ENERGY TRANSFER

April 21, 2016

Ms. Melanie Magee
Environmental Engineer
Air Permits Section (6PD-R)
United States Environmental Protection Agency, Region 6
1445 Ross Avenue
Dallas, TX 75202

Subject: Lone Star NGL Fractionators LLC
Lone Star NGL, Mont Belvieu Gas Plant (FRAC I and FRAC II)
Chambers County, Texas
Rescission Request for Permit PSD-TX-93813-GHG

Dear Ms. Magee:

Lone Star NGL Fractionators LLC (Lone Star) is submitting this request to rescind the above-referenced Greenhouse Gas (GHG) Prevention of Significant Deterioration (PSD) permit which was issued on October 12, 2012. This permit was issued by the U.S. Environmental Protection Agency (EPA) solely because emissions of GHGs were above the PSD major source threshold. When the PSD Tailoring Rule became effective, the existing FRAC I plant was considered a major GHG source since the potential emissions were greater than the threshold of 100,000 tpy CO_2e. However, FRAC I was not subject to the PSD Tailoring Rule as construction began July 1, 2011. The addition of FRAC II was considered a major modification to the existing major source since the net GHG emissions increase was above the threshold of 75,000 tpy CO_2e. The emissions from criteria pollutants at the facility do not exceed, and have never exceeded, PSD major source thresholds.

Based on the revisions to 40 Code of Federal Regulations (CFR) 52.21(w)(2)(iii) that became effective on July 6, 2015, sources that were required to obtain PSD permits solely based on emissions of GHGs may request that these permits be rescinded. The modified rule reads as follows:

> *(w)(2) Any owner or operator of a stationary source or modification who holds a permit for the source or modification may request that the Administrator rescind the permit or a particular portion of the permit if the permit for the source or modification was issued: (iii) Under 52.21 between July 1, 2011 and July 6, 2015 for a modification that was classified as a major modification under paragraph (b)(2) solely on the basis of an increase in emissions of greenhouse gases, which were defined as a regulated NSR pollutant through the application of paragraph (b)(49)(v)(b) of this section as in effect during this time period.*

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Lone Star is requesting that this permit be rescinded as the site meets this criteria. Facility emissions of non-GHG criteria pollutants are authorized under TCEQ Permit No. 93813, which was issued on May 29, 2012 to authorize the addition of FRAC II. This permit has since been amended to reflect as-built conditions, with the most recent version issued November 30, 2015. A copy of the current version of TCEQ Permit No. 93813 is included as Attachment A. Attachment B includes a copy of the TCEQ's technical review for the previous version of Permit No. 93813 (issued May 29, 2012) which summarizes the total project emissions from the addition of FRAC II and documents that the facility is not a PSD major source of any criteria pollutants.

If you have any questions, please contact me at 713-989-7762 or via email at Lisa.Swanson@EnergyTransfer.com.

Sincerely,

Lisa Swanson, P. E.
Environmental Manager

Attachments (2)

Cc: Ashley Harrison, Lone Star NGL Fractionators LLC, Mont Belvieu, TX
Cindy Pate, Lone Star NGL Fractionators LLC, Mont Belvieu, TX
Norman Rokyta, Lone Star NGL Fractionators LLC, Mont Belvieu, TX

ATTACHMENT A
TCEQ PERMIT NO. 93813

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

November 30, 2015

MR BRAD WIDENER
SR. DIRECTOR OF OPERATIONS
LONE STAR NGL FRACTIONATORS LLC
12353 EAGLE POINTE DRIVE
MONT BELVIEU TX 77580-

Standard Permit Registration Number: 93813 Renewal Date: November 30, 2025

Location	10030 A FM 1942
City/County:	Mont Belvieu, Chambers County
Project Description/Unit:	LDH Energy Mont Belvieu Gas Plant
Regulated Entity Number:	RN106018260
Customer Reference Number:	CN604309419
New or Existing Site:	New

30 TAC § 116.620 Effective Date: 09/04/2000

Lone Star NGL Fractionators LLC has registered the emissions associated with the LDH Energy Mont Belvieu Gas Plant under the standard permit listed above as authorized by the Commissioners pursuant to Title 30 Texas Administrative Code § 116.602 (30 TAC § 116.602). Emissions are listed on the attached table.
For rule information see www.tceq.texas.gov/permitting/air/nav/standard.html.

The company is also reminded that these facilities may be subject to and must comply with other state and federal air quality requirements.

If you have questions, please contact Mr. Guillermo Reyes, P.E. at (512) 239-5716. This action is taken under the authority delegated by the Executive Director of the TCEQ.

Sincerely,

Samuel Short, Manager
Rule Registrations Section
Air Permits Division

cc: Air Section Manager, Region 12 - Houston

Project Number: 241852

Standard Permit Maximum Emission Rates Table
Standard Permit Number: 93813

The facilities and emissions included in this table have been represented and reviewed as the maximum emissions authorized by this standard permit registration.

AIR CONTAMINANT DATA					
1. Emission Point			2. Component or Air Contaminant Name	3. Air Contaminant Emission Rate*	
EPN (A)	FIN (B)	NAME (C)		Pounds per Hour (A)	TPY (B)
FRAC I Plant Sources:					
1SK25.002	1SK25.002	FRAC I Thermal Oxidizer	VOC	0.02	0.07
			NO_X	0.42	1.83
			CO	0.23	1.01
			$PM/PM_{10}/PM_{2.5}$	0.02	0.09
			SO_2	<0.01	0.01
			NH_3	--	--
1SK25.002	1MSS2	FRAC I Amine Unit, Miscellaneous MSS	VOC	0.11	0.50
			NO_X	0.51	2.25
			CO	0.28	1.23
			$PM/PM_{10}/PM_{2.5}$	0.04	0.17
			SO_2	1.82	7.97
			NH_3	--	--
1HR15	1HR15.001, 1HR15.002	FRAC I Hot Oil Heater and MS Regen Heater Combined SCR Stack	VOC	1.82	7.51
			NO_X	3.38	13.93
			CO	102.08	52.93
			$PM/PM_{10}/PM_{2.5}$	2.52	10.38
			SO_2	0.25	1.02
			NH_3	1.80	7.88
1SV19.002	1SV19.002	FRAC I Amine Tank 1	VOC	0.26	<0.01
1SV19.003	1SV19.003	FRAC I Amine Tank 2	VOC	0.09	<0.01
1SV19.009	1SV19.009	FRAC I Diesel Tank	VOC	0.02	<0.01
1SV19.001	1SV19.001	FRAC I Spent Caustic Tank	VOC	--	--
1SV19.020	1SV19.020	FRAC I 25% Spent Caustic Tank	VOC	--	--
1SV19.006	1SV19.006	FRAC I Slop Water Tank	VOC	0.07	<0.01
1SV19.006L	1SV19.006L	FRAC I Slop Water Loading	VOC	0.07	<0.01
1FUG	1FUG	FRAC I Fugitives	VOC	1.81	7.95
1GEN.001	1GEN.001	FRAC I Emergency Diesel Generator	VOC	3.09	0.15
			NO_X	3.09	0.15
			CO	2.70	0.14
			$PM/PM_{10}/PM_{2.5}$	0.15	0.01
			SO_2	<0.01	<0.01
1PM18.044	1PM18.044	FRAC I Firewater Pump	VOC	3.02	0.15
			NO_X	3.02	0.15
			CO	2.65	0.13
			$PM/PM_{10}/PM_{2.5}$	0.15	0.01
			SO_2	<0.01	<0.01
1CT.001	1CT.001	FRAC I 2 Cell Cooling Tower	$PM/PM_{10}/PM_{2.5}$	0.09	0.39

AIR CONTAMINANT DATA					
1. Emission Point			2. Component or Air Contaminant Name	3. Air Contaminant Emission Rate *	
EPN (A)	FIN (B)	NAME (C)		Pounds per Hour (A)	TPY (B)
1CT.002	1CT.002	FRAC I 6 Cell Cooling Tower	$PM/PM_{10}/PM_{2.5}$	0.30	1.32
1SK25.001	1SK25.001, 1Sweeps, 1C	Flare	VOC	0.45	1.79
			NO_X	0.86	3.70
			CO	1.71	7.38
			$PM/PM_{10}/PM_{2.5}$	0.07	0.29
			SO_2	0.01	0.04
EXPORT FRAC Sources:					
1SK25.001	2.5Sweeps, 2.5PV	Flare	VOC	0.21	0.93
			NO_X	0.33	1.45
			CO	0.66	2.89
			$PM/PM_{10}/PM_{2.5}$	0.02	0.10
			SO_2	<0.01	0.01
2.5FUG	2.5FUG	EXPORT FRAC Fugitives	VOC	0.95	4.14
FRAC II Plant Sources:					
2SK25.002	2SK25.002	FRAC II Thermal Oxidizer	VOC	0.02	0.07
			NO_X	0.42	1.83
			CO	0.23	1.01
			$PM/PM_{10}/PM_{2.5}$	0.02	0.09
			SO_2	<0.01	0.01
			NH_3	--	--
2SK25.002	2MSS2	FRAC II Amine Unit, Miscellaneous MSS	VOC	0.11	0.50
			NO_X	0.51	2.25
			CO	0.28	1.23
			$PM/PM_{10}/PM_{2.5}$	0.04	0.17
			SO_2	1.82	7.97
			NH_3	--	--
2HR15	2HR15.001, 2HR15.002	FRAC II Hot Oil Heater and MS Regen Heater Combined SCR Stack	VOC	1.80	7.86
			NO_X	3.33	14.59
			CO	102.08	55.42
			$PM/PM_{10}/PM_{2.5}$	2.48	10.87
			SO_2	0.24	1.06
			NH_3	1.77	7.77
2SV19.002	2SV19.002	FRAC II Amine Tank 1	VOC	0.26	<0.01
2SV19.003	2SV19.003	FRAC II Amine Tank 2	VOC	0.09	<0.01
2SV19.009	2SV19.009	FRAC II Diesel Tank	VOC	0.02	<0.01
2SV19.001	2SV19.001	FRAC II Spent Caustic Tank	VOC	--	--
2SV19.020	2SV19.020	FRAC II 25% Spent Caustic Tank	VOC	--	--
2SV19.006	2SV19.006	FRAC II Slop Water Tank	VOC	0.07	<0.01

Standard Permit Maximum Emission Rates Table
Standard Permit Number: 93813
Page 3

AIR CONTAMINANT DATA					
1. Emission Point			2. Component or Air Contaminant Name	3. Air Contaminant Emission Rate [a]	
EPN (A)	FIN (B)	NAME (C)		Pounds per Hour (A)	TPY (B)
2SV19.006L	2SV19.006L	FRAC II Slop Water Loading	VOC	0.07	<0.01
2FUG	2FUG	FRAC II Fugitives	VOC	1.42	6.23
2GEN.001	2GEN.001	FRAC II Emergency Diesel Generator	VOC	3.09	0.15
			NO_X	3.09	0.15
			CO	2.70	0.14
			$PM/PM_{10}/PM_{2.5}$	0.15	0.01
			SO_2	<0.01	<0.01
2CT.001	2CT.001	FRAC II 2 Cell Cooling Tower	$PM/PM_{10}/PM_{2.5}$	0.09	0.39
2CT.002	2CT.002	FRAC II 6 Cell Cooling Tower	$PM/PM_{10}/PM_{2.5}$	0.30	1.32
1SK25.001	2Sweeps, 2Comp	Flare	VOC	0.45	1.79
			NO_X	0.83	3.59
			CO	1.66	7.16
			$PM/PM_{10}/PM_{2.5}$	0.07	0.29
			SO_2	0.01	0.04

ESTIMATED EMISSIONS							
	VOC	NOx	CO	$PM_{2.5/10}$	SO_2	NH_3	Other
	tpy	tpy	tpy	tpy	tpy	tpy	tpy
TOTAL EMISSIONS (TPY):	39.80	45.87	130.67	25.9	18.1	15.65	

MAXIMUM OPERATING SCHEDULE:	Hours/Day		Days/Week		Weeks/Year		Hours/Year	8,760

VOC - volatile organic compounds
NO_x - total oxides of nitrogen
CO - carbon monoxide
PM_{10} - particulate matter equal to or less than 10 microns in size
$PM_{2.5}$ - particulate matter equal to or less than 2.5 microns in size
SO_2 - sulfur dioxide

**Fugitive emissions are an estimate only and should not be considered as a maximum allowable

ATTACHMENT B
TCEQ TECHNICAL REVIEW FOR PERMIT NO. 93813
MODIFICATION TO ADD FRAC II (ISSUED MAY 29, 2012)

[redacted]INICAL REVIEW: STANDARD PERM[redacted]R
INSTALLA[redacted]N AND/OR MODIFICATION OF OIL AN[redacted]S FACILITIES

Permit No.:	93813	*Company Name:*	Lone Star NGL Mont Belvieu LP	*APD Reviewer:*	Ms. Dana Johnson
Project No.:	173813	*Site/Area Name:*	Addition of FRAC II and Updated Emissions - LDH Energy Mont Belvieu Gas Plant	*SP No.:*	6002

GENERAL INFORMATION			
Regulated Entity No.:	RN106018260	**Project Type:**	Standard Permit Application
Customer Reference No.:	CN603855040	**Date Received by TCEQ:**	January 20, 2012
Account No.:	None assigned	**Date Received by Reviewer:**	January 26, 2012
City/County:	Mont Belvieu, Chambers County	**Physical Location:**	10030A FM 1942

CONTACT INFORMATION					
Responsible Official/Primary Contact Name and Title:	Mr. Clint Cowan Senior Director Of Environment	**Phone No.:** **Fax No.:**	(210) 403-7470 (210) 403-7670	**Email:**	clint.cowan@energytransfer.com
Technical Contact/Consultant Name and Title:	Mr. Jeff Weiler Environmental Manager	**Phone No.:** **Fax No.:**	(210) 403-7323 (210) 403-7523	**Email:**	jeff.weiler@energytransfer.com

GENERAL RULES CHECK	YES	NO	COMMENTS
Is confidential information included in the application?		X	
Are there associated NSR or Title V permits at the site?		X	There are no other registrations, but this registration does trigger Title V and the company represents that they will seek proper authorization.
Is the application for renewal of an existing standard permit?		X	This is a revision application.

DESCRIBE OVERALL PROCESS AT THE SITE

Lone Star NGL Mont Belvieu Gas Plant owns and operates the above-referenced natural gas processing plant located in Chambers County. The site will consist of two fractionation trains (FRAC I NGL and FRAC II NGL).

FRAC I - The proposed gas processing plant will fractionate Y-grade natural gas liquids through a series of trayed columns that separate the natural gas liquids into the constituent gas products, which include purity ethane, propane, butanes, and natural gasoline, for sale to customers.
The feed to each column is introduced to the middle of the column. Heat is introduced to the reboiler located at the bottom of the column. The reboiler vaporizes a portion of the feed to produce stripping vapors inside the column. The vapor rises through the column contacting the down-flowing liquid. The vapor leaving the top of the column enters the condenser where heat is removed by the cooling medium. Liquid is returned to the column as reflux to limit the loss of heavy components overhead. The liquid leaving the lower part of the column will have the highest boiling point, whereas the hydrocarbon leaving the top of the column (either as vapor or liquid) will have the lowest boiling point.
Products are treated to remove contaminants, which include water, carbon dioxide, and sulfur compounds. These contaminant removal systems are propriety processes that treat the products to meet sales specifications.
A process heater will be used to heat a low vapor pressure heating medium. Cooling will be provided using cooling water tower technology. Process equipment will be electric motor-driven as necessary.

FRAC II - The FRAC II train will fractionate Y-grade natural gas liquids through a series of frayed columns that separate the natural gas liquids into the constituent gas products, which include purity ethane, propane, butanes, and natural gasoline, for sale to customers.
Amine Unit
Natural gas liquid (NGL) feed will enter the Mont Belvieu FRAC II process and pass through the Amine Unit. This unit will use amine contactors to remove carbon dioxide (CO2) and hydrogen sulfide (H2S) impurities from the NGL stream. Some hydrocarbons will also be absorbed in the process. The rich amine will be routed to an amine regenerator, where heat from the FRAC II process' heating oil system will enable the volatilization of the CO2, H2S, and hydrocarbons (primarily volatile organic compounds, VOC) from the rich amine stream. The lean amine will be returned to the amine contactors for reuse. The Amine Unit will be a closed-loop system. Waste gas from the amine regenerator will be routed to the FRAC II thermal oxidizer (TO) for combustion of H_2S and VOC. The Amine Unit flash tank emissions will be sent to the TO. The TO will be designed to combust low-VOC concentration gas and will have a fuel rating of 10 MMBtu/hr, which will keep the temperature in the combustion chamber at or above 1,400 °R The FRAC II TO will generate process gas combustion-related sulfur dioxide (SO2) emissions in addition to criteria pollutant emissions.
Molecular Sieve Unit
From the Amine Unit, the NGL will be routed through a Molecular Sieve dehydration unit, where the water content in the NGL will be reduced. A Regeneration heater will heat a small amount of natural gas that is slip-streamed from the natural gas stream as needed to regenerate the sieve beds. The gas will then be routed back into the system inlet. There are two beds in the molecular sieve design, and one bed will be regenerated at a time. The Molecular Sieve unit will not have vents to the atmosphere. The wet gas from the beds that are regenerated will be routed back to the system. Therefore, the only associated emissions will be from natural gas combustion in the Regeneration heater.
Product Columns
From the Molecular Sieve dehydration unit, the NGL will be fed to a series of trayed columns for separation into constituent product gases. The NGL will enter each column in its middle section. Heat from the FRAC II process' independent heating oil system will be introduced to a reboiler located at the bottom of each column. The reboiler will vaporize a portion of the feed to produce stripping vapors inside the column. The vapors will rise through the column contacting downflowing liquid. The vapor leaving the top of the column will enter a condenser where heat is removed by the cooling medium and the vapors condensed. Liquid will be returned to the column as reflux to limit the loss of heavy components overhead. The liquid leaving the lower part of the column will have the highest boiling point, whereas the hydrocarbon leaving the top of the column (either as vapor or liquid) will have the lowest boiling point.
No criteria pollutant emissions will be generated from processes downstream from the Amine Unit, except emissions from process heaters and fugitives, because the processes will be closed systems.

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

Permit No.:	93813	*Company Name:*	Lone Star NGL Mont Belvieu LP	*APD Reviewer:*	Ms. Dana Johnson
Project No.:	173813	*Site/Area Name:*	Addition of FRAC II and Updated Emissions - LDH Energy Mont Belvieu Gas Plant	*SP No.:*	6002

Process Heaters

The FRAC II train will employ a heating oil system that will provide heat to the process. By using oil, heat can be transferred to the FRAC II process with a minimum loss of heat to the oil, allowing for a quicker recovery to the desired temperature in a closed-loop system. The heating oil system will be a network of piping that will circulate heating oil through various areas of the FRAC II process. Lone Star NGL Mont Belvieu, L.P. plans to utilize the heating oil system as needed to provide heat in the Amine Regeneration unit, in the Molecular Sieve regeneration unit, and as needed to various heat exchangers associated with the FRAC II process (i.e., piping to maintain desired temperatures on process streams).

The FRAC II process will have one New Oil heater rated at 270 million British thermal units per hour (MMBtu/hr) that will support the heating oil system. Additionally, the FRAC II process will utilize a Molecular Sieve Regeneration heater that will be rated at 46 MMBtu/hr. The combustion of natural gas in these two heaters will result in criteria pollutant emissions. Both process heaters will be ducted to a common stack that will be equipped with Selective Catalytic Reduction (SCR) technology to significantly reduce nitrogen oxides (N0x) emissions.

Flare

Art air-assisted flare will be installed at the Mont Belvieu site to control emergency process releases and streams resulting from Maintenance, Startup, and Shutdown (MSS) activities from both fractionation trains (FRAC I and FRAC II). No process streams will be routed to the flare during normal operation. Combustion-related criteria pollutant emissions from the flare will result from the combustion of natural gas fuel to the pilots and combustion of MSS hydrocarbon streams. This permit application addresses the emission increase from the flare associated with the additional MSS activities expected at the FRAC II process. The flare will have pilot gas flow rate of 200 scfh. Emissions from the pilot gas combustion have been already addressed in the FRAC I standard permit application submitted in October 2010. The flare will have a hydrocarbon destruction and removal efficiency (DRE) of 99.0% and will have a height of approximately 210 feet.

Fugitives

Fugitive emissions of volatile organic compounds (VOCs), may result from piping equipment component leaks. The piping components that may leak include valves, flanges, pump seals, etc. Lone Star NGL Mont Belvieu, L.P. will implement the TCEQ 28LAER Leak Detection and Repair (LDAR) program for the entire Mont Belvieu site.

Cooling Water Heat Exchange System

A vapor mist cooling water heat exchange system will be utilized to cool process piping. The water mist will flow over the piping and will be collected for recycle. Due to its design, cooling water heat exchange system is not expected to have any air pollutant emissions. This cooling system will be used for both fractionation trains.

Tanks

The proposed process tanks will store fresh amine, Dowtherm heating oil (for the heating oil system), and used oil. Additionally, a slop water tank will be installed to store waste water and is not expected to be a significant source of air emissions. Further, a pressurized propane storage tank will be used for the emergency generator (this generator was authorized by the FRAC I standard permit in 2010). Finally, a pressurized ammonia (29% aqueous ammonia solution) tank will be used to store the ammonia to be injected into the SCR NOx control system for the two heaters. The ammonia tank will not have air pollutant emissions.

Electric-driven compressors

As process gas travels through pipelines and the plant processes, it loses pressure or energy due to the friction on the pipe walls or as part of the process. Electric-driven compressors will be utilized to maintain necessary gas pressure. These compressors will not be sources of pollutant emissions.

DESCRIBE PROJECT AND INVOLVED PROCESS

The company submitted a form PI-1S to authorize emissions associated with the addition of a second natural gas liquid (NGL) fractionation train (FRAC II) at the above-referenced site. The company is also seeking to update the following representations in the existing FRAC I NGL fractionation plant:

Thermal Oxidizer (TO)

The proposed changes to the FRAC I design include increasing the firing rate of the TO (EPN 002-THERMO) to 10 MMBtu/hr from 0.62 MMBtu/hr currently authorized. The vent stream from the FRAC I amine system will route to this TO. The TO will be designed to combust low-VOC concentration gas from the amine unit and will have the combustion chamber temperature at or above 1,400 °F. The FRAC I TO will generate process gas combustion-related sulfur dioxide (SO2) emissions in addition to criteria pollutant emissions from natural gas fuel combustion. Additional emissions due to the increased firing rate are addressed in Appendix A.

Process Heaters

The proposed changes to the FRAC I design involve installation of two process heaters in place of the one process heater of 318 MMBtu/hr. The two new process heaters will include New Oil heater rated at 270 MMBtu/hr that will support the heating oil system and one Regeneration heater that will be rated at 46 MMBtu/hr. The combustion of natural gas in these two heaters will result in criteria pollutant emissions. Both process heaters will be ducted to a common stack that will be equipped with SCR technology to significantly reduce NOx emissions. In addition, Lone Star NGL Mont Belvieu, L.P. has revised the hydrogen sulfide content of the fuel gas to 4 ppm from 160 ppm previously assumed in the FRAC I standard permit application. The SO2 emission rates from the heaters were, therefore, reduced significantly compared to the previous estimates. Emission rate changes due to the process heater changes are addressed in Appendix A.

Tanks

The proposed process tanks changes to the FRAC I design will include installation of a tank to store used oil from the hot oil system. Lone Star NGL Mont Belvieu, L.P. will no longer install a tank to store TEG (FPN 006-TKTEG has been removed). Additionally, a slop water tank will be installed to store waste water, but it is not expected to be a significant source of air pollutant emissions. Emission changes due to the additional tanks and removal of previously proposed tanks are addressed in Appendix A.

Cooling Water Tower

The previously authorized cooling tower (EPN 008-COOTOW) for the FRAC I unit will be replaced by a vapor mist cooling water heat exchange system. Identical in design to the FRAC II cooling water heat exchange system, this source will no longer be a source of air pollutant emissions. This emission point, therefore, has been removed from the permit application.

Emission Rate Calculation Methodology (Detailed emission calculations can be found in the permit file)

PROCESS HEATERS

The FRAC II process will have one New Oil Heater rated at 270 million British thermal units per hour (MMBtu/hr) that will support the heating oil system and will utilize a Molecular Sieve Regeneration heater that will be rated at 46 MMBtu/hr. The New Oil Heater (EPN 013 SCR/VE) and Regeneration Heater (EPN 013-SCR/VE) emissions are based on the vendor-provided NOx emission factor using SCR as a control and emission factors provided in AP-42, Section 1.4, Tables 1.4-1 and 1.4-2 for carbon monoxide (CO), VOCs, particulate matter (PM), and SO2. To obtain the SO2 emission rates, 100% conversion of 4 ppm hydrogen sulfide (H2S) (i.e., assumed for pipeline quality natural gas fuel) to SO2 was assumed.

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

Permit No.:	93813	*Company Name:*	Lone Star NGL Mont Belvieu LP	*APD Reviewer:*	Ms. Dana Johnson
Project No.:	173813	*Site/Area Name:*	Addition of FRAC II and Updated Emissions - LDH Energy Mont Belvieu Gas Plant	*SP No.:*	6002

THERMAL OXIDIZER

Waste gas from the amine regenerator and the amine unit flash tank emissions will be routed to the FRAC II TO (EPN 012-THERMO) for combustion of H_2S and VOC. The emission rate calculations for NOx from the thermal oxidizer were based upon vender specifications. The NOx factor used meets current Best Available Control Technology (BACT) as described in TCEQ's Chemical Sources Current BACT Requirements for Vapor Oxidizers, dated November 16, 2006. Emission rate calculations for other products of combustion were based on the EPA's Compilation of Air Pollutant Emission Factors (AP-42). Sulfur dioxide emission rate calculations were developed using the thermal oxidizer's flue gas composition provided by the vendor.

FUGITIVE EMISSIONS

Emissions of VOC from fugitive pipeline component leaks (EPN 019-FUG) were estimated using the oil and gas processing factors from the TCEQ's *Draft* Technical Guidance Package (TGP) for Equipment Leak Fugitives (October 2000). Emission control credits from implementation of TCEQ's 28LAER Leak Detection and Repair (LDAR) program for the entire Mont Belvieu site. Speciation of the fugitive VOC emissions was based on the relative constituent concentrations in the various process streams. Total VOC emission estimates exclude methane and ethane.

FLARE

High-pressure sections of process equipment will be depressurized to the plant flare (EPN 004-FLARE) when taken out of service. The equipment will be further purged with nitrogen to the flare, before opening to the atmosphere. Emission factors for CO and NOx resulting from the combustion of waste gases were obtained from TCEQ's Air Permit Technical Guidance for Chemical Sources: Flares and Vapor Oxidizers *(Draft,* October 2000). VOC emissions were based on the flare destruction and removal efficiency (DRE) from the same TCEQ guidance document.

Lone Star NGL Mont Belvieu, L.P. will utilize a common, air-assisted flare for both the FRAC I and FRAC II trains. During normal operation, the flare will have a continuous pilot flame. Emission rate calculations for the pilot flame originally authorized under Standard Permit Number 93813 were based upon appropriate AP-42 factors. Additionally, vent streams due to Maintenance, Startup, and Shutdown (MSS) activities will be routed to the flare. Emissions rate calculations for the flare, addressing the MSS emissions, are described below:

• Startup and Shutdown of the Facility

Provisions for startup will include the ability to produce off specification products and to hold these products in pressurized storage while the columns are conditioned to make on specification products. This material will be rerun into specification products during normal operations. Thus, no flaring is planned during startup of the facilities. During shutdown of the facility, the in-process materials will be maintained within the equipment. All equipment, except the Y-grade Deethanizer, will be designed to the required settle-out pressure. Because the Y-grade Deethanizer is refrigerated, it will need to vent while it gains ambient heat. Thus, during an extended outage of over 1 day, this column will need to vent to flare until the vapor pressure of the material matches the design of equipment. This venting is estimated to be 24 hours duration.

• Inlet Filter Change Out

The Inlet Feed Filter / Inlet Feed Coalescer remove solids and aqueous liquids from the hydrocarbon feed to the facility. The solids are mostly comprised of pipeline dust and rust. The Inlet Feed Coalescer removes entrained water and other immiscible liquids from the hydrocarbon stream.

The filters will be designed to operate continuously to not be changed until normally scheduled maintenance intervals. The filters will be cleared of hydrocarbon liquids using high pressure ethane. This ethane will be vented to flare. The filter will then be filled with water to displace hydrocarbon vapor. The water will be drained prior to opening the equipment to atmosphere. When put back into service, the vessel will be first inerted with nitrogen, then with product with emissions going to the flare system.

• Normal Pump/Compressor Maintenance

Rotating equipment will be designed to operate continuously for up to 30,000 hours before maintenance requiring isolation from the process. Therefore, the rotating equipment maintenance intervals will be coordinated with the scheduled shutdown of the facility.

When necessary, the equipment will be vented to the flare and purged with nitrogen prior to opening to atmosphere. When being put back into service, the equipment will be air freed with nitrogen and purged with process materials. Hydrocarbons will be vented to flare.

Hydrocarbon pump services will contain double mechanical shaft seals with a barrier fluid monitoring system to alert when seal failure is occurring. Hydrocarbon pump services are 100`)/0 spared such that when such a failure occurs, the standby pump is put in service and the failed pump is taken out of service for repair.

Compressor design will incorporate shaft sealing systems that will capture/prevent hydrocarbon emissions. This will be done by double mechanical seals with barrier protection, with an inert purge or other approved methods. Compressors will be vented to the flare system and nitrogen purged prior to being opened to the atmosphere. When put back into service, the equipment will be air freed with nitrogen and then purged with process material to flare prior to startup.

• Meter Area

There will be several liquid meters necessary for this facility. The plan is to locate all meters in the same general location. Liquid meters require recalibration from time to time. The recalibration will be done by use of a portable prover system that will have to be connected and reconnected to each meter run. The meter system will be capable of being connected to the flare system. Each meter/prover connection will be capable of being purged to the flare system. This multiple prover can be operated in proper succession as to be able to slop each prover volume to the next meter service, thus reducing the hydrocarbon vents to flare.

• Amine Point Source

The purity ethane produced from the feedstock will contain amounts of CO2. The CO2 will be removed from the ethane using an amine process. There will be trace amounts of H2S that will also be removed.

To minimize emissions, the amine stripper overhead vent stream will be destructed by a thermal oxidizer with a minimum destruction and removal efficiency (DRE) of 99.0% for VOC and 99.9% DRE for H2S.

• Mixed Butane Treating

The butane products will require some sulfur removal to meet specifications. A propriety system will be used to convert mercaptan sulfur into a disulfide oil that will be separated from the product stream prior to being fed to the DIB tower. This stream will be routed to the heater fire box with a dedicated burner arrangement. These emissions are now part of the heater emissions.

STORAGE TANKS

The feedstock and products will be transferred to and from the site via pipeline and will be stored in nearby salt dome caverns. Thus, the facility will not have feedstock or product storage vessels on site. Lone Star NGL Mont Belvieu, L.P. proposes to maintain bulk storage of utility chemicals received by truck transport. Transfer of these chemicals will utilize a vapor balance system. VOC emission rate calculations for utility chemical storage were calculated using U.S. EPA's TANKS 4.09d software program.

MISCELLANEOUS MAINTENANCE ACTIVITIES

Scheduled miscellaneous maintenance activities will occur in both the FRAC I and FRAC II units. These maintenance activities will include proving flow meters that measure the

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gas feed into the plant on a monthly basis, filter change outs, pumps and compressor maintenance and startups, tank inspection activities, and the use of a parts washer. Because the calculated VOC emissions from these activities are low, emission estimates are based on the frequency of maintenance events and an estimated emission rate per event.

30 TAC §116.610 (Applicability) Rule Check	Y, N, n/a	COMMENTS
(a) The project (construction or modification of a facility or a group of facilities) to be authorized under this standard permit will meet the following requirements.	Yes	
(a)(1) If the project results in a net increase in emissions of air contaminants (other than carbon dioxide, water, nitrogen, methane, ethane, hydrogen, oxygen, or those for which a national ambient air quality standard has been established), it will meet the emission limitations of §106.261 of this title. *For H_2S emissions from process vents, 10 mg/m³ should be used as the "L" value.*	Yes	See below
(a)(2) Construction or operation of the project will commence prior to the effective date of a revision to this subchapter, if the project would no longer meet the requirements of the revision to this subchapter.	Yes	
(a)(3) The proposed project will comply with the applicable New Source Performance Standards (NSPS, 40 CFR Part 60).	Yes	NSPS A, Db, Dc and KKK
(a)(4) The proposed project will comply with the applicable National Emissions Standards for Hazardous Air Pollutants (NESHAPS, 40 CFR Part 61).	N/A	
(a)(5) The proposed project will comply with the applicable Maximum Achievable Control Technology standards (MACT, 40 CFR Part 63).	Yes	MACT ZZZZ
(a)(6) If subject to Chapter 101, Subchapter H, Division 3 of this title (relating to Mass Emissions Cap and Trade Program) the proposed facility, group of facilities, or account will obtain allocations to operate.	Yes	
(b) If the project constitutes a new major stationary source or major modification as defined in §116.12 of this title (relating to Nonattainment and Prevention of Significant Deterioration Review Definitions) is will be subject to the requirements of §116.110 of this title (relating to Applicability) rather than this subchapter.	N/A	The proposed project is a minor modification to an existing minor source under PSD and NNSR regulations.
(c) Requirements of §116.110 will not be 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.	Yes	
(d) If the project involves a proposed affected source (as defined in §116.15(1) of this title (relating to Section 112(g) Definitions)), it will comply with all applicable requirements under Subchapter E of this chapter (relating to Hazardous Air Pollutants: Regulations Governing Constructed or Reconstructed Major Sources (FCAA, §112(g), 40 CFR Part 63)). *Affected sources subject to Subchapter E of this chapter may use a standard permit under this subchapter only if the terms and conditions of the specific standard permit meet the requirements of Subchapter E of this chapter.*	Yes	

261/262 Emission Limits (K=72.4, based on a distance of 554ft)

Chemical	Applicable paragraph of 261/262	L, mg/m³	Emission Limit (E = L/K), lb/hr	Emission Limit tpy	Actual Emissions lb/hr	Actual Emissions tpy
propane	106.261(2)	--	6.0	10.0	5.69	5.71
n-butane		--	6.0	10.0	1.77	2.69
i-butane	106.261(3)	1,900	1.0	4.38	0.94	1.31
i-pentane		350	1.0	4.38	0.48	0.88
n-pentane		350	1.0	4.38	0.47	0.88
diglycol amine (DGA)		--	1.0	4.38	0.91	0.02
Used Oil		--	1.0	4.38	0.91	0.02
New Oil		--	1.0	4.38	0.91	0.02
n-hexane		180	2.49	5.0	0.79	1.64
benzene	106.262	3	0.04	0.18	0.04	0.09
				Total Emissions:	**12.91**	**13.26**

Comments:
1. Flare MSS related emissions are not expected to occur from both FRAC I and FRAC II simultaneously. Therefore, Flare MSS related emissions are included for FRAC I only.
2. FRAC I and II used oil and new oil tanks are not expected to be filled simultaneously. Therefore, hourly emissions for only one tank are compared.

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30 TAC §116.611 (Registration to Use a Standard Permit) Rule Check	**Y, N, n/a**	**COMMENTS**
(a) Form PI-1S has been submitted in order to register the proposed facility under this standard permit, along with the following supporting documentation:	Yes	
(a)(1) the basis of emission estimates;	Yes	
(a)(2) quantification of all emission increases and decreases associated with the project being registered;	Yes	
(a)(3) sufficient information as may be necessary to demonstrate that the project will comply with §116.610(b) of this title (relating to Applicability);	Yes	
(a)(4) information that describes efforts to be taken to minimize any collateral emissions increases that will result from the project;	Yes	
(a)(5) a description of the project and related process; and	Yes	
(a)(6) a description of any equipment being installed.	Yes	
(b) Construction may begin any time after receipt of written notification from the executive director that there are no objections or 45 days after receipt by the executive director of the registration, whichever occurs first, except where a different time period is specified for a particular standard permit.	Yes	
(c) The company has certified that the maximum emission rates listed on the registration reflect the reasonably anticipated maximums for operation of the facility by submission of Form PI-1S.	Yes	

30 TAC §116.614 (Standard Permit Fees) Rule Check	**Y, N, n/a**	**COMMENTS**
The $900 standard permit fee has been submitted. *No fee is required if a registration is automatically renewed by the commission. No fees will be refunded.*	Yes	

30 TAC §116.615 (General Conditions) Rule Check	**Y, N, n/a**	**COMMENTS**
(1) The emissions from the facility, including dockside vessel emissions, will comply with all applicable rules and regulations of the commission adopted under Texas Health and Safety Code, Chapter 382, and with the intent of the Texas Clean Air Act (TCAA), including protection of health and property of the public.	Yes	
(2) All representations with regard to construction plans, operating procedures, and maximum emission rates in any registration for a standard permit will become conditions upon which the facility or changes thereto, must be constructed and operated.	Yes	
(3) All changes authorized by standard permit to a facility previously permitted under §116.110 of this title will be administratively incorporated into that facility's permit at such time as the permit is amended or renewed.	Yes	
(4) Start of construction, construction interruptions exceeding 45 days, and completion of construction will be reported to the appropriate regional office not later than 15 working days after occurrence of the event, except where a different time period is specified for a particular standard permit.	Yes	
(5) The following start-up notification will be given (unless a particular standard permit modifies start-up notification requirements):	Yes	
(5)(A) The appropriate air program regional office of the commission and any other air pollution control agency having jurisdiction will be notified prior to the commencement of operations of the facilities authorized by a standard permit in such a manner that a representative of the executive director may be present.	Yes	
(5)(B) For phased construction, which may involve a series of units commencing operations at different times, the owner or operator of the facility will provide separate notification for the commencement of operations for each unit.	Yes	
(5)(C) Prior to beginning operations of the facilities authorized by the permit, the permit holder will identify to the Office of Permitting, Remediation, and Registration, the source or sources of allowances to be utilized for compliance with Chapter 101, Subchapter H, Division 3 of this title (relating to Mass Emissions Cap and Trade Program).	Yes	
(6) If sampling of stacks or process vents is required, the standard permit holder will contact the commission's appropriate regional office and any other air pollution control agency having jurisdiction prior to sampling to obtain the proper data forms and procedures.	Yes	
(7) The standard permit holder will demonstrate or otherwise justify the equivalency of emission control methods, sampling or other emission testing methods, and monitoring methods proposed as alternatives to methods indicated in the conditions of the standard permit. Alternative methods must be applied for in writing and must be reviewed and approved by the executive director prior to their use in fulfilling any requirements of the standard permit.	N/A	The facility does not seek alternative methods to those indicated.
(8) A copy of the standard permit along with information and data sufficient to demonstrate applicability of and compliance with the standard permit will be maintained in a file at the plant site and made available at the request of representatives of the executive director, the United States Environmental Protection Agency, or any air pollution control agency having jurisdiction.	Yes	

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(9) The facilities covered by the standard permit will not be operated unless all air pollution emission capture and abatement equipment is maintained in good working order and operating properly during normal facility operations. Notification for emissions events and scheduled maintenance shall be made in accordance with §101.201 and §101.211 of this title.	Yes	
(10) Registration of a standard permit by a standard permit applicant constitutes an acknowledgment and agreement that the holder will comply with all rules, regulations, and orders of the commission issued in conformity with the TCAA and the conditions precedent to the claiming of the standard permit. If more than one state or federal rule or regulation or permit condition are applicable, the most stringent limit or condition shall govern.	Yes	
(11) Notwithstanding any requirement in any standard permit, if a standard permit for a facility requires a distance, setback, or buffer from other property or structures as a condition of the permit, the determination of whether the distance, setback, or buffer is satisfied will be made on the basis of conditions existing at the earlier of the date new construction, expansion, or modification of a facility begins, or the date any application or notice of intent is first filed with the commission to obtain approval for the construction or operation of the facility.	Yes	

30 TAC §116.620 (Installation and/or Modification of Oil and Gas Facilities) Rule Check	**Y, N, n/a**	**COMMENTS**
(a) The following emission specifications will be met:	Yes	
(a)(1) Venting or flaring more than 0.3 long tons per day of total sulfur will not occur. *0.3 long tons/day = 672 pounds/day = 28 lb/hr*	Yes	
(a)(2) Uncontrolled emissions of sulfur compounds (except sulfur dioxide, SO_2) from all vents (excluding process fugitive emissions) will not exceed 4 lb/hr unless the vapors are collected and routed to a flare.	Yes	
(a)(3) All vents, excluding any safety relief valves that discharge to the atmosphere only as a result of fire or failure of utilities, emitting sulfur compounds other than SO_2 will be at least 20 feet above ground level.	Yes	*List vent heights:* at least 20 ft
(a)(4) New or modified internal combustion reciprocating engines or gas turbines will satisfy all of the requirements of §106.512, except that registration using the Form PI-7 is not required. Emissions from engines or turbines shall be limited to the amounts found in §106.4(a)(1) of this title (relating to Requirements for Permitting by Rule).	N/A	The site is not seeking authorization for the installation of a new or modified engine or turbine that is required to meet 106.512.
(a)(5) Total VOC emissions from a natural gas glycol dehydration unit will not exceed 10 tpy unless the vapors are collected and controlled in accordance with subsection (b)(2) of this section.	N/A	
(a)(6) Any combustion unit (excluding flares, internal combustion engines, or natural gas turbines), with a design maximum heat input greater than 40 million Btu per hour (using lower heating values) will not emit more than 0.06 pounds of nitrogen oxides per million Btu.	Yes	*List NO_x emissions in pounds per MMBtu:* **<0.6 lb/MMBtu**
(a)(7) If the facility is less than 500 feet from the nearest off-property receptor, it will emit less than 10 tpy uncontrolled VOC process fugitive emissions, unless the equipment is inspected and repaired according to subsection (c)(1) of this section.	N/A	
(a)(8) If the facility is 500 feet or more from the nearest off-property receptor, it will emit less than 25 tpy uncontrolled VOC process fugitive emissions, unless the equipment is inspected and repaired according to subsection (c)(1) of this section.	Yes	VOC emissions will be less than 25 tpy and will comply with subsection (c)(1).
(a)(9) If the facility is less than 500 feet from the nearest off-property receptor, it will emit less than 25 tpy uncontrolled VOC process fugitive emissions, unless the equipment is inspected and repaired according to subsection (c)(2) of this section.	N/A	
(a)(10) If the facility is 500 feet or more from the nearest off-property receptor, it will emit less than 40 tpy uncontrolled VOC process fugitive emissions, unless the equipment is inspected and repaired according to subsection (c)(2) of this section.	N/A	
(a)(11) If the site handles sour gas, and if the facility is located less than 1/4 mile from the nearest off-plant receptor, it will not emit hydrogen sulfide H_2S or SO_2 process fugitive emissions unless the equipment is inspected and repaired according to subsection (c)(3) of this section. If the site handles sour gas, and if the facility is located at least 1/4 mile from the nearest off-plant receptor, it will not emit hydrogen sulfide H_2S or SO_2 process fugitive emissions unless the equipment is inspected and repaired according to subsection (c)(3) of this section, or unless the H_2S or SO_2 emissions are monitored with ambient property line monitors according to subsection (e)(1) of this section. *sour gas = natural gas containing more than 1.5 grains of hydrogen sulfide per 100 cubic feet, or more than 30 grains of total sulfur per 100 cubic feet*	N/A	The site does not handle sour gas.
(a)(12) Flares will be designed and operated in accordance with 40 Code of Federal Regulations (CFR), Part 60.18 or equivalent standard approved by the commission, including specifications of minimum heating values of waste gas, maximum tip velocity, and pilot flame monitoring. If necessary to ensure adequate combustion, sufficient gas shall be added to make the gases	Yes	The flare utilized will be designed and operated in accordance with 40 CFR § 60.18.

[redacted]NICAL REVIEW; STANDARD PERMI[redacted]R
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combustible. An infrared monitor is considered equivalent to a thermocouple for flame monitoring purposes. An automatic ignition system may be used in lieu of a continuous pilot.		
(a)(13) Appropriate documentation has been submitted to demonstrate that compliance with the PSD and nonattainment new source review provisions of the FCAA, Parts C and D , and with Subchapter C of this chapter will be met. *The oil and gas facility will be required to meet the requirements of Subchapter B of this chapter (relating to New Source Review Permits) instead of this subchapter if a PSD or nonattainment permit or a review under Subchapter C of this chapter is required.*	N/A	The increase of emissions are below the levels that would trigger PSD and NNSR review.
(a)(14) Documentation has been submitted to demonstrate compliance with any applicable New Source Performance Standards (NSPS, 40 CFR Part 60).	Yes	
(a)(15) Documentation has been submitted to demonstrate compliance with any applicable National Emission Standards for Hazardous Air Pollution (NESHAP, 40 CFR Part 61).	N/A	
(a)(16) Documentation has been submitted to demonstrate compliance with any applicable maximum achievable control technology standards (MACT, 40 CFR Part 63).	Yes	
(a)(17) New and increased emissions will not cause or contribute to a violation of any NAAQS or regulation property line standards as specified in Chapters 111, 112, and 113 of this title. *Engineering judgment and/or computerized air dispersion modeling may be used in this demonstration.*	Yes	
(a)(18) Fuel for all combustion units and flare pilots will be sweet natural gas or liquid petroleum gas, fuel gas containing no more than ten grains of total sulfur per 100 dry standard cubic feet (dscf), or field gas. If field gas is sour, the operator will maintain records, including at least quarterly measurements of fuel H_2S and total sulfur content, which demonstrate that the annual SO_2 emissions from the facility do not exceed the limitations listed in the standard permit registration. If a flare is the only combustion unit on a property, the operator is not required to maintain such records on flare pilot gas.	Yes	The fuel used is sweet natural gas.
(b) The following control requirements will be met:	N/A	
(b)(1) Floating roofs or equivalent controls will be installed on all new or modified storage tanks, other than pressurized tanks which meet §106.476 of this title, unless the tank is less than 25,000 gallons in nominal size or the vapor pressure of the compound to be stored in the tank is less than 0.5 psia at maximum short-term storage temperature.		The fixed roof tanks used are less than 25,000 gallons.
(b)(1)(A) For internal floating roofs, mechanical shoe primary seal or liquid-mounted primary seal or a vapor-mounted primary with rim-mounted secondary seal will be used.		
(b)(1)(B) Mechanical shoe or liquid-mounted primary seals will include a rim-mounted secondary seal on all external floating roofs tanks. Vapor-mounted primary seals will not be accepted.		
(b)(1)(C) All floating roof tanks will comply with the requirements under §115.112(a)(2)(A) - (F) of this title (relating to Control Requirements).		
(b)(1)(D) In lieu of a floating roof, tank emissions may be routed to:		
(b)(1)(D)(i) a destruction device such that a minimum VOC destruction efficiency of 98% is achieved; or		
(b)(1)(D)(ii) a vapor recovery system such that a minimum VOC recovery efficiency of 95% is achieved.		
(b)(1)(E) Independent of the PBR listed in this paragraph, if the emissions from any fixed roof tank exceed 10 tpy of VOC or 10 tpy of sulfur compounds, the tank emissions will be routed to a destruction device, vapor recovery unit, or equivalent method of control that meets the requirements listed in subparagraph (D) of this paragraph.		
(b)(2) The VOC emissions from a natural gas glycol dehydration unit shall be controlled as follows.		The facility will utilize a molecular sieve as a stripping gas method and does not propose to install a glycol dehydration unit for either of the fractionation trains.
(b)(2)(A) If total uncontrolled VOC emissions are equal to or greater than 10 tpy, but less than 50 tpy, a minimum of 80% by weight minimum control efficiency will be achieved by either operating a condenser and a separator (or flash tank), vapor recovery unit, destruction device, or equivalent control device.		
(b)(2)(B) If total uncontrolled VOC emissions are equal to or greater than 50 tpy, a minimum of:		
(b)(2)(B)(i) 98% by weight minimum destruction efficiency shall be achieved by a destruction device or equivalent; or		
(b)(2)(B)(ii) 95% by weight minimum control efficiency shall be achieved by a vapor recovery system or equivalent.		
(c) The following inspection requirements will be met:	Yes	
(c)(1) Owners or operators who are subject to subsection (a)(7) or (8) of this section will comply with all inspection requirements detailed in (c)(1)(A) through (c)(1)(J) of this section.	Yes	
(c)(2) Owners or operators who are subject to subsection (a)(9) or (10) of this section will comply	N/A	

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with all inspection requirements detailed in (c)(2)(A) through (c)(2)(K) of this section.		
(c)(3) Owners and operators who are subject to the applicable parts of subsection (a)(11) of this section will conduct daily auditory and visual checks for SO_2 and H_2S leaks within the operating area. Immediately, but no later than eight hours upon detection of a leak, operating personnel will isolate the leak and commence repair or replacement of the leaking component; or use a leak collection/containment system to prevent the leak until repair or replacement can be made if immediate repair is not possible.	N/A	
(d) The following approved test methods will be used:	Yes	
(d)(1) An approved gas analyzer used for the VOC fugitive inspection and repair requirement in subsection (c) of this section, will conform to requirements listed in 40 CFR §60.485(a) and (b).	Yes	
(d)(2) Tutweiler analysis or equivalent will be used to determine the H_2S content as required under subsections (a) and (e) of this section.	Yes	The site has not been constructed, but the company will provide test results if the site does process H2S.
(d)(3) Proper operation of any condenser used as a VOC emissions control device to comply with subsection (a)(5) of this section will be tested to demonstrate compliance with the minimum control efficiency. Sampling will occur within 60 days after start-up of new or modified facilities. Notification and reporting requirements, as specified in this section, will be met.	N/A	
(e) The following monitoring and recordkeeping requirements will be met:	Yes	
(e)(1) If the operator elects to install and maintain ambient H_2S property line monitors to comply with subsection (a)(11) of this section, the monitors will be approved by the Engineering Services Section, Office of Compliance and Enforcement office in Austin, and will be capable of detecting and alarming at H_2S concentrations of 10 ppmv. Operations personnel will perform an initial on-site inspection of the facility within 24 hours of initial alarm and take corrective actions as listed in subsection (c)(3)(A) - (C) of this section within eight hours of detection of a leak.	N/A	
(e)(2) The results of the VOC leak detection and repair requirements will be made available to the executive director or any air pollution control agency having jurisdiction upon request. Records, for all components, will include appropriate dates, test methods, instrument readings, repair results, and corrective actions. Records of flange inspections are not required unless a leak is detected.	Yes	
(e)(3) Records for repairs and replacements made, due to inspections of H_2S and SO_2 components, will be maintained.	Yes	
(e)(4) Records will be kept for each production, processing, and pipeline tank battery, or for each storage tank if not located at a tank battery, on a monthly basis. Records will include tank battery identification or storage tank identification (if not located at a tank battery), compound stored, monthly throughput (in barrels/month), and cumulative annual throughput (in barrels/year).	Yes	
(e)(5) A plan will be submitted to show how ongoing compliance will be demonstrated for the efficiency requirements listed in subsection (b)(1)(D) of this section. The demonstration may include, but is not limited to, monitoring flowrates, temperatures, or other operating parameters.	Yes	
(e)(6) Records will be kept, on at least a monthly basis, of all production facility flow rates (in standard cubic feet per day) and total sulfur content of process vents or flares or gas processing streams. Total sulfur shall be calculated in long tons per day.	Yes	
(e)(7) Records will be kept of all ambient property line monitor alarms and will include the date, time, duration, and cause of alarm, date and time of initial on-site inspection, and date and time of corrective actions taken.	N/A	
(e)(8) All required records will be made available to representatives of the agency, the EPA, or local air pollution control agencies upon request and be kept for at least two years. All required records will be kept at the plant site, unless the plant site is unmanned during business hours. For plant sites ordinarily unmanned during business hours, the records will be maintained at the nearest office in the state having day-to-day operations control of the plant site.	Yes	

COMMUNICATION LOG

Date	Time	Name/Company	Subject of Communication
3/22/2012	1:53 PM	Mr. Jeff Weiler / Lone Star	The reviewer sent the following email: I have completed the review of the calculations submitted, but noticed that the speciated VOCs do not match the total VOCs being revised. Please provide updated information confirming compliance with 106.261/106.262.
3/22/2012	2:38 PM	Mr. Jeff Weiler / Lone Star	Mr. Weiler sent an email stating that my request would be sent over to the consultant to get the requested information.
3/26/2012	PM	Ms. Pradnya Kulkarni / ERM	The reviewer spoke with the consultant regarding issues with the speciations and increase of VOC emissions not adding up. The consultant provided clarification for the speciations of FRAC I and FRAC II. The reviewer requested that the company provided an updated table listing the totals for the speciations.
3/27/2012	10:49 AM	Ms. Pradnya Kulkarni / ERM	The reviewer sent the following email to the company:

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			Per our conversation on yesterday, I am needing the updated speciations summary. Please provide the updated information to me today in order for me to proceed with the registration.
3/27/2012	11:11 AM	Ms. Pradnya Kulkarni / ERM	The consultant sent the following email in response to the email above: Please see attached pdf for updated Table A-10. It now has the "Total Emissions" columns as we discussed yesterday. Also, yesterday, we had briefly talked about the Frac I tank changes. So wanted to note that Page 20 of the permit application mentions proposed tank changes to the FRAC I process. Briefly, for Frac I, Lone Star is proposing to install a tank to store used oil from the hot oil system and not install a tank to store TEG (as proposed in the original FRAC I standard permit application). Thank you for all your help on this permit and please feel free to contact us with any more questions.

Source Category		VOC (tpy)	NOx (tpy)
FRAC II		18.13	18.74
As-Built Updates to FRAC I	Heaters	0.04	0.09
	Thermal Oxidizer	10.52	4.69
	Cooling Tower	5.52	0
	Tanks	0.03	0
PROJECT TOTALS		23.12	23.34
NAA MAJOR PROJECT LEVEL		25	25
NAA REVIEW TRIGGERED?		**NO**	**NO**

MAXIMUM ALLOWABLE EMISSION RATES TABLE (MAERT)

EPN / Emission Source	Specific VOC or Other Pollutants	VOC		NOx		CO		PM_{10}		$PM_{2.5}$		SO_2		Other	
		lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy
FRAC I															
001-MSS / Miscellaneous Maintenance		1.42	0.02												
002-Thermo / 10 MMBtu/hr Thermal Oxidizer	Total HAPs	2.40	10.53	1.11	4.85	1.60	7.02	0.15	0.66	0.15	0.66	3.42	14.97	0.04	0.16
010-DGEN1 / Emergency Diesel Generator		3.94	0.07	3.94	0.07	3.45	0.06	0.20	<0.01	0.20	<0.01	<0.01	<0.01		
011-DGEN2 / Firewater Pump		3.94	0.07	3.94	0.07	3.45	0.06	0.20	<0.01	0.20	<0.01	<0.01	<0.01		
003-SCR/VE / 270 MMBtu/hr New Hot Oil Heater	Total HAPs	1.46	6.38	2.70	11.83	10.14	44.43	2.01	8.81	2.01	8.81	0.18	0.78	0.50	2.19
003-SCR/VE / 46 MMBtu/hr Mol Sieve Regenerator Heater	Total HAPs	0.25	1.09	0.46	2.01	1.73	7.57	0.34	1.50	0.34	1.50	0.03	0.13	0.09	0.37
004-FLARE / Flare (MSS)	Total HAPs	4.35	0.05	4.17	0.05	8.32	0.10	<0.01	<0.01	<0.01	<0.01			0.06	<0.01
005 - TKAMIN / Amine Tank		0.45	0.01												
006 - TKUSE / Used Oil Tank		0.91	0.02												
007-TKHOT / New Oil Tank		0.91	0.02												
008-TKSLOP / Slop Water Tank		0.91	0.02												
009-FUG / Fugitives		1.80	7.89												

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

Permit No.:	93813	*Company Name:*	Lone Star NGL Mont Belvieu LP	*APD Reviewer:*	Ms. Dana Johnson
Project No.:	173813	*Site/Area Name:*	Addition of FRAC II and Updated Emissions - LDH Energy Mont Belvieu Gas Plant	*SP No.:*	6002

FRAC II															
020-MSS / Miscellaneous Maintenance		1.42	0.02												
013-SCR/VE / 270 MMBtu/hr New Hot Oil Heater	Total HAPs	1.46	6.38	2.70	11.83	10.14	44.43	2.01	8.81	2.01	8.81	0.18	0.78	0.50	2.19
013-SCR/VE / 46 MMBtu/hr Mol Sieve Regenerator Heater	Total HAPs	0.25	1.09	0.46	2.01	1.73	7.57	0.34	1.50	0.34	1.50	0.03	0.13	0.09	0.37
004-FLARE / Flare (MSS)	Total HAPs	4.35	0.05	4.17	0.05	8.32	0.10	<0.01	<0.01	<0.01	<0.01			0.06	<0.01
012-Thermo / 10 MMBtu/hr Thermal Oxidizer	Total HAPs	2.40	10.53	1.11	4.85	1.60	7.02	0.15	0.66	0.15	0.66	3.42	14.97	0.04	0.16
015-TKAMIN / Amine Tank		0.45	0.01												
016-TKUSE / Used Oil Tank		0.91	0.02												
017-TKNEW / New Oil Tank		0.91	0.02												
008-TKSLOP / Slop Water		0.91	0.02												
019-FUG / Fugitives		1.19	5.23												
*TOTAL EMISSIONS	LBS/HR:	36.99		24.76		50.48		5.4		5.4		7.26		2.76	
	TPY:		49.54		37.62		118.36		21.94		21.94		31.76		5.44
MAXIMUM OPERATING SCHEDULE:	Hours/Day	24	Days/Week	7	Weeks/Year	52	Hours/Year	8,760							

*Fugitive emissions of VOC are not included in the total emissions since natural gas fractionation is not one of the 28 listed source categories in 40 CFR § 52.21; therefore, the total VOC emissions without fugitives is 36.42 tpy and the increase of VOC emissions would be 15.08 tpy.

	TECHNICAL REVIEWER	PEER REVIEWER	FINAL REVIEWER
SIGNATURE:	Dana Johnson	See Hard Copy.	See Hard Copy.
PRINTED NAME:	Ms. Dana Johnson	Ms. Anne Inman, P.E., Manager	Ms. Michael Wilson, P.E., Director
DATE:	May 29, 2012	May 29, 2012	May 29, 2012

BASIS OF PROJECT POINTS	POINTS
Base Points:	2.5
Project Complexity Description and Points: communications	2.0
Technical Reviewer Project Points Assessment:	4.5
Final Reviewer Project Points Confirmation:	