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

Permit No.:	110125	***Company Name:***	EP Energy E&P Company, L.P.	***APD Reviewer:***	Mr. Mark McDonald
Project No.:	219875	***Site/Area Name:***	Lehman Central Production Facility Revision: Throughput and equipment changes.	***SP No.:***	6002 - 116.620 PRE 2011-FEB-27

GENERAL INFORMATION			
Regulated Entity No.:	RN106727225	**Project Type:**	Standard Permit Application
Customer Reference No.:	CN604089854	**Date Received by TCEQ:**	October 23, 2014
Account No.:		**Date Received by Reviewer:**	November 18, 2014
City/County:	Cotulla, La Salle County	**Physical Location:**	From Cotulla travel W on Cochina Rd for 2.9 miles turn L continue south 0.5 miles then continue right for 0.4 miles to lease gate turn right heading NW and follow to site.

CONTACT INFORMATION					
Responsible Official/Primary Contact Name and Title:	Mr. Erik Hauser Sr. EH&S Specialist	**Phone No.:** **Fax No.:**	(713) 997-5464	**Email:**	ERIK.HAUSER@EPENERGY.COM
Technical Contact/Consultant Name and Title:	Ms. Julie Spear Sr. Engineer	**Phone No.:** **Fax No.:**	(303) 980-0540 (303) 985-2080	**Email:**	JULIE_SPEAR@GOLDER.COM

GENERAL RULES CHECK	**YES**	**NO**	**COMMENTS**
Is confidential information included in the application?		X	No confidential information indicated.
Are there associated NSR or Title V permits at the site?		X	
Is the application for renewal of an existing standard permit?		X	
Do NSPS, NESHAP, or MACT standards apply to this registration?			NSPS 60.18, NSPS IIII, NSPS JJJJ, NSPS OOOO, MACT HH & ZZZZ.
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		*If YES, list contaminant and associated emission limit in §§ 106.261(3) or (4) or 106.262(3):* See table 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	*list the emission rate (must be ≤4 lb/hr):* <4
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		*List vent heights:* 20'
Are there new or modified internal combustion reciprocating engines or gas turbines at the facility?	X		*emission rates to satisfy §§ 106.512 and 106.4(a)(1)*
Is there a natural gas glycol dehydration unit at the site that emits >10 tpy of VOCs?		X	*If YES, mark the type of control device used.* ___ flash tank ___ Vapor Recovery Unit ___ VOC destruction device ___ other
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	*If YES, list NO_x emissions in pounds per MBtu.(must be < 0.06 lb/MBtu):*

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Are VOC process fugitive emissions uncontrolled? *If YES, mark applicable inspection and repair requirements.* [§ 116.620(c)(1) or § 116.620(c)(2)]			VOCs (tpy) / receptor < 500' / receptor ≥500' __ <10 / no LDAR / no LDAR __X__ 10≤25 / 28M [(c)(1)] / no LDAR __ 25≤40 / 28VHP [(c)(2)] / 28M [(c)(1)] __ >40 / 28VHP [(c)(2)] / 28VHP [(c)(2)]
Are all components in sweet crude oil or gas service (defined in 30 TAC Chapter 101)? *If NO, mark applicable inspection and monitoring requirements.* [§§ 116.620(c)(3) and 116.620(e)(1)]		X	RECEPTOR / APPLICABLE REQUIREMENT ____ < ¼ mile / § 116.620(c)(3) __X__ ≥ ¼ mile / § 116.620 (c)(3) or (e)(1)
Are there flares at the facility?	X		
Is a flare the only combustion unit at the site?		X	*If NO, mark the fuel type for all combustion units.* __X__ sweet natural gas ___ liquid petroleum gas ___ fuel gas ≤10 grains total sulfur/100 dscf ___ field gas ≤1.5 grains H_2S/100 dcfm or ≤30 grains total sulfur/100 dscf ___ field gas >1.5 grains H_2S/100 dcfm or >30 grains total sulfur/100 dscf (recordkeeping requirements of § 116.620(a)(18) applicable)
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	*Fix roof > 25,000 gallons* ___ internal floating roof [§ 116.620(b)(1)(A) & (C)] ___ external floating roof [§ 116.620(b)(1)(B) & (C)] __X__ VOC destruction device with 98% destruction efficiency ___ Vapor Recovery System with 95% recovery efficiency
Are there any fixed roof storage tanks onsite that emit > 10 tpy VOCs or sulfur compounds?		X	*Flare control device and its efficiency [§ 116.620(b)(1)(D)]:* VOC destruction device with 98% destruction efficiency

DESCRIBE OVERALL PROCESS AT THE SITE

With this modification, Lehman CPF will processes 20.0 million standard cubic feet per day (MMscf/day) of sweet natural gas, 6,000 bbls of oil per day, and 4,500 barrels of water per day. This site handles inlet production that is sour; however, the gas and the oil is treated onsite and is considered sweet gas during processing and liquid storage. Gas is processed in the HP Scavenger Vessel prior to processing and oil is chemically treated prior to storage. A process flow diagram is included in Figure 1.

2.1 Incoming Well Effluent System Well fluids from completed producing wells are transported to Lehman via a 6-inch infield gathering network. Each of the Producing Wells' downstream well-pad piping is equipped with a manual production choke valve and diverter valves, used for directing the flow of well effluent to the production manifold and directly to the gathering system or the test header for wellstream flow measurement. Measured wellstreams are then returned to the production manifold and routed to the central processing facility (CPF) via the infield gathering system. **2.2**

Hydrocarbon Processing System Well fluids from the infield gathering system will be routed to either the HP or IP slug catchers. The HP and IP slug catchers, LP separator, heater treaters, and stabilization skids will separate the well fluids into its three constituent phases: gas, oil, and water. The separated gas phase from all these processes will be directed to the gas dehydration contactor via the flash gas and IP compressors. All produced water will be sent to the produced water separator and then to the produced water storage tanks. As the oil proceeds from the slug catchers through each stage of the process to the oil storage tanks, progressively more water and entrained gases will be removed. The separated oil phase from the slug catchers will first be directed to the LP separator and then sent to the oil heater treater skid (EPN H1) under level control. Then, the oil will be sent from the oil heater treater skid to its respective oil stabilization skid (EPN H2) under level control. Once the oil reaches the oil stabilization skid, it will flow under pressure control through the stabilization exchanger to the stabilizer heater. Inside the stabilizer heater, the oil will be heated to achieve vapor pressure sales specifications. The stabilized oil will flow through the stabilizer vessel to the stabilization exchanger and will be cooled prior to being sent to the good oil storage tanks. October 2014 4 Project No.1412630 Overhead vapors from the stabilizer will be cooled and sent to the natural gas liquids (NGL) separator, where condensate will be dropped out and sent to the NGL bullet tank for storage until truck load out. Cooled gas will be directed to the flash gas compressor (EPN C1). From the oil tanks, the oil will be directed to the crude oil pipeline via the oil pipeline pump/LACT system. Upon metering, the oil will flow under pressure into the oil pipeline system via HP positive displacement pumps. When needed, truck loading of oil will occur via a LACT unit (EPN L1,V1). If the oil does not meet export specifications, the diverter valve will be actuated, and the oil will be pumped to the bad oil storage tank. Emissions from oil truck loading operations will be unassisted using a return line to an annually leak-tested atmospheric tanker truck with a collection efficiency of 98.7. Collected vapors will be routed into a Vapor Point lVRU volatile organic compound (VOC) recovery system. EP Energy is conservatively claiming a 95% control for the lVRU Loading of produced water will be uncontrolled (EPN L2).

2.3 Gas Treatment System Low pressure gas from the LP separator, heater treater, stabilizer, and NGL separators are commingled and routed to the gas dehydration contactor through the flash gas compressor (EPN C1), while the LP slug catcher gas will be compressed by the IP compressor (EPN C2). Low Pressure gas from the LP Separator, heater treater and stabilizer are commingled and routed to the LP Gas Filter Separator then to the flash gas compressor where it is compressed to high pressure. Discharge from the flash gas and IP compressors are commingled and routed to the H2S scavenger vessel where H2S is reduced. The sweetened gas is then routed to the gas dehydration contactor for final treating. The gas dehydration contactor is designed to lower the water content of the high pressure gas with lean triethylene glycol (TEG). High pressure gas will enter the gas

dehydration contactor and flows across packing, where lean TEG will absorb water to meet sales specifications. The dry gas will then sent to the sales gas pipeline. The glycol after-scrubber (EPN G1) will first direct the rich glycol to the flash tank (glycol separator), where hydrocarbon vapors will be removed through a pressure reduction. The flash gas will be routed to the HP flare (EPN FL2), while the remaining rich glycol will be routed to the regenerator and glycol reboiler. The glycol regenerator and reboiler will remove excess water and other contaminants such as benzene, toluene, ethylbenzene, and xylene (BTEX) from the glycol. The removed gas stream will be routed to the BTEX condenser and gas/liquid separator for 80% VOC control and then sent to the glycol reboiler burner (EPN H3), which provides for an additional 90% VOC control, for a combined control efficiency of 98%. October 2014 5 Project No.1412630

2.4 Fuel Gas Treatment System High pressure gas from the glycol-after scrubber is sent to the fuel gas treatment system. This system consists of fuel scrubber and two sets of redundant upstream pressure regulators. The high pressure gas takes two pressure cuts through the upstream regulators and then enters the fuel gas scrubber. The fuel gas scrubber is a two phase vertical pressure vessel designed to remove any entrained liquid in the gas prior to being sent to the CPF fuel gas users (e.g., gas fueled generators1 and storage tank blanket gas). The vessel will have an inlet distributor and gas mesh pad arrangement. Condensate produced in the scrubber is level controlled and returned under pressure to the inlet of the LP separator.

2.5 Tank Farm General Description The Tank Farm consists of a total of nine 1,000-barrel nominal capacity, API 12D vertical storage tanks enclosed within an approximately 20,000-square foot (approximately 250-feet by 80-feet) bermed area in the southeast portion of the CPF. Six tanks are designated for good oil storage (EPNs T1 through T6), one bad oil tank (EPN T7) and two produced water/drip (EPNS W1 through W2). All tanks are fitted with 24-inch by 36-inch access cleanout panels at the base of the tank. Two common and redundant electric motor driven bad oil recycle pumps are available to transfer and roll crude in the tanks from a skid outside the berm.

2.6 Good Oil Tanks Process crude oil from the stabilizer skid will be piped to a good oil fill header. A line will run to the tank farm from the header, where each tank will be connected by a separate vertical fill line that fills the specific tank from the top. Each tank will have a discharge outlet near its base that ties into one of two headers routed to both the oil pipeline transfer system and the truck LACT unit skid, from which crude oil will be sampled, metered, and exported by pipeline or tanker trucks. Blanket gas from the fuel gas scrubber for the good oil tanks enters the top of each tank via an 8-inch line. Pressure control valves (PCVs) are set at 3-ounces per square inch (oz/in2) to control blanket gas pressure to the Tanks. A 10-inch Emergency Pressure Relief Valve set at 8-oz/in2 and Enardo Model 660L spring loaded thief hatch set for 6-oz pressure and 0.4-oz vacuum is affixed to the top of each tank to protect each tank in over/under pressure situations, control vapor losses and provide access for maintenance and inspection.

2.7 Bad Oil Tank Off-spec crude oil from the produced water separator, LP and HP flare scrubbers, LACT units, and other sources will be sent into a bad oil filler header. A discharge line near the base of the tank will connect October 2014 6 Project No.1412630 directly into the pumps, from which off-spec crude oil will be routed back into the tank or pumped to the LP separator for further processing. Off-spec crude from the produced water separator, LP separator, flash gas and compressors, LP and HP scrubbers, and LACT Units are piped into a bad oil filter header. The tank is connected to one of the rolling headers should rolling of crude by the Bad Oil Recycle Pumps be necessary. A 4-inch discharge line near the base of the tank connects directly into the Pumps from which off spec crude can be rolled back into the tank or pumped to the LP Separator, for further processing. Blanket gas from the fuel gas scrubber enters the top of the bad oil tank via an 8-inch line. PCVs are set at 3-oz/in2 and 2-oz/in2 respectively to control blanket gas pressure to the Tanks. A 10-inch Emergency Pressure Relief Valve set at 8-oz/in2 and Enardo Model 660L spring loaded Thief Hatch set for 6-oz pressure and a 0.4-oz vacuum is affixed to the top of the tank to protect the tank in an over/under pressure situations, control vapor losses and provide access for maintenance and inspection. **2.8 Produced Water Tanks** Produced Water from the heater treater, stabilizer, and produced water separator is routed to the produced water tanks. Separate discharge lines will be at the base of each tank connect to a drain connection and tanker truck load-out rack (EPN L2). Blanket gas from the Fuel Gas Scrubber, enters the top of the Produced Water Tanks via an 8-inch line. PCVs are set at 3-oz/in2 to control blanket gas pressure to the Tanks. A 10-inch Emergency Pressure Relief Valve set 8-oz/in2 and Enardo Model 660L spring loader Thief Hatch set for 6-oz pressure and a 0.4-oz vacuum is affixed to the top of each tank to protect each tank in an over/under pressure situations, control vapor losses and provide access for maintenance and inspection. Each tank is affixed with an anode to help limit corrosion.

2.9 NGL Bullet Tank Natural gas liquids, which are a by-product of the oil stabilization process, will flow from the stabilizer skid's NGL blow cases to the 30,000-gallon NGL bullet tank, where they will be collected and stored under pressure. Load-out trucks will routinely connect to the NGL bullet tank bulkhead hose and unload NGL from the bullet tank for transport. When a load-out truck operator connects to the associated bulkhead to unload NGL from the tank, the operator will attach the bulkhead liquid outlet hose to the truck tank's liquid pump line and attach the vapor return hose to the truck tank's vapor space. As the truck pumps NGL into the tank truck, an equal volume of vapor will be returned to the bullet tank. This vapor return, in addition to the breather lines installed on October 2014 7 Project No.1412630 the bullet tank, will prevent the tank truck from overpressure and prevents a vacuum condition in the bullet tank. Since the liquids will be stored under pressure, there are no emissions associated with the NGL bullet tank.

2.10 Flare System The Flare System consists of both High Pressure (EPN FL2) and Low Pressure (FL1) Systems. These systems are configured to collect both operational and emergency releases in a closed system, to separate and remove condensables, and provide for efficient burning of vapors at a safe distance from CPF operational areas. The HP System includes a flare header where both free gas from compressor shutdowns and multiphase fluids from overpressure relief valves are routed to the HP flare scrubber. The scrubber separates the liquids and the vapors are routed to the flare for destruction. The flare is an electronic spark ignition, GBA Corona Model CSF 1 HP Flare and Stack, designed for a smokeless burn. The system supports collection of flare/relieving sources from all pressurized components with the exception of the storage tanks including; slug catchers, LP separator, heater treater, stabilizer, NGL bullet tank, gas scrubbers, separators, gas Compressors, Gas Dehydration Contactor and Produced Water Separator. The collection system is piped via multiple lines to a 6-inch HP Header. Flare gas from the HP Header enters the HP Flare Scrubber via a 6-inch line. Inlet pressure to the HP Flare Scrubber will be limited by PSV's affixed to each process vessel. Flare gas from the HP Flare Scrubber is piped to the base of the HP Flare Stack via a 6 inch line. Fuel gas from the Fuel Gas System shall be piped to the HP Flare Stack via a 2-inch line where it is reduced to a 1-inch pilot gas line affixed to the Stack. The pilot gas line runs to the pilot nozzle that is connected to a 6000-volt, electronic spark igniter. Pilot gas supply to the nozzle and ignition are controlled from an electronic pilot control panel. The LP System includes a low pressure flare header where all tank overheads are manifolded to a closed header where the vapors are routed to a pressure vacuum relief and then to the LP Flare Scrubber. The pressure vacuum relief maintains 5-oz/in2 pressure on the tanks to limit flaring of only those vapors related to tank operations. The scrubber separates the liquids and the vapors are routed to the flare for destruction. The flare includes a remote ignition GBA Corona Model CAF 8, 25-foot, smokeless LP Flare and Stack, and Air-assist Blower. Each Tank is outfitted with a Thief Hatch rated at 6 oz pressure/4 oz vacuum. The LP Flare Scrubber is equipped with a level transmitter, controller, level sensor high, and switches to facilitate monitoring of liquid levels and discharge to

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the LP Flare Scrubber pumps. October 2014 8 Project No.1412630 Flare gas from the LP Gas Scrubber is piped to the LP Flare Stack via an 8-inch line where it is reduced to a 4-inch inlet diameter waste gas line. This waste gas line parallels the Stack's 16-inch Air Riser to a point where it flanges into the flare. Fuel gas from the Fuel Gas System is piped to the LP Flare Stack via a 2-inch line where it is reduced to a one pilot gas line affixed to the Stack. The pilot gas line runs to the pilot nozzle that is connected to a 6000-volt, electronic spark igniter. Pilot gas supply to the nozzle and ignition are controlled from an electronic pilot control panel. Air assist for the LP Flare Stack is provided by a variable frequency drive (VFD) controlled, direct drive Blower affixed to the base of the Stack.

2.11 Power Generation System The Power Generation System is currently comprised of one gas-fired Genset generator that will provide power to all Site loads. The next phase of plant growth will include a connection to the power utility and installation of an engine driven generator as a back-up.

DESCRIBE PROJECT AND INVOLVED PROCESS

EP Energy proposed to modify the Standard Permit Registration No. 110125 to include the following modifications:

- Update emissions calculations to allow for an increase in Site-wide throughput of produced crude oil to 6,000 bbl/day.
- Update emission calculations to include flash emissions from the crude oil storage tanks (T1-T7) and produced water tanks (WT1-WT2) (EPN FL1).
- Update emission calculations during loading operations (EPN L1 and L2) and consolidate EPN L1, uncontrolled loading losses and V1, controlled loading vent losses into one emission point, EPN L1/V1.
- Remove the backup Cummins diesel-fired generator (EPN E2).
- Remove Alternate Operating Scenario

EP Energy E&P Company, L.P. has chosen to certify their site and emissions under 116.620 using a PI-1S. 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.

EP Energy is not registering any planned maintenance, startup, and shutdown (MSS) emissions at this time. MSS emissions for the Site are permitted under the Permit-by-Rule (PBR) found at 30 TAC 106.359. The Site records associated with the claim of and compliance with this PBR have been updated to reflect the Site changes sought by this application. This includes emissions associated with alternate operating scenarios for the stabilizer skid, flash gas compressor and IP compressor downtime.

OIL AND GAS FACILITY GENERAL INFORMATION

Natural Gas Throughput (MMSCF/day):	20	**H_2S Content of Inlet Gas:**	225 ppm
Oil/Condensate Throughput (bbl/day):	6000	**Is the gas sweet or sour?**	Sour
Produced Water Throughput (bbl/day):	4500	**Is this site operational/producing?**	Yes

EQUIPMENT/PROCESSES AT SITE

Number of each:	**Compressor Engines:**	2	**Glycol dehydrators:**	1	**VRU:**	1
	Separators:	3	**Amine units:**		**Fugitives:**	1
	Storage Tanks:	9	**Heater Treaters:**	5	**MSS:**	
	Truck Loading:	2	**Flares:**	2	**Other:**	

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)-(d) of the oil and gas standard permit.

106.261 / 106.262 Compliance
The site complies with the limitations of 30 TAC §§106.261 and 106.262.

Engines and NAAQS compliance were previously authorized and had no changes.

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261 / 262 Compliance

Chemical Speciation - REVISED
EP Energy E&P Company, L.P.
Lehman Central Production Facilty
Standard Permit Registration

VOC Project Summary

EPN	Old Emissions (June 17, 2013) Hourly Emissions (lb/hr)	Old Emissions (June 17, 2013) Annual Emissions (tpy	New Emissions Hourly Emissions (lb/hr)	New Emissions Annual Emissions (tpy	Emission Point Increases Increases Speciated Hourly Emissions (lb/hr)	Emission Point Increases Increases Speciated Annual Emissions (tpy
FL1	11.46	2.61	16.040	24.949	**4.58**	**22.34**
L2	0.19	0.99	0.398	1.742	**0.21**	**0.75**
L1/V1	0.06	0.07	0.022	0.095	**0.00**	**0.03**
TOTAL	**11.71**	**3.67**	**16.46**	**26.79**	**4.79**	**23.12**

CHEMICAL SPECIATION IS FOR NON-COMBUSTION PROJECT EMISSIONS INCREASES ONLY (NOT FACILITY-WIDE).

Chemical Speciation

Chemical	Applicable Paragraph of 261/262	L Value (mg/m^3)	Emission Limit $(lb/hr)^{(1,2)}$	Emission Limit (tpy)	Hourly Emissions (lb/hr)	Annual Emissions (tpy)
Hydrogen Sulfide	106.262(a)(2)	10	0.29	1.29	**0.0000**	**0.0000**
Propane	106.261(a)(2)	-	6.00	10.00	1.7340	8.3531
Isobutane	106.261(a)(2)	-	6.00	10.00	0.5807	2.8228
n-Butane	106.261(a)(2)	-	6.00	10.00	1.3722	6.6720
Isopentane	106.262(a)(2)	350	6.00	5.00	0.3515	1.7092
n-Pentane	106.262(a)(2)	350	6.00	5.00	0.3783	1.8398
C6's	106.262(a)(2)	1,760	6.00	5.00	0.1077	0.5235
n-Hexane	106.262(a)(2)	176	5.18	5.00	0.0771	0.3752
C7's	106.262(a)(2)	350	6.00	5.00	0.0978	0.4757
C8's	106.262(a)(2)	350	6.00	5.00	0.0384	0.1869
C9's	106.262(a)(2)	1,050	6.00	5.00	0.0125	0.0607
C10 - C14	106.261(a)(3)	-	1.00	4.38	0.0000	0.0000
C15-C19	106.261(a)(3)	-	1.00	4.38	0.0000	0.0000
C20+	106.261(a)(3)	-	1.00	4.38	0.0000	0.0000
Benzene	106.262(a)(2)	3	0.09	0.39	0.0254	0.0394
Toluene	106.262(a)(2)	188	5.53	5.00	0.0079	0.0383
Ethylbenzene	106.262(a)(2)	434	6.00	5.00	0.0008	0.0039
Xylenes	106.262(a)(2)	434	6.00	5.00	0.0032	0.0155
2,2,4-Trimethylpentane	106.262(a)(2)	350	6.00	5.00	0.0000	0.0000
Total Butane	106.261(a)(2)	-	6.00	10.00	**1.9529**	**9.4949**
Total VOC					**4.79**	**23.12**

STORAGE TANK FLASH LOSS CALCULATION METHOD

G.O.R.	E&P Tanks	Direct Measure	Vasquez-Beggs	Simulation	Other
X					

CONTROL DEVICE

Type (VRU, Flare, Vapor Combustor):	Flare for storage tanks		
VOC Destruction Efficiency:	98%	**H_2S Destruction Efficiency:**	98%

CONTROL DEVICE

Type (VRU, Flare, Vapor Combustor):	VRU for Loading		
VOC Destruction Efficiency:	95%	**H_2S Destruction Efficiency:**	95%

COMMUNICATION LOG

Date	Time	Name/Company	Subject of Communication
11/21/2014	3:11 p.m.	Ms. Julie Spear / Golder Associates Inc.	Ms. Spear, My name is Mark McDonald and I am the assigned TCEQ air permit reviewer for the revision to LEHMAN CENTRAL PRODUCTION FACILITY for EP Energy E&P Company, L.P. (Permit# 110125 / Project #219875) I have finished my technical review and unfortunately the site does not meet the 106.261/ 106.262 speciation requirement of the Standard permit rules 116.620. Butane is not allowed to be split up into Isobutane and n-Butane. The rule allows a total of all butane's for 6 lbs/hr and 10 tpy, and this project total exceeds the limit. Can you please double check your calculations and get back with me? Reviewer included 261/262 table and the TCEQ 5 day policy.
11/24/2014	9:23 a.m.	Ms. Julie Spear / Golder Associates Inc.	Phone / emails: Ms. Spear submitted updated calculations for project only VOC speciation meets the limits. Additionally, Ms. Spear reiterated that conservative estimates seem to put the overall site over the limit, but they will recalculate and update records kept at the site. Emails and new tables have been added to the revision application file.

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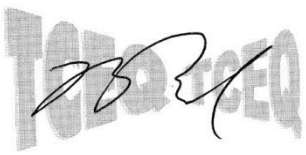
ESTIMATED EMISSIONS

EPN / Emission Source	VOC		NOx		CO		$PM_{10/2.5}$		SO_2		H_2S		Benzene		HCHO	
	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	lbs/hr	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy	lbs/hr	tpy
F1 / Equipment Fugitives	2.05	8.99									<0.01	0.02	<0.01	0.01		
C1 / Cat G3516 TALE Compressor Engine	2.95	12.94	5.91	25.88	8.86	38.82	0.10	0.44	0.01	0.03	-	-	<0.01	0.02	0.16	0.68
C2 / Cat 3508 TALE Compressor Engine	1.39	6.08	2.78	12.17	4.17	18.25	0.04	0.19	<0.01	0.01	-	-	<0.01	0.01	0.24	1.03
E1 / Aggreko Diesel Generator Engine	0.03	0.14	2.82	12.36	0.15	0.68	0.09	0.39	0.66	2.89	-	-	<0.01	0.01	<0.01	0.01
H1 / 1.0 MMBtu/hr Heater Treater	<0.01	0.02	0.07	0.31	0.06	0.26	0.01	0.02	<0.01	<0.01	-	-	-	-	-	-
H2 / 1.0 MMBtu/hr Heater Treater	<0.01	0.02	0.07	0.31	0.06	0.26	0.01	0.02	<0.01	<0.01	-	-	-	-	-	-
H3 / 1.5 MMBtu/hr Stabilizer Treater	<0.01	0.03	0.11	0.46	0.09	0.39	<0.01	0.04	<0.01	<0.01	-	-	-	-	-	-
H4 / 1.5 MMBtu/hr Stabilizer Treater	<0.01	0.03	0.11	0.46	0.09	0.39	<0.01	0.04	<0.01	<0.01	-	-	-	-	-	-
H5 / Glycol Dehydrator Still Vent Emissions	0.19	0.85														
H5 / 0.3 MMBtu/hr Glycol Reboiler	<0.01	<0.01	0.02	0.08	0.02	0.08	<0.01	0.01	<0.01	<0.01	-	-	-	-	-	-
FL2 / HP Process Flare – From Dehyd Flash Tank and Pilot gas	0.24	1.03	0.16	0.69	0.31	1.37	<0.01	<0.01	<0.01	<0.01	-	-	<0.01	<0.01		
L1/V1 / Controlled Loading – Oil Loading area	0.02	0.10											<0.01	<0.01		
L2 / Uncontrolled Produced Water Loading	0.40	1.74														
FL1 / LP Flare	16.04	24.95	4.45	6.98	8.88	13.92	0.12	0.19	<0.01	<0.01	-	-	0.03	0.04		
TOTAL EMISSIONS (TPY):		**56.90**		**59.70**		**74.41**		**1.34**		**2.96**		**0.02**		**0.09**		**1.72**

MAXIMUM OPERATING SCHEDULE:	**Hours/Day**	24	**Days/Week**	7	**Weeks/Year**	52	**Hours/Year**	8760

	TECHNICAL REVIEWER	PEER REVIEWER	FINAL REVIEWER
SIGNATURE:			
PRINTED NAME:	Mr. Mark McDonald	Mr. Joe Shine	Ms. Anne M. Inman, P.E., Manager
DATE:	November 24, 2014	November 25, 2014	November 26, 2014

BASIS OF PROJECT POINTS	POINTS
Base Points:	2.5
Project Complexity Description and Points: Project > 15 days old	
Technical Reviewer Project Points Assessment:	2.5
Final Reviewer Project Points Confirmation:	