

# TECHNICAL REVIEW: AIR QUALITY PERMIT BY RULE FOR OIL AND GAS HANDLING AND PRODUCTION FACILITIES

<b>Permit No.:</b>	100068	<b>Company Name:</b>	DFW Midstream Services LLC	<b>APD Reviewer:</b>	James Nolan
<b>Project No.:</b>	201302	<b>Site/Area Name:</b>	JOHNSON COUNTY 1 STATION	<b>PBR No.:</b>	106.352 (a-k) 2011-FEB-27 - LEVEL 2

GENERAL INFORMATION					
<b>Regulated Entity No.:</b>	RN106304843	<b>Project Type:</b>	Permit by Rule Application		
<b>Customer Reference No.:</b>	CN603578618	<b>Date Received by TCEQ:</b>	November 12, 2013		
<b>Account No.:</b>		<b>Date Received by Reviewer:</b>	January 9, 2014		
<b>City/County:</b>	Venus, Johnson County	<b>Physical Location:</b>	3230 Chambers St		

CONTACT INFORMATION					
<b>Responsible Official/ Primary Contact Name and Title:</b>	Ms. Marlene Breitenbach Vp, Hse&r	<b>Phone No.:</b>	(214) 306-9853	<b>Email:</b>	MBREITENBACH@SUMMITMIDSTREAM.COM
<b>Technical Contact/ Consultant Name and Title:</b>	Mr. Chris Marlais Air Quality Specialist	<b>Phone No.:</b>	(972) 550-9326	<b>Email:</b>	CHRISMARLAIS@PROVIDENCEENG.COM

Screening Criteria	YES	NO	COMMENTS
Is the application certified?	X		
New or Existing site?	X		Existing
Are there other affected air permits or registrations at this site?		X	
Is each PBR > 25/250 tpy?		X	
Are PBR sitewide emissions > 25/250 tpy?		X	
Are there permit limits on using PBRs at the site?		X	
Do NSPS, NESHAP, or MACT standards apply to this registration?	X		MACT ZZZZ, MACT HH, NSPS OOOO
Is this site in Barnett-shale?	X		Johnson County
Confirm Level 1 or Level 2 PBR?	X		Level 2
Was an impacts evaluation included in the application?		X	Emissions below de minimis rates.
Operations limits, controls, Compliance issues, Fed or State Reg, Major/Modif./Netting?	X		
Notification Received?	X		Project # 197965
Within 90-180 days?	X		
Was the TCEQ Oil and Gas Emission Calculation Spreadsheet (or equivalent) included in the application?	X		
Were appropriate gas and liquid analyses included in the application?	X		The RE provided a Representative analysis that meets the TCEQ requirements.
Is the site in compliance with all other applicable rules and regulations?	X		
Does the site handle sour oil or gas?		X	
Is planned MSS included in the registration?		X	

DESCRIBE OVERALL PROCESS AT THE SITE
Johnson is primarily a natural gas compressor station facility. Refer to Figure 1, the process flow diagram, for an outline of the site equipment and operations at the end of this section. Dehydrated and compressed gas from Summit's Arlington 1 station enters Johnson at a pressure of 700-800 psig at 80 degrees F. Gas flow is controlled by two back pressure valves, and forces a 60 MMSCFD (max) slip stream of 2.3 mol% CO <sub>2</sub> to a 150 GPM amine plant. The remaining 290 MMSCFD of gas bypasses the treater. The untreated gas enters the high pressure Amine Unit. The liquid produced from the first separation column hits a flash tank (Emissions Point Number [EPN]: AMINE). The liquid passes along to a second separation column. The gas produced from the second separation column is an acid gas stream (EPN: AMINE). The treated gas is sent on to the Dehydration unit. This treated gas (wet gas) is contacted with TEG to remove water from the stream. The liquid produced from the first separation column hits a flash tank and vapors are vented (EPN: DEHY). The liquid passes along to a second separation column. The gas produced after the second separation column is sent to a BTEX condenser where vapors are vented (EPN: DEHY) and liquids are sent to a Slop Tank (EPN: TK102). The treated gas stream flows further through a compressor powered by a 1775 horsepower (hp) reciprocating internal combustion engine (Emission Point Number [EPN]: C-1). Produced liquids are sent to a slop water/oil tank (EPN: T1). Produced liquid is loaded into tanker trucks (EPN: TL-1).

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**DESCRIBE PROJECT AND INVOLVED PROCESS**

The Regulated Entity has chosen to certify their site and emissions under 106.352 (a-k) Level 2 using the TCEQ E-Permits mechanism. Rule compliance, calculation methodologies, emission calculations, and other supporting documentation have been provided by the company and can be found in the application. This information will be made available upon request by any regulatory agency/local program in accordance with §106.8.

**ESTIMATED EMISSIONS**

EPN / Emission Source	VOC		NOx		CO		PM10		PM 2.5		SO2		HCHO	
	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy
RBLRA/Amine Reboiler	0.07	0.29	1.20	5.26	1.01	4.42	0.09	0.40	0.07	0.30	0.01	0.03		
RBLRD/Dehy Reboiler	<0.01	0.01	0.03	0.15	0.03	0.12	<0.01	0.01	<0.01	0.01	<0.01	<0.01		
TK102/Amine Slop Tank	<0.01	<0.01												
DEHY/TEG Dehy Unit	0.10	0.44												
AMINE/DGA Sweetening Unit	0.10	0.42												
C-1/Caterpillar 3606TA LE Engine	3.48	15.25	1.96	8.57	10.76	47.13	0.13	0.59	0.13	0.59	0.01	0.03	1.02	4.46
T1/210 BBL Produced Water Tank	<0.01	0.02												
TL-1/Produced Water Loading Emissions	0.32	<0.01												
FUG/Fugitive Emissions	0.01	0.04												
BD/Blowdowns	0.03	<0.01												
<b>TOTAL EMISSIONS (TPY):</b>		16.48		13.97		51.67		1.00		0.90		0.06		4.46
<b>MAXIMUM OPERATING SCHEDULE:</b>	<b>Hours/Day</b>		<b>Days/Week</b>		<b>Weeks/Year</b>		<b>Hours/Year</b>		<b>Days/Year</b>		<b>Hours/Year</b>		<b>Days/Year</b>	

	TECHNICAL REVIEWER	PEER REVIEWER	FINAL REVIEWER
<b>SIGNATURE:</b>			See Hard Copy.
<b>PRINTED NAME:</b>	Mr. James Nolan	Ms. Kristyn Bower	Ms. Anne M. Inman, P.E., Manager
<b>DATE:</b>	January 9, 2014	January 9, 2014	January 10, 2014