

**TECHNICAL REVIEW: STANDARD PERMIT FOR
INSTALLATION AND/OR MODIFICATION OF OIL AND GAS FACILITIES**

Permit No.:	144716	Company Name:	Anadarko E&P Onshore LLC	APD Reviewer:	Mr. Robert Chavez
Project No.:	263539	Site/Area Name:	Hughes & Talbot 75-24 2H & 7523-2H Tank Battery	SP No.:	6002 - 116.620 PRE 2011-FEB-27

GENERAL INFORMATION			
Regulated Entity No.:	RN109151035	Project Type:	Standard Permit Application
Customer Reference No.:	CN602947558	Date Received by TCEQ:	January 6, 2017
Account No.:		Date Received by Reviewer:	January 9, 2017
City/County:	Kermit, Loving County	Physical Location:	From Kermit, TX travel west on TX-302 for 3 miles and turn right on Frying Pan RR. Go Northwest for 7.4 miles and turn left. Travel west for 9.1 miles to facility on right.

CONTACT INFORMATION					
Responsible Official/Primary Contact Name and Title:	Mr. Mike Long Onshore Operations Director	Phone No.:	(832) 636-1000	Email:	MIKE.LONG@ANADARKO.COM
Technical Contact/Consultant Name and Title:	Mr. Joe Landry Environmental Specialist	Phone No.:	(318) 5007-3040	Email:	JOE.LANDRY@ANADARKO.COM

GENERAL RULES CHECK	YES	NO	COMMENTS
Is confidential information included in the application?		X	
Has the standard permit fee been paid?	X		
Are there associated NSR or Title V permits at the site?		X	Upon issuance of this permit, PBR#139638 shall be voided.
Is the application for renewal of an existing standard permit?		X	
Do NSPS, NESHAP, or MACT standards apply to this registration?	X		OOOOa
Is the following documentation included with this registration? 1. The General Requirements Checklist demonstrating compliance with 30 TAC §§ 116.110 and 116.601-615 2. Process description 3. Project description 4. Descriptions of any equipment being installed 5. Emissions calculations including the basis of the calculations 6. Emission increases and/or decreases associated with this project (quantified) 7. Description of efforts to minimize any collateral emissions or collateral increases	X		
Are any requirements of 116.110 circumvented by: (1) artificially limiting feed or production rates below the maximum capacity of the project's equipment; (2) claiming a limited chemical list; or (3) dividing and registering a project in separate segments?		X	

STANDARD PERMIT RULES CHECK:	YES	NO	COMMENTS		
Does the facility meet the § 116.14(2) definition of an Oil & Gas facility?	X				
Are there any net increases in emissions associated with this registration?	X		See speciation below		
Does the facility vent or flare more than 0.3 long tons of sulfur (other than Sulfur Dioxide) per day?		X			
Are all emissions of sulfur compounds (other than SO2 and fugitives) controlled?		X	Sulfur compounds are less than 4 lb/hr		
Are all vents that emit sulfur compounds (other than SO2 and fugitives) to the atmosphere at least 20 feet above ground level (excluding emergency safety relief valves)?	X				
Are any combustion units with a design maximum heat input value > 40 MBtu/hr at the site (other than flares, internal combustion engines, or natural gas turbines)?		X			
Are VOC process fugitive emissions uncontrolled? <i>If YES, mark applicable inspection and repair requirements.</i> [§ 116.620(c)(1) or § 116.620(c)(2)]	X		VOCs (tpy)	receptor < 500'	receptor ≥500'
			<u> X </u> <10	no LDAR	no LDAR
			<u> </u> 10≤25	28M [(c)(1)]	no LDAR
			<u> </u> 25≤40	28VHP [(c)(2)]	28M [(c)(1)]
			<u> </u> >40	28VHP [(c)(2)]	28VHP [(c)(2)]

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Are all components in sweet crude oil or gas service (defined in 30 TAC Chapter 101)? <i>If NO, mark applicable inspection and monitoring requirements.</i> [§§ 116.620(c)(3) and 116.620(e)(1)]	X		
Are there flares at the facility?	X		Flare will follow 40 CFR 60.18 requirements
Are all storage tanks onsite either (1) pressurized; (2) < 25,000 gallons in size; or (3) used for storage of compounds with vapor pressures < 0.5 psia?	X		
Are there any fixed roof storage tanks onsite that emit > 10 tpy VOCs or sulfur compounds?	X		Tanks controlled by flare at 98% destruction efficiency

DESCRIBE OVERALL PROCESS AT THE SITE

The subject facility is a central tank battery facility. The wells included with this tank battery application are listed below:

- Hughes & Talbot 75-24 2H
- Hughes & Talbot 75-23 2H

The facility has two (2) 3-phase separators, whereby each well-stream is sent to its own dedicated separator for an initial stage of separation. The separated gas is sent offsite from the facility via pipeline. The separated condensate is routed to the heater treater and the produced water is routed to the water storage tanks. After further separation from the heater treater, the condensate and produced water are routed to the appropriate storage tanks. Gas from the heater treater is routed to the flare. The storage tanks and condensate truck loading are controlled by the flare.

The three condensate storage tanks are each configured with a fill port and are all joined by a common liquid manifold line; therefore, each tank can potentially operate either in series or in parallel. Condensate and produced water are loaded out by truck. There are two (2) truck loading stations and the condensate loading station is set up with lines to enable vapor-balancing. There is one (1) flare which is used as a control device for the condensate tanks, water tanks, and the condensate truck loading station.

Loading losses for the condensate storage tanks are vapor-balanced and then routed to the flare. A vapor collection efficiency of 98.7% is assumed for trucks (according to TCEQ Guidance) that are tested in a manner consistent with NSPS standards.

DESCRIBE PROJECT AND INVOLVED PROCESS

Anadarko E&P Onshore has submitted a PI-1S for registration and supporting documentation under the Standard Permit rule (116.620). MSS emissions are being claimed under 106.359. The facility is currently operating under PBR#139638 issued March 31, 2016.

Anadarko is submitting this application (PI-1S) for a Standard Permit 6002 (Oil & Gas Facilities) for the facility to reflect the addition of a well at the site. Anadarko is also requesting that the facility name be changed to Hughes & Talbot 75-24 2H & 75-23 2H Tank Battery.

TECHNICAL SUMMARY - DESCRIBE HOW THE PROJECT MEETS THE RULES

§116.610 Applicability

This standard permit includes all facilities at this site and conditions (a)-(d) are met.

§116.611 Registration to Use a Standard Permit

All required documentation has been submitted. All of conditions (a)-(c) are met.

§116.614 Standard Permit Fees

The \$900 fee has been submitted.

§116.615 General Conditions

All of general conditions (1)-(10) will be met.

§116.620 Installation and/or Modification of Oil and Gas Facilities

This site meets all conditions (a)-(e) of the oil and gas standard permit

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106.261/262 Speciation totals: 12.36 lb/hr and 28.7 tpy VOC

Component	Total Max lb/hr				Emission Limit (E=L/K) lb/hr		Actual Emission	
Carbon Dioxide								
Methane								
Ethane								
VOC	UNF Lb/hr	L Value (mg/m ³)	PBR	K Value	Max. E=L/K	Allowable E=L/K (lb/hr)	Max lb/hr	PASS/FAIL
Propane	3.35	2500.00	106.261(a)(2)	28	89.29	6.00	3.35	PASS
Butane	4.36	NA	106.261(a)(2)	28	-	6.00	4.36	PASS
Pentane	1.86	350	106.262, Fig.1	28	12.50	6.00	1.86	PASS
Benzene (HAP)	0.05	3	106.262, Fig.1	28	0.11	0.11	0.05	PASS
Toluene (HAP)	0.05	188	ACGIH TLV	28	6.71	6.00	0.05	PASS
E-Benzene (HAP)	0.00	434	ACGIH TLV	28	15.50	6.00	0.00	PASS
Xylenes (HAP)	0.02	434	ACGIH TLV	28	15.50	6.00	0.02	PASS
Hexanes	1.17	1760	ACGIH TLV	28	62.86	6.00	1.17	PASS
Heptanes	0.56	350	106.262, Fig.1	28	12.50	6.00	0.56	PASS
Octanes	0.20	350	106.262, Fig.1	28	12.50	6.00	0.20	PASS
Nonanes	0.11	NA	106.261(a)(2)	28	-	6.00	0.11	PASS
Decanes +	0.63	NA	106.261(a)(3)	28	-	1.00	0.63	PASS
Hydrogen Sulfide	0.00	10	116.620(a)(17)	28	0.36	0.36	0.00	PASS

D => 1320 ft. K=28

D => 1320 ft. K=28

Component	Total tpy				Emission Limit (E=L/K) tpy	Actual Emission	
Carbon Dioxide							
Methane							
Ethane							
VOC	Max tpy	L Value (mg/m ³)	PBR	K Value	Allowable tpy	Max tpy	PASS/FAIL
Propane	7.19	NA	106.261(a)(2)	28	10.00	7.19	PASS
Butane	9.31	NA	106.261(a)(2)	28	10.00	9.31	PASS
Pentane	4.04	350	106.261(a)(6)	28	5.00	4.04	PASS
Benzene (HAP)	0.12	3	106.261(a)(6)	28	5.00	0.12	PASS
Toluene (HAP)	0.14	188	106.261(a)(6)	28	5.00	0.14	PASS
E-Benzene (HAP)	0.01	434	106.261(a)(6)	28	5.00	0.01	PASS
Xylenes (HAP)	0.06	434	106.261(a)(6)	28	5.00	0.06	PASS
Hexanes	2.68	1760	106.261(a)(6)	28	5.00	2.68	PASS
Heptanes	1.42	350	106.261(a)(6)	28	5.00	1.42	PASS
Octanes	0.58	350	106.261(a)(6)	28	5.00	0.58	PASS
Nonanes	0.38	NA	106.261(a)(2)	28	10.00	0.38	PASS
Decanes +	2.72	NA	106.261(a)(3)	28	4.38	2.72	PASS
Hydrogen Sulfide	0.01	10	116.620(a)(17)	28	1.56	0.01	PASS

Note: Where 0.00 is stated for a short-term or annual emission rate and it is associated with a corresponding short-term or annual emission rate, the appropriate short-term or annual rate should be <0.01. However, as the table above was generated by the company, all emissions rates, 0.00 included, remain as represented by the company and unchanged.

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ESTIMATED EMISSIONS																	
EPN / Emission Source	EPN / Emission Source	VOC		NOX		CO		PM10		PM2.5		SO2		Formaldehyde		Benzene	
		lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy
FUG	Site Wide Fugitives	1.40	6.13	-	-	-	-	-	-	-	-	-	-	-	-	0.00	0.02
HT-1	Heater Treater	0.00	0.02	0.07	0.33	0.06	0.28	0.01	0.02	0.00	0.02	0.00	0.00	-	-	-	-
CTK-01	Storage Tank, Condensate, 400 BBL	*	*	-	-	-	-	-	-	-	-	-	-	-	-	*	*
CTK-02	Storage Tank, Condensate, 400 BBL	*	*	-	-	-	-	-	-	-	-	-	-	-	-	*	*
CTK-03	Storage Tank, Condensate, 400 BBL	*	*	-	-	-	-	-	-	-	-	-	-	-	-	*	*
WTK-01	Storage Tank, Water, 400 BBL	*	*	-	-	-	-	-	-	-	-	-	-	-	-	*	*
WTK-02	Storage Tank, Water, 400 BBL	*	*	-	-	-	-	-	-	-	-	-	-	-	-	*	*
WTK-03	Storage Tank, Water, 400 BBL	*	*	-	-	-	-	-	-	-	-	-	-	-	-	*	*
TL-1	Condensate Tank Truck Loading	0.73	0.39	-	-	-	-	-	-	-	-	-	-	-	-	0.00	0.00
TL-2	Produced Water Tank Truck Loading	0.68	1.31	-	-	-	-	-	-	-	-	-	-	-	-	0.00	0.00
FL-1	Flare	9.60	21.01	3.15	13.22	5.44	22.71	0.11	0.48	0.09	0.36	0.20	0.89	-	-	0.05	0.10
MSS-1	MSS-Separator Blowdowns	76.36	0.92	-	-	-	-	-	-	-	-	-	-	-	-	0.19	0.00
MSS-2	MSS-Heater Treater Blowdowns	50.94	0.31	-	-	-	-	-	-	-	-	-	-	-	-	0.12	0.00
MSS-3	MSS-Tank Cleaning	9.42	0.01	-	-	-	-	-	-	-	-	-	-	-	-	0.04	0.00
MSS-4	MSS-Low Emitters	0.03	0.13	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MSS-5	MSS-Painting and Blasting	0.19	0.84	-	-	-	-	0.01	0.03	0.00	0.00	-	-	-	-	-	-
TOTAL EMISSIONS (lb/hr-TPY):		149.36	31.07	3.22	13.55	5.51	22.99	0.13	0.54	0.09	0.39	0.20	0.89	0.00	0.00	0.41	0.13
MAXIMUM OPERATING SCHEDULE:		Hours/Day		24		Days/Week		7		Weeks/Year		52					

Notes:

1.) Storage tanks and condensate truck loading are controlled by the flare. In addition, the heater treater gas is also routed to the flare.

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	TECHNICAL REVIEWER	PEER REVIEWER	FINAL REVIEWER
SIGNATURE:			
PRINTED NAME:	Mr. Robert Chavez, P.E.	Ms. Sabrina Coty-Butler	Mr. Samuel Short, Manager
DATE:	January 11, 2017	January 11, 2017	January 13, 2017