity of a source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored or processed, shall be treated as part of its design if the limitation is enforceable by the EPA and the Division. This term does not alter or affect the use of this term for any other purposes under the Act, or the term "capacity factor" as used in Title IV of the Act or the regulations promulgated thereunder.

Basis for Determination Options:

- *Manufacturer Data*
- *Test results for this source*
- *Similar source test results*
- *GRICalc*
- *Tanks Program*
- *AP-42*
- *Other. If this is selected, attach a document with a description of the method used.*

Criteria Pollutants :

Pollutant	Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (PTE) (lbs/hr)*	Potential to Emit (PTE) (tons/yr)*	Basis for Determination*
		Potential to Emit (PTE)*	Units*			
Particulate emissions (PE/PM) (formerly particulate matter, PM)	0	0		0	0	
PM # 10 microns in diameter (PE/PM10)	0	0		0	0	
PM # 2.5 microns in diameter (PE/PM2.5)	0	0		0	0	
Sulfur dioxide (SO2)	0	0		0	0	
Nitrogen oxides (NOx)	0	0		0	0	
Carbon monoxide (CO)	0	0		0	0	
Volatile organic compounds (VOC)	0	0		0.02	0.09	Other
Lead (Pb)	0	0		0	0	
Total Hazardous Air Pollutants (HAPs)	0	0		0.002	0.01	Other
Fluoride (F)	0	0		0	0	
Hydrogen Sulfide (H2S)	0	0		0	0	
Mercury (Hg)	0	0		0	0	
Total Reduced Sulfur (TRS)	0	0		0	0	
Sulfuric Acid Mist (SAM)	0	0		0	0	

Hazardous Air Pollutants (HAPs) and Toxic Air Contaminants:

Pollutant	Pollutant Category	Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (PTE) (lbs/hr)*	Potential to Emit (PTE) (tons/yr)*	Basis for Determination*
			Potential to Emit (PTE)*	Units*			

Greenhouse Gases (GHGs):

Pollutant	Pollutant Category	Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (PTE) (lbs/hr)*	Potential to Emit (PTE) (tons/yr)*	Basis for Determination*
			Potential to Emit (PTE)*	Units*			

* Provide your calculations as an attachment and explain how all process variables and emissions factors were selected. Note the emission factor(s) employed and document origin. Example: AP-42, Table 4.4-3 (8/97); stack test, Method 5, 4/96; mass balance based on MSDS; etc.

** AQD Calculated - See 'Help' for more information.

- **Best Available Control Technology (BACT)**

Was a BACT Analysis completed for this unit? No

- **Lowest Achievable Emission Rate (LAER)**

Was a LAER Analysis completed for this unit? No

- **Federal and State Rule Applicability**

New Source Performance Standards (NSPS) Not affected
New Source Performance Standards are listed under 40 CFR 60 - Standards of Performance for New Stationary Sources.

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 61) Not affected
National Emissions Standards for Hazardous Air Pollutants (NESHAP Part 61) are listed under 40 CFR 61. (These include asbestos, benzene, beryllium, mercury, and vinyl chloride).

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 63) Not affected
National Emission Standards for Hazardous Air Pollutants (NESHAP Part 63) standards are listed under 40 CFR 63.

Prevention of Significant Deterioration (PSD) Not Affected
These rules are found under WAQSR Chapter 6, Section 4.

Non-Attainment New Source Review Not Affected
These rules are found under WAQSR Chapter 6, Section 13.

- **Emission Unit Attachments**

Required Attachment	Public Document Id	Attachment Type	Description
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Section II - Specific Air Contaminant Source Information

AQD EU ID: HET001

AQD EU description:

Company EU ID: HET001

Company EU Description: 0.085 MMBtu/hr
Reboiler for
DHY001

- **Source Installation or Modification Schedule** – Select reason(s) for this emissions unit being included in this application (must be completed regardless of date of installation or modification):

Modification

When will you begin to modify the air contaminant source?

04/21/2015

- **Emission Unit Type Specific Information**

Emission Unit Type : Heater/Chiller

Fuel Sulfur Content : 0.00

Units : %

- **Potential Operating Schedule** – Provide the operating schedule for this emissions unit

Hours/day :

Hours/year :

- **Emissions Information** "Potential to emit" means the maximum capacity of a source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored or processed, shall be treated as part of its design if the limitation is enforceable by the EPA and the Division. This term does not alter or affect the use of this term for any other purposes under the Act, or the term "capacity factor" as used in Title IV of the Act or the regulations promulgated thereunder.

Basis for Determination Options:

- *Manufacturer Data*
- *Test results for this source*
- *Similar source test results*
- *GRICalc*
- *Tanks Program*
- *AP-42*
- *Other. If this is selected, attach a document with a description of the method used.*

Criteria Pollutants :

Pollutant	Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (PTE) (lbs/hr)*	Potential to Emit (PTE) (tons/yr)*	Basis for Determination*
		Potential to Emit (PTE)*	Units*			
Particulate emissions (PE/PM) (formerly particulate matter, PM)	0	0		0	0	
PM # 10 microns in diameter (PE/PM10)	0	0		0	0	
PM # 2.5 microns in diameter (PE/PM2.5)	0	0		0	0	
Sulfur dioxide (SO2)	0	0		0	0	

Nitrogen oxides (NOx)	0	0.098	lb/MMBtu	0.0083	0.037	AP-42
Carbon monoxide (CO)	0	0.082	lb/MMBtu	0.007	0.031	AP-42
Volatile organic compounds (VOC)	0	0.005	lb/MMBtu	0.0005	0.002	AP-42
Lead (Pb)	0	0		0	0	
Total Hazardous Air Pollutants (HAPs)	0	0		0	0	
Fluoride (F)	0	0		0	0	
Hydrogen Sulfide (H2S)	0	0		0	0	
Mercury (Hg)	0	0		0	0	
Total Reduced Sulfur (TRS)	0	0		0	0	
Sulfuric Acid Mist (SAM)	0	0		0	0	

Hazardous Air Pollutants (HAPs) and Toxic Air Contaminants:

Pollutant	Pollutant Category	Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (PTE) (lbs/hr)*	Potential to Emit (PTE) (tons/yr)*	Basis for Determination*
			Potential to Emit (PTE)*	Units*			

Greenhouse Gases (GHGs):

Pollutant	Pollutant Category	Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (PTE) (lbs/hr)*	Potential to Emit (PTE) (tons/yr)*	Basis for Determination*
			Potential to Emit (PTE)*	Units*			

* Provide your calculations as an attachment and explain how all process variables and emissions factors were selected. Note the emission factor(s) employed and document origin. Example: AP-42, Table 4.4-3 (8/97); stack test, Method 5, 4/96; mass balance based on MSDS; etc.

** AQD Calculated - See 'Help' for more information.

- Best Available Control Technology (BACT)

Was a BACT Analysis completed for this unit? No

- Lowest Achievable Emission Rate (LAER)

Was a LAER Analysis completed for this unit? No

- Federal and State Rule Applicability

New Source Performance Standards (NSPS) Not affected
New Source Performance Standards are listed under 40 CFR 60 - Standards of Performance for New Stationary Sources.

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 61) Not affected
National Emissions Standards for Hazardous Air Pollutants (NESHAP Part 61) are listed under 40 CFR 61. (These include asbestos, benzene, beryllium, mercury, and vinyl chloride).

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 63) Not affected
National Emission Standards for Hazardous Air Pollutants

(NESHAP Part 63) standards are listed under 40 CFR 63.

Prevention of Significant Deterioration (PSD)

These rules are found under WAQSR Chapter 6, Section 4.

Not Affected

Non-Attainment New Source Review

These rules are found under WAQSR Chapter 6, Section 13.

Not Affected

- **Emission Unit Attachments**

Required Attachment	Public Document Id	Attachment Type	Description
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Section II - Specific Air Contaminant Source Information

AQD EU ID: HET002

AQD EU description:

Company EU ID: HET002

Company EU Description: 0.085 MMBtu/hr
Reboiler Heater
for DHY002 (Out of
Service)

- **Source Installation or Modification Schedule** – Select reason(s) for this emissions unit being included in this application (must be completed regardless of date of installation or modification):

Modification

When will you begin to modify the air contaminant source?

04/21/2015

- **Emission Unit Type Specific Information**

Emission Unit Type : Heater/Chiller

Fuel Sulfur Content : 0.00

Units : %

- **Potential Operating Schedule** – Provide the operating schedule for this emissions unit

Hours/day :

Hours/year :

- **Emissions Information** "Potential to emit" means the maximum capacity of a source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored or processed, shall be treated as part of its design if the limitation is enforceable by the EPA and the Division. This term does not alter or affect the use of this term for any other purposes under the Act, or the term "capacity factor" as used in Title IV of the Act or the regulations promulgated thereunder.

Basis for Determination Options:

- *Manufacturer Data*
- *Test results for this source*
- *Similar source test results*
- *GRICalc*
- *Tanks Program*
- *AP-42*
- *Other. If this is selected, attach a document with a description of the method used.*

Criteria Pollutants :

Pollutant	Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (PTE) (lbs/hr)*	Potential to Emit (PTE) (tons/yr)*	Basis for Determination*
		Potential to Emit (PTE)*	Units*			
Particulate emissions (PE/PM) (formerly particulate matter, PM)	0	0		0	0	
PM # 10 microns in diameter (PE/PM10)	0	0		0	0	
PM # 2.5 microns in diameter (PE/PM2.5)	0	0		0	0	
Sulfur dioxide (SO2)	0	0		0	0	

Nitrogen oxides (NOx)	0	0.098	lb/MMBtu	0	0	AP-42
Carbon monoxide (CO)	0	0.082	lb/MMBtu	0	0	AP-42
Volatile organic compounds (VOC)	0	0.005	lb/MMBtu	0	0	AP-42
Lead (Pb)	0	0		0	0	
Total Hazardous Air Pollutants (HAPs)	0	0		0	0	
Fluoride (F)	0	0		0	0	
Hydrogen Sulfide (H2S)	0	0		0	0	
Mercury (Hg)	0	0		0	0	
Total Reduced Sulfur (TRS)	0	0		0	0	
Sulfuric Acid Mist (SAM)	0	0		0	0	

Hazardous Air Pollutants (HAPs) and Toxic Air Contaminants:

Pollutant	Pollutant Category	Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (PTE) (lbs/hr)*	Potential to Emit (PTE) (tons/yr)*	Basis for Determination*
			Potential to Emit (PTE)*	Units*			

Greenhouse Gases (GHGs):

Pollutant	Pollutant Category	Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (PTE) (lbs/hr)*	Potential to Emit (PTE) (tons/yr)*	Basis for Determination*
			Potential to Emit (PTE)*	Units*			

* Provide your calculations as an attachment and explain how all process variables and emissions factors were selected. Note the emission factor(s) employed and document origin. Example: AP-42, Table 4.4-3 (8/97); stack test, Method 5, 4/96; mass balance based on MSDS; etc.

** AQD Calculated - See 'Help' for more information.

- Best Available Control Technology (BACT)

Was a BACT Analysis completed for this unit? No

- Lowest Achievable Emission Rate (LAER)

Was a LAER Analysis completed for this unit? No

- Federal and State Rule Applicability

New Source Performance Standards (NSPS) Not affected
New Source Performance Standards are listed under 40 CFR 60 - Standards of Performance for New Stationary Sources.

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 61) Not affected
National Emissions Standards for Hazardous Air Pollutants (NESHAP Part 61) are listed under 40 CFR 61. (These include asbestos, benzene, beryllium, mercury, and vinyl chloride).

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 63) Not affected
National Emission Standards for Hazardous Air Pollutants

(NESHAP Part 63) standards are listed under 40 CFR 63.

Prevention of Significant Deterioration (PSD)

Not Affected

These rules are found under WAQSR Chapter 6, Section 4.

Non-Attainment New Source Review

Not Affected

These rules are found under WAQSR Chapter 6, Section 13.

- **Emission Unit Attachments**

Required Attachment	Public Document Id	Attachment Type	Description
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Section II - Specific Air Contaminant Source Information

AQD EU ID: HET003

AQD EU description:

Company EU ID: HET003

Company EU Description: 0.75 MMBtu/hr
Separator Heater
for DHY001

- **Source Installation or Modification Schedule** – Select reason(s) for this emissions unit being included in this application (must be completed regardless of date of installation or modification):

Modification

When will you begin to modify the air contaminant source?

04/21/2015

- **Emission Unit Type Specific Information**

Emission Unit Type : Heater/Chiller

Fuel Sulfur Content : 0.00

Units : %

- **Potential Operating Schedule** – Provide the operating schedule for this emissions unit

Hours/day :

Hours/year :

- **Emissions Information** "Potential to emit" means the maximum capacity of a source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored or processed, shall be treated as part of its design if the limitation is enforceable by the EPA and the Division. This term does not alter or affect the use of this term for any other purposes under the Act, or the term "capacity factor" as used in Title IV of the Act or the regulations promulgated thereunder.

Basis for Determination Options:

- *Manufacturer Data*
- *Test results for this source*
- *Similar source test results*
- *GRICalc*
- *Tanks Program*
- *AP-42*
- *Other. If this is selected, attach a document with a description of the method used.*

Criteria Pollutants :

Pollutant	Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (PTE) (lbs/hr)*	Potential to Emit (PTE) (tons/yr)*	Basis for Determination*
		Potential to Emit (PTE)*	Units*			
Particulate emissions (PE/PM) (formerly particulate matter, PM)	0	0		0	0	
PM # 10 microns in diameter (PE/PM10)	0	0		0	0	
PM # 2.5 microns in diameter (PE/PM2.5)	0	0		0	0	
Sulfur dioxide (SO2)	0	0		0	0	

Nitrogen oxides (NOx)	0	0.098	lb/MMBtu	0.0735	0.322	AP-42
Carbon monoxide (CO)	0	0.082	lb/MMBtu	0.0618	0.271	AP-42
Volatile organic compounds (VOC)	0	0.005	lb/MMBtu	0.004	0.018	AP-42
Lead (Pb)	0	0		0	0	
Total Hazardous Air Pollutants (HAPs)	0	0		0	0	
Fluoride (F)	0	0		0	0	
Hydrogen Sulfide (H2S)	0	0		0	0	
Mercury (Hg)	0	0		0	0	
Total Reduced Sulfur (TRS)	0	0		0	0	
Sulfuric Acid Mist (SAM)	0	0		0	0	

Hazardous Air Pollutants (HAPs) and Toxic Air Contaminants:

Pollutant	Pollutant Category	Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (PTE) (lbs/hr)*	Potential to Emit (PTE) (tons/yr)*	Basis for Determination*
			Potential to Emit (PTE)*	Units*			

Greenhouse Gases (GHGs):

Pollutant	Pollutant Category	Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (PTE) (lbs/hr)*	Potential to Emit (PTE) (tons/yr)*	Basis for Determination*
			Potential to Emit (PTE)*	Units*			

* Provide your calculations as an attachment and explain how all process variables and emissions factors were selected. Note the emission factor(s) employed and document origin. Example: AP-42, Table 4.4-3 (8/97); stack test, Method 5, 4/96; mass balance based on MSDS; etc.

** AQD Calculated - See 'Help' for more information.

- Best Available Control Technology (BACT)

Was a BACT Analysis completed for this unit? No

- Lowest Achievable Emission Rate (LAER)

Was a LAER Analysis completed for this unit? No

- Federal and State Rule Applicability

New Source Performance Standards (NSPS) Not affected
New Source Performance Standards are listed under 40 CFR 60 - Standards of Performance for New Stationary Sources.

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 61) Not affected
National Emissions Standards for Hazardous Air Pollutants (NESHAP Part 61) are listed under 40 CFR 61. (These include asbestos, benzene, beryllium, mercury, and vinyl chloride).

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 63) Not affected
National Emission Standards for Hazardous Air Pollutants

(NESHAP Part 63) standards are listed under 40 CFR 63.

Prevention of Significant Deterioration (PSD)

These rules are found under WAQSR Chapter 6, Section 4.

Not Affected

Non-Attainment New Source Review

These rules are found under WAQSR Chapter 6, Section 13.

Not Affected

- **Emission Unit Attachments**

Required Attachment	Public Document Id	Attachment Type	Description
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Section II - Specific Air Contaminant Source Information

AQD EU ID: HET004

AQD EU description:

Company EU ID: HET004

Company EU Description: 0.75 MMBtu/hr
Separator Heater
for DHY002 (Out of
Service)

- **Source Installation or Modification Schedule** – Select reason(s) for this emissions unit being included in this application (must be completed regardless of date of installation or modification):

Modification

When will you begin to modify the air contaminant source?

04/21/2015

- **Emission Unit Type Specific Information**

Emission Unit Type : Heater/Chiller

Fuel Sulfur Content : 0.00

Units : %

- **Potential Operating Schedule** – Provide the operating schedule for this emissions unit

Hours/day :

Hours/year :

- **Emissions Information** "Potential to emit" means the maximum capacity of a source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored or processed, shall be treated as part of its design if the limitation is enforceable by the EPA and the Division. This term does not alter or affect the use of this term for any other purposes under the Act, or the term "capacity factor" as used in Title IV of the Act or the regulations promulgated thereunder.

Basis for Determination Options:

- *Manufacturer Data*
- *Test results for this source*
- *Similar source test results*
- *GRICalc*
- *Tanks Program*
- *AP-42*
- *Other. If this is selected, attach a document with a description of the method used.*

Criteria Pollutants :

Pollutant	Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (PTE) (lbs/hr)*	Potential to Emit (PTE) (tons/yr)*	Basis for Determination*
		Potential to Emit (PTE)*	Units*			
Particulate emissions (PE/PM) (formerly particulate matter, PM)	0	0		0	0	
PM # 10 microns in diameter (PE/PM10)	0	0		0	0	
PM # 2.5 microns in diameter (PE/PM2.5)	0	0		0	0	
Sulfur dioxide (SO2)	0	0		0	0	

Nitrogen oxides (NOx)	0	0.098	lb/MMBtu	0	0	AP-42
Carbon monoxide (CO)	0	0.082	lb/MMBtu	0	0	AP-42
Volatile organic compounds (VOC)	0	0.005	lb/MMBtu	0	0	AP-42
Lead (Pb)	0	0		0	0	
Total Hazardous Air Pollutants (HAPs)	0	0		0	0	
Fluoride (F)	0	0		0	0	
Hydrogen Sulfide (H2S)	0	0		0	0	
Mercury (Hg)	0	0		0	0	
Total Reduced Sulfur (TRS)	0	0		0	0	
Sulfuric Acid Mist (SAM)	0	0		0	0	

Hazardous Air Pollutants (HAPs) and Toxic Air Contaminants:

Pollutant	Pollutant Category	Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (PTE) (lbs/hr)*	Potential to Emit (PTE) (tons/yr)*	Basis for Determination*
			Potential to Emit (PTE)*	Units*			

Greenhouse Gases (GHGs):

Pollutant	Pollutant Category	Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (PTE) (lbs/hr)*	Potential to Emit (PTE) (tons/yr)*	Basis for Determination*
			Potential to Emit (PTE)*	Units*			

* Provide your calculations as an attachment and explain how all process variables and emissions factors were selected. Note the emission factor(s) employed and document origin. Example: AP-42, Table 4.4-3 (8/97); stack test, Method 5, 4/96; mass balance based on MSDS; etc.

** AQD Calculated - See 'Help' for more information.

- **Best Available Control Technology (BACT)**

Was a BACT Analysis completed for this unit? No

- **Lowest Achievable Emission Rate (LAER)**

Was a LAER Analysis completed for this unit? No

- **Federal and State Rule Applicability**

New Source Performance Standards (NSPS) Not affected
New Source Performance Standards are listed under 40 CFR 60 - Standards of Performance for New Stationary Sources.

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 61) Not affected
National Emissions Standards for Hazardous Air Pollutants (NESHAP Part 61) are listed under 40 CFR 61. (These include asbestos, benzene, beryllium, mercury, and vinyl chloride).

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 63) Not affected
National Emission Standards for Hazardous Air Pollutants

(NESHAP Part 63) standards are listed under 40 CFR 63.

Prevention of Significant Deterioration (PSD) Not Affected
These rules are found under WAQSR Chapter 6, Section 4.

Non-Attainment New Source Review Not Affected
These rules are found under WAQSR Chapter 6, Section 13.

- **Emission Unit Attachments**

Required Attachment	Public Document Id	Attachment Type	Description
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Section II - Specific Air Contaminant Source Information

AQD EU ID: HET005

AQD EU description:

Company EU ID: HET005

Company EU Description: 0.75 MMBtu/hr Line
Heater Secondary
Burner Control

- **Source Installation or Modification Schedule** – Select reason(s) for this emissions unit being included in this application (must be completed regardless of date of installation or modification):

Modification

When will you begin to modify the air contaminant source?

04/21/2015

- **Emission Unit Type Specific Information**

Emission Unit Type : Heater/Chiller

Fuel Sulfur Content : 0.00

Units : %

- **Potential Operating Schedule** – Provide the operating schedule for this emissions unit

Hours/day :

Hours/year :

- **Emissions Information** "Potential to emit" means the maximum capacity of a source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored or processed, shall be treated as part of its design if the limitation is enforceable by the EPA and the Division. This term does not alter or affect the use of this term for any other purposes under the Act, or the term "capacity factor" as used in Title IV of the Act or the regulations promulgated thereunder.

Basis for Determination Options:

- *Manufacturer Data*
- *Test results for this source*
- *Similar source test results*
- *GRICalc*
- *Tanks Program*
- *AP-42*
- *Other. If this is selected, attach a document with a description of the method used.*

Criteria Pollutants :

Pollutant	Pre- Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (PTE) (lbs/hr)*	Potential to Emit (PTE) (tons/yr)*	Basis for Determinatio n*
		Potential to Emit (PTE)*	Units*			
Particulate emissions (PE/PM) (formerly particulate matter, PM)	0	0		0	0	
PM # 10 microns in diameter (PE/PM10)	0	0		0	0	
PM # 2.5 microns in diameter (PE/PM2.5)	0	0		0	0	
Sulfur dioxide (SO2)	0	0		0	0	

Nitrogen oxides (NOx)	0	0.098	lb/MMBtu	0.09	0.394	AP-42
Carbon monoxide (CO)	0	0.082	lb/MMBtu	0.066	0.289	AP-42
Volatile organic compounds (VOC)	0	0.005	lb/MMBtu	0.004	0.018	AP-42
Lead (Pb)	0	0		0	0	
Total Hazardous Air Pollutants (HAPs)	0	0		0	0	
Fluoride (F)	0	0		0	0	
Hydrogen Sulfide (H2S)	0	0		0	0	
Mercury (Hg)	0	0		0	0	
Total Reduced Sulfur (TRS)	0	0		0	0	
Sulfuric Acid Mist (SAM)	0	0		0	0	

Hazardous Air Pollutants (HAPs) and Toxic Air Contaminants:

Pollutant	Pollutant Category	Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (PTE) (lbs/hr)*	Potential to Emit (PTE) (tons/yr)*	Basis for Determination*
			Potential to Emit (PTE)*	Units*			

Greenhouse Gases (GHGs):

Pollutant	Pollutant Category	Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (PTE) (lbs/hr)*	Potential to Emit (PTE) (tons/yr)*	Basis for Determination*
			Potential to Emit (PTE)*	Units*			

* Provide your calculations as an attachment and explain how all process variables and emissions factors were selected. Note the emission factor(s) employed and document origin. Example: AP-42, Table 4.4-3 (8/97); stack test, Method 5, 4/96; mass balance based on MSDS; etc.

** AQD Calculated - See 'Help' for more information.

- Best Available Control Technology (BACT)

Was a BACT Analysis completed for this unit? No

- Lowest Achievable Emission Rate (LAER)

Was a LAER Analysis completed for this unit? No

- Federal and State Rule Applicability

New Source Performance Standards (NSPS)

New Source Performance Standards are listed under 40 CFR 60 - Standards of Performance for New Stationary Sources.

Not affected

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 61)

National Emissions Standards for Hazardous Air Pollutants (NESHAP Part 61) are listed under 40 CFR 61. (These include asbestos, benzene, beryllium, mercury, and vinyl chloride).

Not affected

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 63)

National Emission Standards for Hazardous Air Pollutants

Not affected

(NESHAP Part 63) standards are listed under 40 CFR 63.

Prevention of Significant Deterioration (PSD)

These rules are found under WAQSR Chapter 6, Section 4.

Not Affected

Non-Attainment New Source Review

These rules are found under WAQSR Chapter 6, Section 13.

Not Affected

- **Emission Unit Attachments**

Required Attachment	Public Document Id	Attachment Type	Description
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Section II - Specific Air Contaminant Source Information

AQD EU ID: PNE001

AQD EU description:

Company EU ID: PNE001

Company EU Description: (1) Pneumatic Heat Trace Pump (60 scfh)

- **Source Installation or Modification Schedule** – Select reason(s) for this emissions unit being included in this application (must be completed regardless of date of installation or modification):

Modification

When will you begin to modify the air contaminant source?

04/21/2015

- **Emission Unit Type Specific Information**

Emission Unit Type : Pneumatic Equipment

Motive Force : Field Gas

VOC Content (%) : 6.411

HAP Content (%) : 0.055

- **Potential Operating Schedule** – Provide the operating schedule for this emissions unit

Hours/day :

Hours/year :

- **Emissions Information** "Potential to emit" means the maximum capacity of a source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored or processed, shall be treated as part of its design if the limitation is enforceable by the EPA and the Division. This term does not alter or affect the use of this term for any other purposes under the Act, or the term "capacity factor" as used in Title IV of the Act or the regulations promulgated thereunder.

Basis for Determination Options:

- *Manufacturer Data*
- *Test results for this source*
- *Similar source test results*
- *GRICalc*
- *Tanks Program*
- *AP-42*
- *Other. If this is selected, attach a document with a description of the method used.*

Criteria Pollutants :

Pollutant	Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (PTE) (lbs/hr)*	Potential to Emit (PTE) (tons/yr)*	Basis for Determination*
		Potential to Emit (PTE)*	Units*			
Particulate emissions (PE/PM) (formerly particulate matter, PM)	0	0		0	0	
PM # 10 microns in diameter (PE/PM10)	0	0		0	0	
PM # 2.5 microns in diameter (PE/PM2.5)	0	0		0	0	

Sulfur dioxide (SO2)	0	0		0	0	
Nitrogen oxides (NOx)	0	0		0	0	
Carbon monoxide (CO)	0	0		0	0	
Volatile organic compounds (VOC)	0.773	0		0.0035	0.015	Other
Lead (Pb)	0	0		0	0	
Total Hazardous Air Pollutants (HAPs)	0.007	0		0	0.0001	Other
Fluoride (F)	0	0		0	0	
Hydrogen Sulfide (H2S)	0	0		0	0	
Mercury (Hg)	0	0		0	0	
Total Reduced Sulfur (TRS)	0	0		0	0	
Sulfuric Acid Mist (SAM)	0	0		0	0	

Hazardous Air Pollutants (HAPs) and Toxic Air Contaminants:

Pollutant	Pollutant Category	Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (PTE) (lbs/hr)*	Potential to Emit (PTE) (tons/yr)*	Basis for Determination*
			Potential to Emit (PTE)*	Units*			

Greenhouse Gases (GHGs):

Pollutant	Pollutant Category	Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (PTE) (lbs/hr)*	Potential to Emit (PTE) (tons/yr)*	Basis for Determination*
			Potential to Emit (PTE)*	Units*			

* Provide your calculations as an attachment and explain how all process variables and emissions factors were selected.

Note the emission factor(s) employed and document origin. Example: AP-42, Table 4.4-3 (8/97); stack test, Method 5, 4/96; mass balance based on MSDS; etc.

** AQD Calculated - See 'Help' for more information.

- Best Available Control Technology (BACT)

Was a BACT Analysis completed for this unit? No

- Lowest Achievable Emission Rate (LAER)

Was a LAER Analysis completed for this unit? No

- Federal and State Rule Applicability

New Source Performance Standards (NSPS) Not affected
New Source Performance Standards are listed under 40 CFR 60 - Standards of Performance for New Stationary Sources.

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 61) Not affected
National Emissions Standards for Hazardous Air Pollutants (NESHAP Part 61) are listed under 40 CFR 61. (These include asbestos, benzene, beryllium, mercury, and vinyl chloride).

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 63) Not affected

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 63) standards are listed under 40 CFR 63.

Prevention of Significant Deterioration (PSD)
These rules are found under WAQSR Chapter 6, Section 4.

Not Affected

Non-Attainment New Source Review
These rules are found under WAQSR Chapter 6, Section 13.

Not Affected

- **Emission Unit Attachments**

Required Attachment	Public Document Id	Attachment Type	Description
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Section II - Specific Air Contaminant Source Information

AQD EU ID: PNE002

AQD EU description:

Company EU ID: PNE002

Company EU Description: One (1) Methanol Injection Pump (25 scfh)

- **Source Installation or Modification Schedule** – Select reason(s) for this emissions unit being included in this application (must be completed regardless of date of installation or modification):

Modification

When will you begin to modify the air contaminant source?

04/21/2015

- **Emission Unit Type Specific Information**

Emission Unit Type : Pneumatic Equipment

Motive Force : Field Gas

VOC Content (%) : 6.411

HAP Content (%) : 0.055

- **Potential Operating Schedule** – Provide the operating schedule for this emissions unit

Hours/day :

Hours/year :

- **Emissions Information** "Potential to emit" means the maximum capacity of a source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored or processed, shall be treated as part of its design if the limitation is enforceable by the EPA and the Division. This term does not alter or affect the use of this term for any other purposes under the Act, or the term "capacity factor" as used in Title IV of the Act or the regulations promulgated thereunder.

Basis for Determination Options:

- *Manufacturer Data*
- *Test results for this source*
- *Similar source test results*
- *GRICalc*
- *Tanks Program*
- *AP-42*
- *Other. If this is selected, attach a document with a description of the method used.*

Criteria Pollutants :

Pollutant	Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (PTE) (lbs/hr)*	Potential to Emit (PTE) (tons/yr)*	Basis for Determination*
		Potential to Emit (PTE)*	Units*			
Particulate emissions (PE/PM) (formerly particulate matter, PM)	0	0		0	0	
PM # 10 microns in diameter (PE/PM10)	0	0		0	0	
PM # 2.5 microns in diameter (PE/PM2.5)	0	0		0	0	

Sulfur dioxide (SO2)	0	0		0	0	
Nitrogen oxides (NOx)	0	0		0	0	
Carbon monoxide (CO)	0	0		0	0	
Volatile organic compounds (VOC)	0.322	0		0.0015	0.006	Other
Lead (Pb)	0	0		0	0	
Total Hazardous Air Pollutants (HAPs)	0.003	0		0	0.0001	Other
Fluoride (F)	0	0		0	0	
Hydrogen Sulfide (H2S)	0	0		0	0	
Mercury (Hg)	0	0		0	0	
Total Reduced Sulfur (TRS)	0	0		0	0	
Sulfuric Acid Mist (SAM)	0	0		0	0	

Hazardous Air Pollutants (HAPs) and Toxic Air Contaminants:

Pollutant	Pollutant Category	Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (PTE) (lbs/hr)*	Potential to Emit (PTE) (tons/yr)*	Basis for Determination*
			Potential to Emit (PTE)*	Units*			

Greenhouse Gases (GHGs):

Pollutant	Pollutant Category	Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (PTE) (lbs/hr)*	Potential to Emit (PTE) (tons/yr)*	Basis for Determination*
			Potential to Emit (PTE)*	Units*			

* Provide your calculations as an attachment and explain how all process variables and emissions factors were selected. Note the emission factor(s) employed and document origin. Example: AP-42, Table 4.4-3 (8/97); stack test, Method 5, 4/96; mass balance based on MSDS; etc.

** AQD Calculated - See 'Help' for more information.

- Best Available Control Technology (BACT)

Was a BACT Analysis completed for this unit? No

- Lowest Achievable Emission Rate (LAER)

Was a LAER Analysis completed for this unit? No

- Federal and State Rule Applicability

New Source Performance Standards (NSPS) Not affected
New Source Performance Standards are listed under 40 CFR 60 - Standards of Performance for New Stationary Sources.

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 61) Not affected
National Emissions Standards for Hazardous Air Pollutants (NESHAP Part 61) are listed under 40 CFR 61. (These include asbestos, benzene, beryllium, mercury, and vinyl chloride).

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 63) Not affected

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 63) standards are listed under 40 CFR 63.

Prevention of Significant Deterioration (PSD)

These rules are found under WAQSR Chapter 6, Section 4.

Not Affected

Non-Attainment New Source Review

These rules are found under WAQSR Chapter 6, Section 13.

Not Affected

- **Emission Unit Attachments**

Required Attachment	Public Document Id	Attachment Type	Description
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Section II - Specific Air Contaminant Source Information

AQD EU ID: PNE003

AQD EU description:

Company EU ID: PNE003

Company EU Description: Six (6) Intermittent-bleed LLCs (1.75 scfh/each) - Three (3) Out of Service

- **Source Installation or Modification Schedule** – Select reason(s) for this emissions unit being included in this application (must be completed regardless of date of installation or modification):

Modification

When will you begin to modify the air contaminant source?

04/21/2015

- **Emission Unit Type Specific Information**

Emission Unit Type : Pneumatic Equipment

Motive Force : Field Gas

VOC Content (%) : 6.411

HAP Content (%) : 0.055

- **Potential Operating Schedule** – Provide the operating schedule for this emissions unit

Hours/day :

Hours/year :

- **Emissions Information** "Potential to emit" means the maximum capacity of a source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored or processed, shall be treated as part of its design if the limitation is enforceable by the EPA and the Division. This term does not alter or affect the use of this term for any other purposes under the Act, or the term "capacity factor" as used in Title IV of the Act or the regulations promulgated thereunder.

Basis for Determination Options:

- *Manufacturer Data*
- *Test results for this source*
- *Similar source test results*
- *GRICalc*
- *Tanks Program*
- *AP-42*
- *Other. If this is selected, attach a document with a description of the method used.*

Criteria Pollutants :

Pollutant	Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (PTE) (lbs/hr)*	Potential to Emit (PTE) (tons/yr)*	Basis for Determination*
		Potential to Emit (PTE)*	Units*			
Particulate emissions (PE/PM) (formerly particulate matter, PM)	0	0		0	0	
PM # 10 microns in diameter (PE/PM10)	0	0		0	0	
PM # 2.5 microns in	0	0		0	0	

diameter (PE/PM2.5)						
Sulfur dioxide (SO2)	0	0		0	0	
Nitrogen oxides (NOx)	0	0		0	0	
Carbon monoxide (CO)	0	0		0	0	
Volatile organic compounds (VOC)	0	0		0.015	0.068	Other
Lead (Pb)	0	0		0	0	
Total Hazardous Air Pollutants (HAPs)	0	0		0.0001	0.001	Other
Fluoride (F)	0	0		0	0	
Hydrogen Sulfide (H2S)	0	0		0	0	
Mercury (Hg)	0	0		0	0	
Total Reduced Sulfur (TRS)	0	0		0	0	
Sulfuric Acid Mist (SAM)	0	0		0	0	

Hazardous Air Pollutants (HAPs) and Toxic Air Contaminants:

Pollutant	Pollutant Category	Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (PTE) (lbs/hr)*	Potential to Emit (PTE) (tons/yr)*	Basis for Determination*
			Potential to Emit (PTE)*	Units*			

Greenhouse Gases (GHGs):

Pollutant	Pollutant Category	Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (PTE) (lbs/hr)*	Potential to Emit (PTE) (tons/yr)*	Basis for Determination*
			Potential to Emit (PTE)*	Units*			

* Provide your calculations as an attachment and explain how all process variables and emissions factors were selected.

Note the emission factor(s) employed and document origin. Example: AP-42, Table 4.4-3 (8/97); stack test, Method 5, 4/96; mass balance based on MSDS; etc.

** AQD Calculated - See 'Help' for more information.

- Best Available Control Technology (BACT)

Was a BACT Analysis completed for this unit? No

- Lowest Achievable Emission Rate (LAER)

Was a LAER Analysis completed for this unit? No

- Federal and State Rule Applicability

New Source Performance Standards (NSPS)

New Source Performance Standards are listed under 40 CFR 60 - Standards of Performance for New Stationary Sources.

Not affected

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 61)

National Emissions Standards for Hazardous Air Pollutants (NESHAP Part 61) are listed under 40 CFR 61. (These include asbestos, benzene, beryllium, mercury, and vinyl chloride).

Not affected

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 63) Not affected
National Emission Standards for Hazardous Air Pollutants (NESHAP Part 63) standards are listed under 40 CFR 63.

Prevention of Significant Deterioration (PSD) Not Affected
These rules are found under WAQSR Chapter 6, Section 4.

Non-Attainment New Source Review Not Affected
These rules are found under WAQSR Chapter 6, Section 13.

- **Emission Unit Attachments**

Required Attachment	Public Document Id	Attachment Type	Description
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Section II - Specific Air Contaminant Source Information

AQD EU ID: SEP001

AQD EU description:

Company EU ID: SEP001

Company EU Description: Separator for
DHY001

- **Source Installation or Modification Schedule** – Select reason(s) for this emissions unit being included in this application (must be completed regardless of date of installation or modification):

Modification

When will you begin to modify the air contaminant source?

04/21/2015

- **Emission Unit Type Specific Information**

Emission Unit Type : Separator/Treater

Operating Temperature (F) : 75

Operating Pressure (psig) : 400.00

- **Potential Operating Schedule** – Provide the operating schedule for this emissions unit

Hours/day :

Hours/year :

- **Emissions Information** "Potential to emit" means the maximum capacity of a source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored or processed, shall be treated as part of its design if the limitation is enforceable by the EPA and the Division. This term does not alter or affect the use of this term for any other purposes under the Act, or the term "capacity factor" as used in Title IV of the Act or the regulations promulgated thereunder.

Basis for Determination Options:

- *Manufacturer Data*
- *Test results for this source*
- *Similar source test results*
- *GRICalc*
- *Tanks Program*
- *AP-42*
- *Other. If this is selected, attach a document with a description of the method used.*

Criteria Pollutants :

Pollutant	Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (PTE) (lbs/hr)*	Potential to Emit (PTE) (tons/yr)*	Basis for Determination*
		Potential to Emit (PTE)*	Units*			
Particulate emissions (PE/PM) (formerly particulate matter, PM)	0	0		0	0	
PM # 10 microns in diameter (PE/PM10)	0	0		0	0	
PM # 2.5 microns in diameter (PE/PM2.5)	0	0		0	0	
Sulfur dioxide (SO2)	0	0		0	0	
Nitrogen oxides (NOx)	0	0		0	0	

Carbon monoxide (CO)	0	0		0	0	
Volatile organic compounds (VOC)	0	0		0	0	
Lead (Pb)	0	0		0	0	
Total Hazardous Air Pollutants (HAPs)	0	0		0	0	
Fluoride (F)	0	0		0	0	
Hydrogen Sulfide (H2S)	0	0		0	0	
Mercury (Hg)	0	0		0	0	
Total Reduced Sulfur (TRS)	0	0		0	0	
Sulfuric Acid Mist (SAM)	0	0		0	0	

Hazardous Air Pollutants (HAPs) and Toxic Air Contaminants:

Pollutant	Pollutant Category	Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (PTE) (lbs/hr)*	Potential to Emit (PTE) (tons/yr)*	Basis for Determination*
			Potential to Emit (PTE)*	Units*			

Greenhouse Gases (GHGs):

Pollutant	Pollutant Category	Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (PTE) (lbs/hr)*	Potential to Emit (PTE) (tons/yr)*	Basis for Determination*
			Potential to Emit (PTE)*	Units*			

* Provide your calculations as an attachment and explain how all process variables and emissions factors were selected. Note the emission factor(s) employed and document origin. Example: AP-42, Table 4.4-3 (8/97); stack test, Method 5, 4/96; mass balance based on MSDS; etc.

** AQD Calculated - See 'Help' for more information.

- Best Available Control Technology (BACT)

Was a BACT Analysis completed for this unit? No

- Lowest Achievable Emission Rate (LAER)

Was a LAER Analysis completed for this unit? No

- Federal and State Rule Applicability

New Source Performance Standards (NSPS) Not affected
New Source Performance Standards are listed under 40 CFR 60 - Standards of Performance for New Stationary Sources.

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 61) Not affected
National Emission Standards for Hazardous Air Pollutants (NESHAP Part 61) are listed under 40 CFR 61. (These include asbestos, benzene, beryllium, mercury, and vinyl chloride).

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 63) Not affected
National Emission Standards for Hazardous Air Pollutants (NESHAP Part 63) standards are listed under 40 CFR 63.

Prevention of Significant Deterioration (PSD)
These rules are found under WAQSR Chapter 6, Section 4.

Not Affected

Non-Attainment New Source Review
These rules are found under WAQSR Chapter 6, Section 13.

Not Affected

- **Emission Unit Attachments**

Required Attachment	Public Document Id	Attachment Type	Description
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Section II - Specific Air Contaminant Source Information

AQD EU ID: SEP002

AQD EU description:

Company EU ID: SEP002

Company EU Description: Separator for
DHY002 (Out of
Service)

- **Source Installation or Modification Schedule** – Select reason(s) for this emissions unit being included in this application (must be completed regardless of date of installation or modification):

Modification

When will you begin to modify the air contaminant source?

04/21/2015

- **Emission Unit Type Specific Information**

Emission Unit Type : Separator/Treater

Operating Temperature (F) : 75

Operating Pressure (psig) : 400.00

- **Potential Operating Schedule** – Provide the operating schedule for this emissions unit

Hours/day :

Hours/year :

- **Emissions Information** "Potential to emit" means the maximum capacity of a source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored or processed, shall be treated as part of its design if the limitation is enforceable by the EPA and the Division. This term does not alter or affect the use of this term for any other purposes under the Act, or the term "capacity factor" as used in Title IV of the Act or the regulations promulgated thereunder.

Basis for Determination Options:

- *Manufacturer Data*
- *Test results for this source*
- *Similar source test results*
- *GRICalc*
- *Tanks Program*
- *AP-42*
- *Other. If this is selected, attach a document with a description of the method used.*

Criteria Pollutants :

Pollutant	Pre- Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (PTE) (lbs/hr)*	Potential to Emit (PTE) (tons/yr)*	Basis for Determinatio n*
		Potential to Emit (PTE)*	Units*			
Particulate emissions (PE/PM) (formerly particulate matter, PM)	0	0		0	0	
PM # 10 microns in diameter (PE/PM10)	0	0		0	0	
PM # 2.5 microns in diameter (PE/PM2.5)	0	0		0	0	
Sulfur dioxide (SO2)	0	0		0	0	

Nitrogen oxides (NOx)	0	0		0	0	
Carbon monoxide (CO)	0	0		0	0	
Volatile organic compounds (VOC)	0	0		0	0	
Lead (Pb)	0	0		0	0	
Total Hazardous Air Pollutants (HAPs)	0	0		0	0	
Fluoride (F)	0	0		0	0	
Hydrogen Sulfide (H2S)	0	0		0	0	
Mercury (Hg)	0	0		0	0	
Total Reduced Sulfur (TRS)	0	0		0	0	
Sulfuric Acid Mist (SAM)	0	0		0	0	

Hazardous Air Pollutants (HAPs) and Toxic Air Contaminants:

Pollutant	Pollutant Category	Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (PTE) (lbs/hr)*	Potential to Emit (PTE) (tons/yr)*	Basis for Determination*
			Potential to Emit (PTE)*	Units*			

Greenhouse Gases (GHGs):

Pollutant	Pollutant Category	Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (PTE) (lbs/hr)*	Potential to Emit (PTE) (tons/yr)*	Basis for Determination*
			Potential to Emit (PTE)*	Units*			

* Provide your calculations as an attachment and explain how all process variables and emissions factors were selected. Note the emission factor(s) employed and document origin. Example: AP-42, Table 4.4-3 (8/97); stack test, Method 5, 4/96; mass balance based on MSDS; etc.

** AQD Calculated - See 'Help' for more information.

- Best Available Control Technology (BACT)

Was a BACT Analysis completed for this unit? No

- Lowest Achievable Emission Rate (LAER)

Was a LAER Analysis completed for this unit? No

- Federal and State Rule Applicability

New Source Performance Standards (NSPS) Not affected
New Source Performance Standards are listed under 40 CFR 60 - Standards of Performance for New Stationary Sources.

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 61) Not affected
National Emissions Standards for Hazardous Air Pollutants (NESHAP Part 61) are listed under 40 CFR 61. (These include asbestos, benzene, beryllium, mercury, and vinyl chloride).

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 63) Not affected
National Emission Standards for Hazardous Air Pollutants

(NESHAP Part 63) standards are listed under 40 CFR 63.

Prevention of Significant Deterioration (PSD) Not Affected
These rules are found under WAQSR Chapter 6, Section 4.

Non-Attainment New Source Review Not Affected
These rules are found under WAQSR Chapter 6, Section 13.

- **Emission Unit Attachments**

Required Attachment	Public Document Id	Attachment Type	Description
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Section II - Specific Air Contaminant Source Information

AQD EU ID: TNK001

AQD EU description:

Company EU ID: TNK001

Company EU Description: Methanol Tank

- **Source Installation or Modification Schedule** – Select reason(s) for this emissions unit being included in this application (must be completed regardless of date of installation or modification):

Modification

When will you begin to modify the air contaminant source?

04/21/2015

- **Emission Unit Type Specific Information**

Emission Unit Type : Storage Tank/Silo

Maximum Hourly Throughput :

Units :

Is Tank Heated : No

Operating Pressure (psig) : 11.30

Vapor Pressure of Material 1.43
Stored (psig) :

- **Potential Operating Schedule** – Provide the operating schedule for this emissions unit

Hours/day :

Hours/year :

- **Emissions Information** "Potential to emit" means the maximum capacity of a source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored or processed, shall be treated as part of its design if the limitation is enforceable by the EPA and the Division. This term does not alter or affect the use of this term for any other purposes under the Act, or the term "capacity factor" as used in Title IV of the Act or the regulations promulgated thereunder.

Basis for Determination Options:

- *Manufacturer Data*
- *Test results for this source*
- *Similar source test results*
- *GRICalc*
- *Tanks Program*
- *AP-42*
- *Other. If this is selected, attach a document with a description of the method used.*

Criteria Pollutants :

Pollutant	Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (PTE) (lbs/hr)*	Potential to Emit (PTE) (tons/yr)*	Basis for Determination*
		Potential to Emit (PTE)*	Units*			
Particulate emissions (PE/PM) (formerly particulate matter, PM)	0	0		0	0	
PM # 10 microns in diameter (PE/PM10)	0	0		0	0	
PM # 2.5 microns in	0	0		0	0	

diameter (PE/PM2.5)						
Sulfur dioxide (SO2)	0	0		0	0	
Nitrogen oxides (NOx)	0	0		0	0	
Carbon monoxide (CO)	0	0		0	0	
Volatile organic compounds (VOC)	0	0		0	0	
Lead (Pb)	0	0		0	0	
Total Hazardous Air Pollutants (HAPs)	0	0		0	0	
Fluoride (F)	0	0		0	0	
Hydrogen Sulfide (H2S)	0	0		0	0	
Mercury (Hg)	0	0		0	0	
Total Reduced Sulfur (TRS)	0	0		0	0	
Sulfuric Acid Mist (SAM)	0	0		0	0	

Hazardous Air Pollutants (HAPs) and Toxic Air Contaminants:

Pollutant	Pollutant Category	Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (PTE) (lbs/hr)*	Potential to Emit (PTE) (tons/yr)*	Basis for Determination*
			Potential to Emit (PTE)*	Units*			

Greenhouse Gases (GHGs):

Pollutant	Pollutant Category	Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (PTE) (lbs/hr)*	Potential to Emit (PTE) (tons/yr)*	Basis for Determination*
			Potential to Emit (PTE)*	Units*			

* Provide your calculations as an attachment and explain how all process variables and emissions factors were selected. Note the emission factor(s) employed and document origin. Example: AP-42, Table 4.4-3 (8/97); stack test, Method 5, 4/96; mass balance based on MSDS; etc.

** AQD Calculated - See 'Help' for more information.

- Best Available Control Technology (BACT)

Was a BACT Analysis completed for this unit? No

- Lowest Achievable Emission Rate (LAER)

Was a LAER Analysis completed for this unit? No

- Federal and State Rule Applicability

New Source Performance Standards (NSPS)
New Source Performance Standards are listed under 40 CFR 60 - Standards of Performance for New Stationary Sources.

Not affected

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 61)
National Emissions Standards for Hazardous Air Pollutants (NESHAP Part 61) are listed under 40 CFR 61. (These include asbestos, benzene, beryllium, mercury, and vinyl chloride).

Not affected

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 63)
National Emission Standards for Hazardous Air Pollutants (NESHAP Part 63) standards are listed under 40 CFR 63.

Not affected

Prevention of Significant Deterioration (PSD)
These rules are found under WAQSR Chapter 6, Section 4.

Not Affected

Non-Attainment New Source Review
These rules are found under WAQSR Chapter 6, Section 13.

Not Affected

- **Emission Unit Attachments**

Required Attachment	Public Document Id	Attachment Type	Description
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Section II - Specific Air Contaminant Source Information

AQD EU ID: TNK002

AQD EU description:

Company EU ID: TNK002

Company EU Description: Emergency Tank 1

- **Source Installation or Modification Schedule** – Select reason(s) for this emissions unit being included in this application (must be completed regardless of date of installation or modification):

Modification

When will you begin to modify the air contaminant source?

04/21/2015

- **Emission Unit Type Specific Information**

Emission Unit Type : Storage Tank/Silo

Maximum Hourly Throughput
:

Units :

Is Tank Heated : No

Operating Pressure (psig) : 11.30

Vapor Pressure of Material 4.09
Stored (psig) :

- **Potential Operating Schedule** – Provide the operating schedule for this emissions unit

Hours/day :

Hours/year :

- **Emissions Information** "Potential to emit" means the maximum capacity of a source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored or processed, shall be treated as part of its design if the limitation is enforceable by the EPA and the Division. This term does not alter or affect the use of this term for any other purposes under the Act, or the term "capacity factor" as used in Title IV of the Act or the regulations promulgated thereunder.

Basis for Determination Options:

- *Manufacturer Data*
- *Test results for this source*
- *Similar source test results*
- *GRICalc*
- *Tanks Program*
- *AP-42*
- *Other. If this is selected, attach a document with a description of the method used.*

Criteria Pollutants :

Pollutant	Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (PTE) (lbs/hr)*	Potential to Emit (PTE) (tons/yr)*	Basis for Determination*
		Potential to Emit (PTE)*	Units*			
Particulate emissions (PE/PM) (formerly particulate matter, PM)	0	0		0	0	
PM # 10 microns in diameter (PE/PM10)	0	0		0	0	
PM # 2.5 microns in	0	0		0	0	

diameter (PE/PM2.5)						
Sulfur dioxide (SO2)	0	0		0	0	
Nitrogen oxides (NOx)	0	0		0	0	
Carbon monoxide (CO)	0	0		0	0	
Volatile organic compounds (VOC)	0	0		0	0	
Lead (Pb)	0	0		0	0	
Total Hazardous Air Pollutants (HAPs)	0	0		0	0	
Fluoride (F)	0	0		0	0	
Hydrogen Sulfide (H2S)	0	0		0	0	
Mercury (Hg)	0	0		0	0	
Total Reduced Sulfur (TRS)	0	0		0	0	
Sulfuric Acid Mist (SAM)	0	0		0	0	

Hazardous Air Pollutants (HAPs) and Toxic Air Contaminants:

Pollutant	Pollutant Category	Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (PTE) (lbs/hr)*	Potential to Emit (PTE) (tons/yr)*	Basis for Determination*
			Potential to Emit (PTE)*	Units*			

Greenhouse Gases (GHGs):

Pollutant	Pollutant Category	Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (PTE) (lbs/hr)*	Potential to Emit (PTE) (tons/yr)*	Basis for Determination*
			Potential to Emit (PTE)*	Units*			

* Provide your calculations as an attachment and explain how all process variables and emissions factors were selected. Note the emission factor(s) employed and document origin. Example: AP-42, Table 4.4-3 (8/97); stack test, Method 5, 4/96; mass balance based on MSDS; etc.

** AQD Calculated - See 'Help' for more information.

- Best Available Control Technology (BACT)

Was a BACT Analysis completed for this unit? No

- Lowest Achievable Emission Rate (LAER)

Was a LAER Analysis completed for this unit? No

- Federal and State Rule Applicability

New Source Performance Standards (NSPS) Not affected
New Source Performance Standards are listed under 40 CFR 60 - Standards of Performance for New Stationary Sources.

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 61) Not affected
National Emissions Standards for Hazardous Air Pollutants (NESHAP Part 61) are listed under 40 CFR 61. (These include asbestos, benzene, beryllium, mercury, and vinyl chloride).

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 63) Not affected
National Emission Standards for Hazardous Air Pollutants (NESHAP Part 63) standards are listed under 40 CFR 63.

Prevention of Significant Deterioration (PSD) Not Affected
These rules are found under WAQSR Chapter 6, Section 4.

Non-Attainment New Source Review Not Affected
These rules are found under WAQSR Chapter 6, Section 13.

- **Emission Unit Attachments**

Required Attachment	Public Document Id	Attachment Type	Description
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Section II - Specific Air Contaminant Source Information

AQD EU ID: TNK003

AQD EU description:

Company EU ID: TNK003

Company EU Description: Emergency Tank 2

- **Source Installation or Modification Schedule** – Select reason(s) for this emissions unit being included in this application (must be completed regardless of date of installation or modification):

Modification

When will you begin to modify the air contaminant source?

04/21/2015

- **Emission Unit Type Specific Information**

Emission Unit Type : Storage Tank/Silo

Maximum Hourly Throughput :

Units :

Is Tank Heated : No

Operating Pressure (psig) : 11.30

Vapor Pressure of Material Stored (psig) : 4.09

- **Potential Operating Schedule** – Provide the operating schedule for this emissions unit

Hours/day :

Hours/year :

- **Emissions Information** "Potential to emit" means the maximum capacity of a source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored or processed, shall be treated as part of its design if the limitation is enforceable by the EPA and the Division. This term does not alter or affect the use of this term for any other purposes under the Act, or the term "capacity factor" as used in Title IV of the Act or the regulations promulgated thereunder.

Basis for Determination Options:

- *Manufacturer Data*
- *Test results for this source*
- *Similar source test results*
- *GRICalc*
- *Tanks Program*
- *AP-42*
- *Other. If this is selected, attach a document with a description of the method used.*

Criteria Pollutants :

Pollutant	Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (PTE) (lbs/hr)*	Potential to Emit (PTE) (tons/yr)*	Basis for Determination*
		Potential to Emit (PTE)*	Units*			
Particulate emissions (PE/PM) (formerly particulate matter, PM)	0	0		0	0	
PM # 10 microns in diameter (PE/PM10)	0	0		0	0	
PM # 2.5 microns in	0	0		0	0	

diameter (PE/PM2.5)						
Sulfur dioxide (SO2)	0	0		0	0	
Nitrogen oxides (NOx)	0	0		0	0	
Carbon monoxide (CO)	0	0		0	0	
Volatile organic compounds (VOC)	0	0		0	0	
Lead (Pb)	0	0		0	0	
Total Hazardous Air Pollutants (HAPs)	0	0		0	0	
Fluoride (F)	0	0		0	0	
Hydrogen Sulfide (H2S)	0	0		0	0	
Mercury (Hg)	0	0		0	0	
Total Reduced Sulfur (TRS)	0	0		0	0	
Sulfuric Acid Mist (SAM)	0	0		0	0	

Hazardous Air Pollutants (HAPs) and Toxic Air Contaminants:

Pollutant	Pollutant Category	Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (PTE) (lbs/hr)*	Potential to Emit (PTE) (tons/yr)*	Basis for Determination*
			Potential to Emit (PTE)*	Units*			

Greenhouse Gases (GHGs):

Pollutant	Pollutant Category	Pre-Controlled Potential Emissions (tons/yr)	Efficiency Standards		Potential to Emit (PTE) (lbs/hr)*	Potential to Emit (PTE) (tons/yr)*	Basis for Determination*
			Potential to Emit (PTE)*	Units*			

* Provide your calculations as an attachment and explain how all process variables and emissions factors were selected. Note the emission factor(s) employed and document origin. Example: AP-42, Table 4.4-3 (8/97); stack test, Method 5, 4/96; mass balance based on MSDS; etc.

** AQD Calculated - See 'Help' for more information.

- Best Available Control Technology (BACT)

Was a BACT Analysis completed for this unit? No

- Lowest Achievable Emission Rate (LAER)

Was a LAER Analysis completed for this unit? No

- Federal and State Rule Applicability

New Source Performance Standards (NSPS)
 New Source Performance Standards are listed under 40 CFR 60 - Standards of Performance for New Stationary Sources.

Not affected

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 61)
 National Emissions Standards for Hazardous Air Pollutants (NESHAP Part 61) are listed under 40 CFR 61. (These include asbestos, benzene, beryllium, mercury, and vinyl chloride).

Not affected

National Emission Standards for Hazardous Air Pollutants (NESHAP Part 63) Not affected
National Emission Standards for Hazardous Air Pollutants (NESHAP Part 63) standards are listed under 40 CFR 63.

Prevention of Significant Deterioration (PSD) Not Affected
These rules are found under WAQSR Chapter 6, Section 4.

Non-Attainment New Source Review Not Affected
These rules are found under WAQSR Chapter 6, Section 13.

- **Emission Unit Attachments**

Required Attachment	Public Document Id	Attachment Type	Description
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Facility Detail Report
Facility Name: Warbonnet 12-2 PAD
ID: F022944



- **Facility Information**

Facility ID: F022944
 FacilityName: Warbonnet 12-2 PAD
 Facility Description:
 Company Name: Ultra Resources, Inc.
 Operating Status: Operating AFS:
 Facility Class: Minor Facility Type: Production Site
 CERR Class: NON

- **Location**

Physical Address	City	County	Lat/Long	PLSS	Effective Date
		Sublette	42.59608/-109.69121	S2-T30N-R108W	05/08/2012

Location Detail For : null

Latitude: 42.59608 Longitude: -109.69121
 Quarter Quarter: Quarter:
 Section: 2
 Township: 30N Range: 108W
 County: Sublette State: Wyoming
 Distict: District 5
 Physical Address 1: Physical Address 2:
 City: Zip:
 Effective Date: 05/08/2012

- **API**

API
3525497

- **Notes**

User Name	Date	Note
Data, Legacy	05/08/2012	[AQDS_Site_Memo] construct a new gas/condensate production facility, known as the Warbonnet 12-2 PAD, with two reboiler overheads condensers and two smokeless combustion devices to control volatile organic compound and hazardous air pollutant emissions associated with the

- **NAICS Codes**

21111 Oil and Gas Extraction

- **Contacts**

Contact Type	Contact Person	Phone Number	Email	Start Date	End Date
NSR Permitting	Bott, Kelly	(303) 645-9809	kbott@ultrapet	06/11/2015	

contact			roleum.com		
Environmental contact	Bott, Kelly	(303) 645-9809	kbott@ultrapetroleum.com	06/11/2015	
Compliance contact	Ennis, Jim			05/15/2013	
NSR Permitting contact	Lasnik, Todd			05/15/2013	
NSR Permitting contact	McClure, Sam			05/15/2013	
Compliance contact	McClure, Sam			05/15/2013	
Compliance contact	Salinas, Belinda	(303) 645-9843	bsalinas@ultrapetroleum.com	05/15/2013	
NSR Permitting contact	Salinas, Belinda	(303) 645-9843	bsalinas@ultrapetroleum.com	05/15/2013	
NSR Permitting contact	Shields, Laura			05/15/2013	
NSR Permitting contact	Waite, Tim			05/15/2013	
Compliance contact	McKee, Cally	(303) 645-9843	cmckee@ultrapetroleum.com	05/15/2013	11/04/2014
Environmental contact	McKee, Cally	(303) 645-9843	cmckee@ultrapetroleum.com	05/15/2013	11/04/2014

Contact Detail For : Bott, Kelly

Prefix:

First Name: Kelly

Middle Name:

Last Name: Bott

Suffix:

Company Title: Regulatory and Environmental Manager

Contact's Company Name: Ultra Resources, Inc.

Address 1: 116 Inverness Drive East, Suite 400

Address 2:

City: Englewood

Zip Code: 80112

State: Colorado

Work Phone No: (303) 645-9809

Secondary Phone No.:

Address 2:

Secondary Ext. No.:

Mobile Phone No.:

Pager No.:

Fax No:

Pager PIN No.:

Email: kbott@ultrapetroleum.com

Email Pager Address:

Contact Detail For : Ennis, Jim

Prefix:

First Name: Jim

Middle Name:

Last Name: Ennis

Suffix:

Company Title:

Contact's Company Name: Ultra Resources, Inc.

Address 1: P.O. Box 1768

Address 2:

City: Pinedale

Zip Code: 82941

State: Wyoming

Work Phone No:	Secondary Phone No.:
Address 2:	Secondary Ext. No.:
Mobile Phone No.:	Pager No.:
Fax No:	Pager PIN No.:
Email:	
Email Pager Address:	

Contact Detail For : Lasnik, Todd

Prefix:	First Name: Todd
Middle Name:	Last Name: Lasnik
Suffix:	
Company Title:	Contact's Company Name: Ultra Resources, Inc.
Address 1: 555 17th St., Ste 2400	
Address 2:	
City: Denver	Zip Code: 80202
State: Colorado	

Work Phone No:	Secondary Phone No.:
Address 2:	Secondary Ext. No.:
Mobile Phone No.:	Pager No.:
Fax No:	Pager PIN No.:
Email:	
Email Pager Address:	

Contact Detail For : McClure, Sam

Prefix:	First Name: Sam
Middle Name:	Last Name: McClure
Suffix:	
Company Title:	Contact's Company Name: Ultra Resources, Inc.
Address 1: 225 E. Magnolia Street, P.O. Box 1768	
Address 2:	
City: Pinedale	Zip Code: 82941
State: Wyoming	

Work Phone No:	Secondary Phone No.:
Address 2:	Secondary Ext. No.:
Mobile Phone No.:	Pager No.:
Fax No:	Pager PIN No.:
Email:	
Email Pager Address:	

Contact Detail For : Salinas, Belinda

Prefix:	First Name: Belinda
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Middle Name: Last Name: Salinas
Suffix:
Company Title: Contact's Company Name: Ultra Resources, Inc.
Address 1: 304 Inverness Way South, Suite 295
Address 2:
City: Englewood Zip Code: 80112
State: Colorado
Work Phone No: (303) 645-9843 Secondary Phone No.:
Address 2: Secondary Ext. No.:
Mobile Phone No.: Pager No.:
Fax No: (303) 708-9748 Pager PIN No.:
Email: bsalinas@ultrapetroleum.com
Email Pager Address:

Contact Detail For : Shields, Laura

Prefix: First Name: Laura
Middle Name: Last Name: Shields
Suffix:
Company Title: Contact's Company Name: Ultra Resources, Inc.
Address 1: P.O. Box 1768
Address 2:
City: Pinedale Zip Code: 82941
State: Wyoming
Work Phone No: Secondary Phone No.:
Address 2: Secondary Ext. No.:
Mobile Phone No.: Pager No.:
Fax No: Pager PIN No.:
Email:
Email Pager Address:

Contact Detail For : Waite, Tim

Prefix: First Name: Tim
Middle Name: Last Name: Waite
Suffix:
Company Title: Contact's Company Name: Ultra Resources, Inc.
Address 1: 304 Inverness Way South, Ste. 295
Address 2:
City: Englewood Zip Code: 80112
State: Colorado
Work Phone No: Secondary Phone No.:
Address 2: Secondary Ext. No.:
Mobile Phone No.: Pager No.:
Fax No: Pager PIN No.:

Email:
Email Pager Address:

Contact Detail For : McKee, Cally

Prefix: First Name: Cally
Middle Name: Last Name: McKee
Suffix:
Company Title: Contact's Company Name: Ultra Resources, Inc.
Address 1: 304 Inverness Way S Ste 295
Address 2:
City: Englewood Zip Code: 80112
State: Colorado
Work Phone No: (303) 645-9843 Secondary Phone No.:
Address 2: Secondary Ext. No.:
Mobile Phone No.: Pager No.:
Fax No: Pager PIN No.:
Email: cmckee@ultrapetroleum.com
Email Pager Address:

- Rules & Regs

Subject to Part 60 NSPS: Subject to 112(r) Accidental Release Prevention:
Subject to Part 61 NESHAP: Subject to non-attainment NSR:
Subject Part 63 NESHAP: Subject to PSD:
Subject to Title IV Acid Rain:

- Attachments

Description	Type	Modified By	Modified Date
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- Version

Version ID	Version Start Date	Version End Date	Preserved
CURRENT	07/07/2015		X
22944	05/08/2012	07/07/2015	X

Emission Unit : DHY001

Sep 22 2015, 14:53:39

- Emission Unit Information

AQD Emissions Unit ID: DHY001
Emission Unit Type: Dehydration Unit
Dehydration Type: TEG
Design Capacity (MMscf/day): 4.0
AQD Description:
Company Equipment ID: DHY001
Company Equipment Description: 4M Dehydrator
Operating Status: Operating
Initial Construction Commencement Date: 01/02/2009
Initial Operation Commencement Date: 01/02/2009
Most Recent Construction/Modification Commencement Date: 04/21/2015
Most Recent Operation Commencement Date:

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments
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- Processes

- Emission Process Information

Process ID: PRC001
Process Name: 4M Dehydrator
Company Process Description:
Source Classification Code (SCC): 3-10-003-01

Control equipment(s) directly associated with this process

FLA001

Emission Unit : DHY002

Sep 22 2015, 14:53:40

- Emission Unit Information

AQD Emissions Unit ID: DHY002

Emission Unit Type: Dehydration Unit

Dehydration Type: TEG

Design Capacity (MMscf/day): 4.0

AQD Description:

Company Equipment ID: DHY002

Company Equipment Description: 4M Dehydrator (Currently OOS)

Operating Status: Operating

Initial Construction Commencement Date: 01/02/2009

Initial Operation Commencement Date: 01/02/2009

Most Recent Construction/Modification Commencement Date: 04/21/2015

Most Recent Operation Commencement Date:

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments
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- Processes

- Emission Process Information

Process ID: PRC002

Process Name: 4M Dehy

Company Process Description:

Source Classification Code (SCC): 3-10-003-01

Control equipment(s) directly associated with this process

FLA001

Emission Unit : FLR001

Sep 22 2015, 14:53:40

- Emission Unit Information

AQD Emissions Unit ID: FLR001

Emission Unit Type: Flare

Maximum Design Capacity: 0.33

Units : Mscf/hr

Minimum Design Capacity: 0.03

Units : Mscf/hr

Pilot Gas Volume (scf/min):

AQD Description:

Company Equipment ID: FLR001

Company Equipment Description: Combustor 1 16" BTEX

Operating Status: Operating

Initial Construction Commencement Date: 01/02/2009

Initial Operation Commencement Date: 01/02/2009

Most Recent Construction/Modification Commencement Date: 04/21/2015

Most Recent Operation Commencement Date:

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments
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- Processes

- Emission Process Information

Process ID: PRC003

Process Name: 24" BTEX Combustor

Company Process Description:

Source Classification Code (SCC): 3-10-002-05

Release points(s) directly associated with this process

VER001

Emission Unit : FUG001

Sep 22 2015, 14:53:40

- Emission Unit Information

AQD Emissions Unit ID: FUG001

Emission Unit Type: Fugitive

AQD Description:

Company Equipment ID: FUG001

Company Equipment Description: Equipment Fugitive Leaks - All Equipment (Valves, Flanges, Connections, Seals, Drains)

Operating Status: Operating

Initial Construction Commencement Date: 01/02/2009

Initial Operation Commencement Date: 01/02/2009

Most Recent Construction/Modification Commencement Date: 04/21/2015

Most Recent Operation Commencement Date:

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments
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- Processes

- Emission Process Information

Process ID: PRC004

Process Name: Fugitives

Company Process Description:

Source Classification Code (SCC): 3-10-888-11

Release points(s) directly associated with this process

AVL005

Emission Unit : HET001

Sep 22 2015, 14:53:40

- Emission Unit Information

AQD Emissions Unit ID: HET001
 Emission Unit Type: Heater/Chiller
 Firing Type: Indirect
 Heat Input Rating: 0.09
 Primary Fuel Type: Field Gas
 Heat Content of Fuel (BTU/scf): 1020
 AQD Description:
 Company Equipment ID: HET001
 Company Equipment Description: 0.085 MMBtu/hr Reboiler for DHY001
 Operating Status: Operating

Initial Construction Commencement Date: 01/02/2009
 Initial Operation Commencement Date: 01/02/2009
 Most Recent Construction/Modification Commencement Date: 04/21/2015
 Most Recent Operation Commencement Date:

Units: MMBtu/hr

Secondary Fuel Type: N/A

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments

- Processes

- Emission Process Information

Process ID: PRC005
 Process Name: .085 MMBtu/hr Reboiler
 Company Process Description:
 Source Classification Code (SCC): 3-10-003-02

Release points(s) directly associated with this process

VER003

Emission Unit : HET002

Sep 22 2015, 14:53:40

- Emission Unit Information

AQD Emissions Unit ID: HET002
 Emission Unit Type: Heater/Chiller
 Firing Type: Indirect
 Heat Input Rating: 0.09 Units: MMBtu/hr
 Primary Fuel Type: Field Gas Secondary Fuel Type: N/A
 Heat Content of Fuel (BTU/scf): 1020
 AQD Description:
 Company Equipment ID: HET002
 Company Equipment Description: 0.085 MMBtu/hr Reboiler Heater for DHY002 (Out of Service)
 Operating Status: Operating
 Initial Construction Commencement Date: 01/02/2009
 Initial Operation Commencement Date: 01/02/2009
 Most Recent Construction/Modification Date: 04/21/2015
 Most Recent Operation Commencement Date:

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments

- Processes

- Emission Process Information

Process ID: PRC006
 Process Name: .085 MMBtu/hr Reboiler
 Company Process Description:
 Source Classification Code (SCC): 3-10-003-02

Release points(s) directly associated with this process

VER008

Emission Unit : HET003

Sep 22 2015, 14:53:40

- Emission Unit Information

AQD Emissions Unit ID: HET003
 Emission Unit Type: Heater/Chiller
 Firing Type: Indirect
 Heat Input Rating: 0.75 Units: MMBtu/hr
 Primary Fuel Type: Field Gas Secondary Fuel Type: N/A
 Heat Content of Fuel (BTU/scf): 1020
 AQD Description:
 Company Equipment ID: HET003
 Company Equipment Description: 0.75 MMBtu/hr Separator Heater for DHY001
 Operating Status: Operating
 Initial Construction Commencement Date: 01/02/2009
 Initial Operation Commencement Date: 01/02/2009
 Most Recent Construction/Modification Commencement Date: 04/21/2015
 Most Recent Operation Commencement Date:

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments

- Processes

- Emission Process Information

Process ID: PRC007
 Process Name: 0.75 MMBtu/hr Separator Heater
 Company Process Description:
 Source Classification Code (SCC): 3-10-004-04

Release points(s) directly associated with this process

VER004

Emission Unit : HET004

Sep 22 2015, 14:53:40

- Emission Unit Information

AQD Emissions Unit ID: HET004
 Emission Unit Type: Heater/Chiller
 Firing Type: Indirect
 Heat Input Rating: 0.75 Units: MMBtu/hr
 Primary Fuel Type: Field Gas Secondary Fuel Type: N/A
 Heat Content of Fuel (BTU/scf): 1020
 AQD Description:
 Company Equipment ID: HET004
 Company Equipment Description: 0.75 MMBtu/hr Separator Heater for DHY002 (Out of Service)
 Operating Status: Operating
 Initial Construction Commencement Date: 01/02/2009
 Initial Operation Commencement Date: 01/02/2009
 Most Recent Construction/Modification Commencement Date: 04/21/2015
 Most Recent Operation Commencement Date:

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments

- Processes

- Emission Process Information

Process ID: PRC008
 Process Name: 0.75 MMBtu/hr Separator Heater
 Company Process Description:
 Source Classification Code (SCC): 3-10-004-04

Release points(s) directly associated with this process

VER009

Emission Unit : HET005

Sep 22 2015, 14:53:40

- Emission Unit Information

AQD Emissions Unit ID: HET005
 Emission Unit Type: Heater/Chiller
 Firing Type: Indirect
 Heat Input Rating: 0.75 Units: MMBtu/hr
 Primary Fuel Type: Field Gas Secondary Fuel Type: N/A
 Heat Content of Fuel (BTU/scf): 1020
 AQD Description:
 Company Equipment ID: HET005
 Company Equipment Description: 0.75 MMBtu/hr Line Heater Secondary Burner Control
 Operating Status: Operating
 Initial Construction Commencement Date: 04/21/2015
 Initial Operation Commencement Date: 04/21/2015
 Most Recent Construction/Modification Commencement Date:
 Most Recent Operation Commencement Date:

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments

- Processes

- Emission Process Information

Process ID: PRC009
 Process Name: 0.75 MMBtu/hr Line Heater/Secondary Burner Control
 Company Process Description:
 Source Classification Code (SCC): 3-10-004-05

Release points(s) directly associated with this process

VER006

- **Emission Unit Information**

AQD Emissions Unit ID: PNE001
 Emission Unit Type: Pneumatic Equipment
 Type of Equipment: Pump
 Bleed rate (cu. ft/hr):
 Gas Consumption Rate (cu. ft/hr): 60.0000
 AQD Description:
 Company Equipment ID: PNE001
 Company Equipment Description: (1) Pneumatic Heat Trace Pump (60 scfh)
 Operating Status: Operating
 Initial Construction Commencement Date: 01/02/2009
 Initial Operation Commencement Date: 01/02/2009
 Most Recent Construction/Modification Commencement Date: 04/21/2015
 Most Recent Operation Commencement Date:

- **Permitted Emissions**

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments

- **Processes**

- **Emission Process Information**

Process ID: PRC010
 Process Name: Heat Trace Pumps
 Company Process Description:
 Source Classification Code (SCC): 3-10-003-25

Control equipment(s) directly associated with this process

OTH001

Emission Unit : PNE002

Sep 22 2015, 14:53:40

- Emission Unit Information

AQD Emissions Unit ID: PNE002

Emission Unit Type: Pneumatic Equipment

Type of Equipment: Pump

Bleed rate (cu. ft/hr):

Gas Consumption Rate (cu. ft/hr): 25.0000

AQD Description:

Company Equipment ID: PNE002

Company Equipment Description: One (1) Methanol Injection Pump (25 scfh)

Operating Status: Operating

Initial Construction Commencement Date: 01/02/2009

Initial Operation Commencement Date: 01/02/2009

Most Recent Construction/Modification Commencement Date: 04/21/2015

Most Recent Operation Commencement Date:

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments
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- Processes

- Emission Process Information

Process ID: PRC011

Process Name: Pneumatic Pump

Company Process Description:

Source Classification Code (SCC): 3-10-003-25

Control equipment(s) directly associated with this process

OTH001

- **Emission Unit Information**

AQD Emissions Unit ID: PNE003
 Emission Unit Type: Pneumatic Equipment
 Type of Equipment: Contoller (Intermittent)
 Bleed rate (cu. ft/hr): 1.7500
 Gas Consumption Rate (cu. ft/hr):
 AQD Description:
 Company Equipment ID: PNE003
 Company Equipment Description: Six (6) Intermittent-bleed LLCs (1.75 scfh/each) - Three (3) Out of Service
 Operating Status: Operating
 Initial Construction Commencement Date: 01/02/2009
 Initial Operation Commencement Date: 01/02/2009
 Most Recent Construction/Modification Commencement Date: 04/21/2015
 Most Recent Operation Commencement Date:

- **Permitted Emissions**

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments

- **Processes**

- **Emission Process Information**

Process ID: PRC017
 Process Name: LLCs
 Company Process Description:
 Source Classification Code (SCC): 3-10-003-24

Release points(s) directly associated with this process

AVL001

Emission Unit : SEP001

Sep 22 2015, 14:53:40

- Emission Unit Information

AQD Emissions Unit ID: SEP001
 Emission Unit Type: Separator/Treater
 Type Of Vessel: 3-Phase Separator
 AQD Description:
 Company Equipment ID: SEP001
 Company Equipment Description: Separator for DHY001
 Operating Status: Operating
 Initial Construction Commencement Date: 01/02/2009
 Initial Operation Commencement Date: 01/02/2009
 Most Recent Construction/Modification Commencement Date: 04/21/2015
 Most Recent Operation Commencement Date:

is Vessel Heated: Yes

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments

- Processes

- Emission Process Information

Process ID: PRC012
 Process Name: Separator
 Company Process Description:
 Source Classification Code (SCC): 3-10-004-04

Emission Unit : SEP002

Sep 22 2015, 14:53:40

- Emission Unit Information

AQD Emissions Unit ID: SEP002

Emission Unit Type: Separator/Treater

Type Of Vessel: 3-Phase Separator

is Vessel Heated: Yes

AQD Description:

Company Equipment ID: SEP002

Company Equipment Description: Separator for DHY002 (Out of Service)

Operating Status: Operating

Initial Construction Commencement Date: 01/02/2009

Initial Operation Commencement Date: 01/02/2009

Most Recent Construction/Modification Commencement Date: 04/21/2015

Most Recent Operation Commencement Date:

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments
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- Processes

- Emission Process Information

Process ID: PRC013

Process Name: Separator

Company Process Description:

Source Classification Code (SCC): 3-10-004-04

Emission Unit : TNK001

Sep 22 2015, 14:53:40

- Emission Unit Information

AQD Emissions Unit ID: TNK001
Emission Unit Type: Storage Tank/Silo
Material Type: Liquid
Description of Material Stored: Methanol
Capacity: 500 Units: gallons
Maximum Throughput: 1.0000 Units: gallons/day
AQD Description:
Company Equipment ID: TNK001
Company Equipment Description: Methanol Tank
Operating Status: Operating
Initial Construction Commencement Date: 01/02/2009
Initial Operation Commencement Date: 01/02/2009
Most Recent Construction/Modification Commencement Date: 04/21/2015
Most Recent Operation Commencement Date:

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments
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- Processes

- Emission Process Information

Process ID: PRC014
Process Name: Methanol Tank
Company Process Description:
Source Classification Code (SCC): 4-07-008-16

Release points(s) directly associated with this process

AVL002

Emission Unit : TNK002

Sep 22 2015, 14:53:40

- Emission Unit Information

AQD Emissions Unit ID: TNK002
 Emission Unit Type: Storage Tank/Silo
 Material Type: Liquid
 Description of Material Stored: Emergency Fluid
 Capacity: 300 Units: barrels
 Maximum Throughput: 1.0000 Units: barrels/day
 AQD Description:
 Company Equipment ID: TNK002
 Company Equipment Description: Emergency Tank 1
 Operating Status: Operating

Initial Construction Commencement Date: 01/02/2009
 Initial Operation Commencement Date: 01/02/2009
 Most Recent Construction/Modification Commencement Date: 04/21/2015
 Most Recent Operation Commencement Date:

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments

- Processes

- Emission Process Information

Process ID: PRC015
 Process Name: Emergency Tank
 Company Process Description:
 Source Classification Code (SCC): 4-04-003-02

Release points(s) directly associated with this process

AVL003

- Emission Unit Information

AQD Emissions Unit ID: TNK003
 Emission Unit Type: Storage Tank/Silo
 Material Type: Liquid
 Description of Material Stored: Emergency Fluid
 Capacity: 300 Units: barrels
 Maximum Throughput: 1.0000 Units: barrels/day
 AQD Description:
 Company Equipment ID: TNK003
 Company Equipment Description: Emergency Tank 2
 Operating Status: Operating
 Initial Construction Commencement Date: 01/02/2009
 Initial Operation Commencement Date: 01/02/2009
 Most Recent Construction/Modification Commencement Date: 04/21/2015
 Most Recent Operation Commencement Date:

- Permitted Emissions

Pollutant	Potential Emissions (Lbs/hour)	Potential Emissions (Tons/Year)	Allowable Emissions (Lbs/Hour)	Allowable Emissions (Tons/Year)	Comments

- Processes

- Emission Process Information

Process ID: PRC016
 Process Name: Emergency Tank
 Company Process Description:
 Source Classification Code (SCC): 4-04-003-02

Release points(s) directly associated with this process

AVL004

Control Equipment : FLA001

Sep 22 2015, 14:53:40

- Control Equipment Information

Equipment Type: Flare
 Control Equipment ID: FLA001
 AQD Description:
 Company Control Equipment ID: FLA001
 Company Control Equipment Description: Combustor 1 16" BTEX
 Operating Status: Operating
 Manufacturer:
 Initial Installation Date: 01/02/2009
 Model:

- Specific Equipment Type information

Flare Type: Enclosed
 Elevated Flare Type: Enclosed
 Ignition Device: Yes
 Flame Presence Sensor: Yes
 Inlet Gas Temp:
 Flame Presence Type: Thermocouple
 Gas Flow Rate:
 Sec. Outlet Gas Temp:

- Pollutants Controlled

Pollutant	Design Control Efficiency(%)	Operating Control Efficiency(%)	Capture Efficiency(%)	Total Capture Control(%)
Total HAP Pollutants	98	98	100	98
VOC - Volatile Organic Compounds	98	98	100	98

- Associated Control Equipments And Release Points

Release points(s) directly associated with this control equipment

VER001

Control Equipment : OTH001

Sep 22 2015, 14:53:40

- Control Equipment Information

Equipment Type: Other
Control Equipment ID: OTH001
AQD Description:
Company Control Equipment ID: OTH001
Company Control Equipment Description: 0.75 MMBtu/hr Line Heater Secondary Burner Control (1 Unit)
Operating Status: Operating Initial Installation Date: 04/21/2015
Manufacturer: Model:

- Specific Equipment Type information

- Pollutants Controlled

Pollutant	Design Control Efficiency(%)	Operating Control Efficiency(%)	Capture Efficiency(%)	Total Capture Control(%)
Total HAP Pollutants	98	98	100	98
VOC - Volatile Organic Compounds	98	98	100	98

- Associated Control Equipments And Release Points

Release points(s) directly associated with this control equipment

VER006

Release Point : AVL001

Sep 22 2015, 14:53:40

- Release Point Information

Release Point ID: AVL001

Release Type: Fugitive (Area, Volume, Line)

AQD Description:

Company Release Point ID: AVL001

Company Release Point Description: Release point for Liquid Level Controllers

Operating Status: Operating

Release Height (ft):

- Release Latitude and Longitude

Latitude:

Longitude:

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : AVL002

Sep 22 2015, 14:53:40

- Release Point Information

Release Point ID: AVL002

Release Type: Fugitive (Area, Volume, Line)

AQD Description:

Company Release Point ID: AVL002

Company Release Point Description: Fugitive Release Point for Methanol Tank

Operating Status: Operating

Release Height (ft):

- Release Latitude and Longitude

Latitude:

Longitude:

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : AVL003

Sep 22 2015, 14:53:40

- **Release Point Information**

Release Point ID: AVL003

Release Type: Fugitive (Area, Volume, Line)

AQD Description:

Company Release Point ID: AVL003

Company Release Point Description: Fugitive Release Point for Emergency Tank 1

Operating Status: Operating

Release Height (ft):

- **Release Latitude and Longitude**

Latitude:

Longitude:

- **CEM Data**

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : AVL004

Sep 22 2015, 14:53:40

- Release Point Information

Release Point ID: AVL004

Release Type: Fugitive (Area, Volume, Line)

AQD Description:

Company Release Point ID: AVL004

Company Release Point Description: Fugitive Release Point for Emergency Tank 2

Operating Status: Operating

Release Height (ft):

- Release Latitude and Longitude

Latitude:

Longitude:

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : AVL005

Sep 22 2015, 14:53:40

- **Release Point Information**

Release Point ID: AVL005

Release Type: Fugitive (Area, Volume, Line)

AQD Description:

Company Release Point ID: AVL018

Company Release Point Description: Release Point for Facility-Wide Fugitives

Operating Status: Operating

Release Height (ft):

- **Release Latitude and Longitude**

Latitude:

Longitude:

- **CEM Data**

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : VER001

Sep 22 2015, 14:53:40

- Release Point Information

Release Point ID: VER001

Release Type: Vertical

AQD Description:

Company Release Point ID: VER001

Company Release Point Description: Combustor 1 Release Point 16" BTEX

Operating Status: Operating

Base Elevation (ft): 7227.0

- Stack Details

Stack Height (ft): 28.58

Stack Diameter (ft): 1.33

Exit Gas Velocity (ft/s): 2.32

Exit Gas Flow Rate (acfm): 194.65

Exit Gas Temp (F): 1400.0

- Release Latitude and Longitude

Latitude: 42.59608

Longitude: -109.69121

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : VER003

Sep 22 2015, 14:53:40

- Release Point Information

Release Point ID: VER003

Release Type: Vertical

AQD Description:

Company Release Point ID: VER003

Company Release Point Description: Release Point for Reboiler Heater on DHY001

Operating Status: Operating

Base Elevation (ft): 7227.0

- Stack Details

Stack Height (ft): 15.42

Stack Diameter (ft): 0.55

Exit Gas Velocity (ft/s): 1.18

Exit Gas Flow Rate (acfm): 16.95

Exit Gas Temp (F): 500.0

- Release Latitude and Longitude

Latitude: 42.59608

Longitude: -109.69121

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : VER004

Sep 22 2015, 14:53:40

- Release Point Information

Release Point ID: VER004

Release Type: Vertical

AQD Description:

Company Release Point ID: VER004

Company Release Point Description: Release Point for Separator Heater on DHY001

Operating Status: Operating

Base Elevation (ft): 7227.0

- Stack Details

Stack Height (ft): 13.58

Stack Diameter (ft): 0.83

Exit Gas Velocity (ft/s): 4.57

Exit Gas Flow Rate (acfm): 149.59

Exit Gas Temp (F): 500.0

- Release Latitude and Longitude

Latitude: 42.59608

Longitude: -109.69121

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : VER006

Sep 22 2015, 14:53:40

- Release Point Information

Release Point ID: VER006

Release Type: Vertical

AQD Description:

Company Release Point ID: VER006

Company Release Point Description: Release Point for 0.75 MMBtu/hr Line Heater Secondary Burner Control

Operating Status: Operating

Base Elevation (ft): 7227.0

- Stack Details

Stack Height (ft): 11.49

Stack Diameter (ft): 0.83

Exit Gas Velocity (ft/s): 4.57

Exit Gas Flow Rate (acfm): 149.59

Exit Gas Temp (F): 500.0

- Release Latitude and Longitude

Latitude: 42.59608

Longitude: -109.69121

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : VER008

Sep 22 2015, 14:53:40

- Release Point Information

Release Point ID: VER008

Release Type: Vertical

AQD Description:

Company Release Point ID: VER008

Company Release Point Description: Release Point for Reboiler Heater on DHY002

Operating Status: Operating

Base Elevation (ft): 7227.0

- Stack Details

Stack Height (ft): 15.42

Stack Diameter (ft): 0.55

Exit Gas Velocity (ft/s): 1.18

Exit Gas Flow Rate (acfm): 16.95

Exit Gas Temp (F): 500.0

- Release Latitude and Longitude

Latitude: 42.59608

Longitude: -109.69121

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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Release Point : VER009

Sep 22 2015, 14:53:40

- Release Point Information

Release Point ID: VER009

Release Type: Vertical

AQD Description:

Company Release Point ID: VER009

Company Release Point Description: Release Point for Separator Heater on DHY002

Operating Status: Operating

Base Elevation (ft): 7227.0

- Stack Details

Stack Height (ft): 13.58

Stack Diameter (ft): 0.83

Exit Gas Velocity (ft/s): 4.57

Exit Gas Flow Rate (acfm): 149.59

Exit Gas Temp (F): 500.0

- Release Latitude and Longitude

Latitude: 42.59608

Longitude: -109.69121

- CEM Data

Description	H2S	SO2	NOX	CO	THC	HCL	HFL	O	TRS	CO2	FLOW	OPACITY	PM
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