

TECHNICAL REVIEW: Oil and Gas Checklist

Permit No.:	157092	Company Name:	Pioneer Natural Resources USA, Inc.	APD Reviewer:	Ms. Matison Rhodes
Project No.:	393359	Unit Name:	Et Odaniel 37-1h Tank Battery	SP No(s).:	6002 - 116.620 PRE 2011-FEB-27

GENERAL INFORMATION			
Regulated Entity No.:	RN107031080	Date Received by TCEQ::	May 19, 2025
Customer Reference No.:	CN600130447	Date Received by Reviewer:	May 20, 2025
City/County:	Midland, Midland County	Physical Location:	FROM MIDLAND GO S ONTO TX158 E GO 9.5 MI, TURN L ONTO E CO RD 160 GO 3.3 MI, TURN R ONTO LEASE RD GO 0.5MI, SITE IS ON THE L.

CONTACT INFORMATION					
Responsible Official/ Primary Contact Name and Title:	Matt Mathis Vp Production Operations	Phone No.:	(432) 571-3105	Email:	MATTHEW.MATHIS@EXXONMOBIL.COM
Technical Contact/ Consultant Name and Title:	Abby Dolby Hse Specialist	Phone No.:	(405) 581-2128	Email:	ABBY.DOLBY@EXXONMOBIL.COM

GENERAL PROJECT INFORMATION	YES	NO	COMMENTS
Is confidential information included in the application?		X	
Are there affected NSR or Title V permits for the project?		X	
Are there permit limits on using PBRs at the site?		X	
Is PSD or Nonattainment netting required?		X	
Has the fee been paid?	X		767101 / 582EA000668568
Was an impacts evaluation required for the project?	X		NOX / SCREEN3
Have MSS emissions been accounted for in site-wide totals?		X	MSS is being claimed under 106.359
Site Specific Analysis used?		X	Representative analysis meets TCEQ criteria

Compliance History Evaluation - 30 TAC Chapter 60 Rules	
A compliance history report was reviewed on:	June 12, 2025
Site rating & classification:	Unclassified
Company rating & classification:	0.78 / Satisfactory
If site was rated unsatisfactory, what action(s) occurred as a result:	N/A

PROJECT RULES	How was rule compliance demonstrated? (i.e., checklist, rule language, etc.)
116.620	Line-by-line compliance

DESCRIBE THE OVERALL PROCESS AT THE SITE
The ET O'Daniel 37-1H Tank Battery is a natural gas, oil, and water production site. A mixture of oil, gas, and water enters the Site through a series of

TECHNICAL REVIEW: Oil and Gas Checklist

Permit No.:	157092	Company Name:	Pioneer Natural Resources USA, Inc.	APD Reviewer:	Ms. Matison Rhodes
Project No.:	393359	Unit Name:	Et Odaniel 37-1h Tank Battery	SP No(s):	6002 - 116.620 PRE 2011-FEB-27

separators and heater treaters (FINs HT1 – HT8) where the gas phase is separated from the liquid phase and the water is separated from the oil. The gas from this separation process is sent off site via the sales gas pipeline. A portion of the sales gas is diverted through the engine-driven compressors (FINs ENG1 – ENG3) and then routed through the glycol dehydration system (FIN DEHY1).

Emissions from the flash tank are routed to the vapor recovery units (VRUs) on site and the emissions from the regenerator are routed to the dehy reboiler (FIN DEHYBLR1). The site is equipped with one (1) vapor recovery unit (VRU) engine (FIN ENG4). The oil from the separation process is sent into oil tanks (FINs TANK1 – TANK10). The water from the separation process flows into produced water storage tanks (FINs TANK11 – TANK20). The quantity of VRUs maintained on site may fluctuate. At least two (2) VRUs will be on site at all times and additional VRUs will be placed on site on an as-needed basis. In each case, one (1) of the VRUs acts as a backup during downtime. It is assumed that when one VRU is down for maintenance, vapors will be routed to the backup VRU. Therefore, tank emissions will be controlled during 100% of the year at 100% capture efficiency due to the multiple VRUs on site.

Produced oil and water from the storage tanks are primarily piped off site. However, for operational flexibility it has been assumed that up to 1,576,800 barrels per year (bbl/yr) of the produced oil and up to 93,600 bbl/yr of the produced water will be loaded into tanker trucks and trucked off site. Vapors from the oil loading operations (FIN LOAD1) are controlled by a flare (FIN FL1). Produced water loading operations (FIN LOAD2) will be performed with no emissions controls. VRU is down for maintenance, vapors will be routed to the backup VRU. Therefore, tank emissions will be controlled during 100% of the year at 100% capture efficiency due to the multiple VRUs on site.

There is one (1) alternate operating scenario (AOS) for the site. AOS-1 occurs when a portion of the facility gas is sent to the flare instead of the sales line. The permit has accounted for up to 240 hours flaring of the facility gas. The Site is also equipped with a line heater (FIN LH) which may be utilized during winter for heating oil from oil storage tanks. The Site also produces fugitive emissions (FIN FUG).

DESCRIBE THE PROJECT

Pioneer Natural Resources USA, Inc. (Pioneer), Environmental Resources Management Southwest, Inc. (ERM) is submitting this Standard Permit (SP) Revision for the ET O'Daniel 37-1H Tank Battery (the Site) located near Midland in Midland County, Texas. This SP revision is being submitted to authorize the addition of one (1) vapor recovery unit (VRU) engine, to update the production throughputs, to update the gas and liquid representative analyses, and to update the Alternate Operating Scenario (AOS) and Maintenance, Startup, and Shutdown (MSS) activities at the Site (the Project).

FEDERAL STANDARDS APPLICABILITY

<i>Applicable Rule(s) :</i>	Y	NA	<i>Explanation of how it meets (if applicable), or why it isn't applicable:</i>
NSPS Subpart A	X		Applicable. The Site will comply with the applicable notification, testing, and reporting requirements listed in this rule.
NSPS Subpart JJJJ	X		Per 40 CFR §60.4230(a)(4)(i), engines manufactured on or after July 1, 2007 with maximum engine power greater than or equal to 500 horsepower (hp) are subject to the emission standards specified in the rule. Per 40 CFR §60.4230(a)(4)(iii), engines manufactured on or after July 1, 2008 with maximum engine power less than 500 horsepower (hp) are subject to the emission standards specified in the rule. ENG2 – ENG4 will comply with the applicable requirements listed in this rule. ENG1 was manufactured prior to the applicability date and is not subject to the requirements listed in this rule.
NSPS Subpart OOOO		X	<i>Not Applicable. The equipment at the Site commenced construction after the applicability date of this rule.</i>
NSPS Subpart OOOOa	X		<i>Applicable. Centrifugal compressors, reciprocating compressors, pneumatic pumps, and pneumatic controllers that commenced construction, reconstruction, and modification after September 18, 2015 and on or before December 6, 2022 are subject to this rule. Collection of fugitive emissions components at well sites and compressor stations that commenced construction, modification, or reconstruction after September 18, 2015 and on or before December 6, 2022 are also subject to the leak detection and repair requirements listed under this rule. Pioneer will comply with the applicable requirements of NSPS Subpart OOOOa.</i>
NSPS Subpart OOOOb	X		<i>Process controllers, Pneumatic pumps, Tank batteries and fugitive emissions components at well sites and compressor stations that commenced construction, modification, or reconstruction after December 6, 2022 are subject to this rule. Pioneer will comply with the applicable requirements of NSPS Subpart OOOOb</i>
MACT Subpart HH	X		<i>Applicable. Since the benzene emissions from the glycol dehydration unit are below 0.9 megagram per year, according to 40 CFR §63.764(e)(1)(ii), the unit is subject to limited requirements under this rule.</i>
MACT Subpart ZZZZ	X		<i>Applicable. The Site has four (4) stationary spark ignition internal combustion engines. ENG2 – ENG4 will comply with the requirements of this subpart by complying with applicable requirements listed under NSPS Subpart JJJJ. No further requirements apply under this subpart for ENG2 – ENG4. ENG1 will comply with all applicable requirements of this subpart.</i>

TECHNICAL REVIEW: Oil and Gas Checklist

Permit No.:	157092	Company Name:	Pioneer Natural Resources USA, Inc.	APD Reviewer:	Ms. Matison Rhodes
Project No.:	393359	Unit Name:	Et Odaniel 37-1h Tank Battery	SP No(s).:	6002 - 116.620 PRE 2011-FEB-27

SITE INFORMATION		
What is the Natural Gas Throughput?	25	MMSCF/day
What is the Oil/Condensate Throughput?	8,000	bbl/day
What is the Produced Water Throughput?	25,000	bbl/day
Site specific H2S content of inlet gas (ppm)	23	ppm

FACILITY INFORMATION		
Equipment:	# of each	Calculation Methodology
Compressor Engines	3	AP-42
Storage Tanks	20 (10 Oil 10 Water)	ProMax for both Uncontrolled flash and working/breathing
Glycol Dehydrators	1	<i>ProMax</i>
Glycol Reboiler	1	<i>ProMax</i>
Heater Treaters	8	AP-42
Line Heater	1	AP-42
Flares / Combustion Control Devices	1	Emission factors for CO and NOX are based upon the Draft TNRCC Guidance Document for Flares and Vapor Oxidizers (dated 10/00) for air assisted high Btu flares. All other emission factors were obtained from AP-42 Chapter 1.4
VRUs	1	ProMax
Separators	Y	
Truck Loading	Y	AP-42
Fugitives	Y	<i>Fugitive Emission Factors and Reduction Credits are per TCEQ Air Permit Technical Guidance for Chemical Sources, Fugitive Guidance, dated June 2018.</i>
MSS	N	<i>MSS is being claimed under 106.359</i>

CONTROL DEVICE(S)				
VRU	Runtime:	100%	Controls what?	Storage Tanks, Glycol Dehydrator flash vapors
	Capture Efficiency:	100%		
Flare	Destruction Efficiency:	98%	Controls what?	Truck Loading
Additional Notes:	Operation of the VRUs will follow the requirements outlined in the TCEQ VRU Capture/Control Guidance The following equipment and operating procedures will be in place: <ul style="list-style-type: none"> • Mechanical VRU (mVRU) designed to capture vapors; • Sensing equipment that will allow the operator to verify proper functioning; • Redundant equipment to confirm proper functioning; • Proper rerouting equipment as described in the guidance; • Blanket gas system to ensure no oxygen enters the system; • Compressor capable of recovering both wet and dry gas that responds as needed to varying conditions; and Proper continuous monitoring and recordkeeping. 			

ENGINE INFORMATION	YES	NO	COMMENTS
Was NOx/NAAQs compliance demonstrated?	X		SCREEN3
HCHO included in VOC total?		X	

TECHNICAL REVIEW: Oil and Gas Checklist

Permit No.:	157092	Company Name:	Pioneer Natural Resources USA, Inc.	APD Reviewer:	Ms. Matison Rhodes
Project No.:	393359	Unit Name:	Et Odaniel 37-1h Tank Battery	SP No(s):	6002 - 116.620 PRE 2011-FEB-27

Was a Catalyst Used?	X	Oxidation Catalyst
----------------------	---	--------------------

D= 3.475 and K = 8

PBR 106.261 and 106.262 Emission Limits						
Chemical	PBR Claimed	L, mg/m ³	Emission Limit (E = L/K), lb/hr	Emission Limit tpy	Actual Emissions lb/hr	Actual Emissions tpy
Hydrogen Sulfide	116.620(a)(17)	10	0.45	1.96	0.01	<0.01
Propane	106.261(a)(2)	--	6.00	10.00	5.98	0.64
Butanes	106.261(a)(2)	--	6.00	10.00	3.23	0.35
Pentanes	106.262(a)(2)	350	6.00	5.00	1.40	0.16
Hexanes	106.262(a)(2)	176	6.00	5.00	1.03	0.13
Heptanes	106.262(a)(2)	350	6.00	5.00	0.21	0.03
Octanes	106.262(a)(2)	350	6.00	5.00	0.26	0.05
Nonanes	106.262(a)(2)	1,050	6.00	5.00	0.01	0.02
n-Decane	106.261(a)(3)	--	1.00	4.38	<0.01	0.01
Undecanes	106.261(a)(3)	--	1.00	4.38	<0.01	0.01
Dodecane	106.261(a)(3)	--	1.00	4.38	<0.01	0.01
Tridecane	106.261(a)(3)	--	1.00	4.38	<0.01	0.01
Tetradecane	106.261(a)(3)	--	1.00	4.38	<0.01	0.01
Pentadecane	106.261(a)(3)	--	1.00	4.38	<0.01	0.01
Hexadecane	106.261(a)(3)	--	1.00	4.38	<0.01	0.01
Heptadecane	106.261(a)(3)	--	1.00	4.38	<0.01	0.01
Octadecane	106.261(a)(3)	--	1.00	4.38	<0.01	0.01
Nonadecane	106.261(a)(3)	--	1.00	4.38	<0.01	0.01
Eicosane	106.261(a)(3)	--	1.00	4.38	<0.01	0.01
Heneicosane	106.261(a)(3)	--	1.00	4.38	<0.01	<0.01
Docosane	106.261(a)(3)	--	1.00	4.38	<0.01	<0.01
Tricosane	106.261(a)(3)	--	1.00	4.38	<0.01	<0.01
Tetracosane	106.261(a)(3)	--	1.00	4.38	<0.01	<0.01
Pentacosane	106.261(a)(3)	--	1.00	4.38	<0.01	<0.01
Hexacosane	106.261(a)(3)	--	1.00	4.38	<0.01	<0.01
Heptacosane	106.261(a)(3)	--	1.00	4.38	<0.01	<0.01
Octacosane	106.261(a)(3)	--	1.00	4.38	<0.01	<0.01
Nonacosane	106.261(a)(3)	--	1.00	4.38	<0.01	<0.01
Triacontane	106.261(a)(3)	--	1.00	4.38	0.01	0.05
Benzene	106.262(a)(2)	3	0.24	1.04	0.05	0.01
Toluene	106.262(a)(2)	188	6.00	5.00	0.04	<0.01
Ethylbenzene	106.262(a)(2)	434	6.00	5.00	0.01	<0.01
Xylene	106.262(a)(2)	434	6.00	5.00	0.02	<0.01
Total Project VOC Emissions:					12.26	1.53
Total Project H2S Emissions:					0.01	<0.01

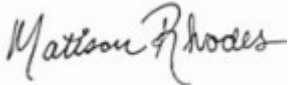
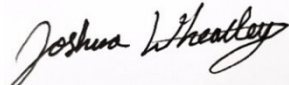
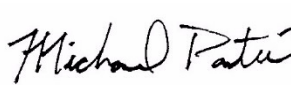
MAXIMUM ALLOWABLE EMISSION RATES TABLE (MAERT)														
EPN / Emission Source	VOC		NOx		CO		PM/PM ₁₀ /PM _{2.5}		SO ₂		H ₂ S		CH ₂ O	
	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy
New Emissions														
ENG4 / VRU Engine 1	0.16	0.71	0.20	0.89	0.41	1.78	0.02	0.07	<0.01	<0.01	-	-	0.02	0.09

TECHNICAL REVIEW: Oil and Gas Checklist

Permit No.:	157092	Company Name:	Pioneer Natural Resources USA, Inc.	APD Reviewer:	Ms. Matison Rhodes
Project No.:	393359	Unit Name:	Et Odaniel 37-1h Tank Battery	SP No(s):	6002 - 116.620 PRE 2011-FEB-27

Revised Emissions														
FUG / Site Fugitives	3.45	15.11	-	-	-	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01
HT1 / Heater Treater 1	0.01	0.02	0.09	0.37	0.07	0.31	0.01	0.03	<0.01	<0.01	-	-	<0.01	<0.01
HT2 / Heater Treater 2	0.01	0.02	0.09	0.37	0.07	0.31	0.01	0.03	<0.01	<0.01	-	-	<0.01	<0.01
HT3 / Heater Treater 3	0.01	0.02	0.09	0.37	0.07	0.31	0.01	0.03	<0.01	<0.01	-	-	<0.01	<0.01
HT4 / Heater Treater 4	0.01	0.02	0.09	0.37	0.07	0.31	0.01	0.03	<0.01	<0.01	-	-	<0.01	<0.01
HT5 / Heater Treater 5	0.01	0.02	0.09	0.37	0.07	0.31	0.01	0.03	<0.01	<0.01	-	-	<0.01	<0.01
HT6 / Heater Treater 6	0.01	0.02	0.09	0.37	0.07	0.31	0.01	0.03	<0.01	<0.01	-	-	<0.01	<0.01
HT7 / Heater Treater 7	0.01	0.04	0.17	0.75	0.14	0.63	0.01	0.06	<0.01	<0.01	-	-	<0.01	<0.01
HT8 / Heater Treater 8	0.01	0.04	0.17	0.75	0.14	0.63	0.01	0.06	<0.01	<0.01	-	-	<0.01	<0.01
DEHYBLR1 / Glycol Dehy Reboiler 1	<0.01	0.01	0.03	0.11	0.02	0.09	<0.01	0.01	<0.01	<0.01	-	-	<0.01	<0.01
LH / Line Heater	0.01	0.02	0.17	0.37	0.14	0.31	0.01	0.03	<0.01	<0.01	-	-	<0.01	<0.01
ENG1 / Compressor Engine 1	2.44	10.66	4.43	19.39	4.43	19.39	0.09	0.37	0.01	0.02	-	-	0.22	0.97
ENG2 / Compressor Engine 2	2.44	10.66	3.04	13.33	6.09	26.65	0.10	0.43	0.01	0.03	-	-	0.30	1.33
ENG3 / Compressor Engine 3	2.43	10.66	3.04	13.33	6.09	26.65	0.10	0.43	0.01	0.03	-	-	0.30	1.33
DEHYBLR1 / Glycol Dehydrator - 1	0.12	0.52	-	-	-	-	-	-	-	-	<0.01	<0.01	-	-
LOAD1 / Uncaptured Oil Loading	0.59	2.24	-	-	-	-	-	-	-	-	<0.01	<0.01	-	-
LOAD2 / Water Loading	0.25	0.09	-	-	-	-	-	-	-	-	0.01	<0.01	-	-
FL1 / Flare	0.73	2.84	0.24	0.95	0.48	1.89	0.01	0.03	0.01	0.03	<0.01	<0.01	-	-
FL1 / AOS Flare Operations	23.77	2.85	15.51	1.86	30.97	3.72	0.73	0.09	0.33	0.04	<0.01	<0.01	-	-
TOTAL EMISSIONS (TPY):	--	56.57	--	53.95	--	83.60	--	1.76	--	0.15	--	<0.01	--	3.72

MAXIMUM OPERATING SCHEDULE:	Hours/Year	8,760
------------------------------------	-------------------	--------------

	TECHNICAL REVIEWER	PEER REVIEWER	FINAL REVIEWER
SIGNATURE:			
PRINTED NAME:	Matison Rhodes, Reviewer	Joshua Wheatley, Team Lead	Michael Partee, Manager
DATE:	06/16/25	06/16/25	06/16/25