



Region 6 Compliance Assurance and Enforcement Division INSPECTION REPORT

Inspection Date(s):	11/20/2013		
Media:	Air		
Regulatory Program(s)	Clean Air Act (CAA), Title V, State Implementation Plan (SIP), New Source Performance Standards (NSPS), National Emission Standard for Hazardous Air Pollutants (NESHAP), Risk Management Plan (RMP)		
Company Name:	Regency Field Services, LLC		
Facility Name:	Keystone Gas Plant		
Facility Physical Location:	6297 CR 301		
(city, state, zip code)	Kermit, TX 79745		
Mailing address:	P.O. Drawer R		
(city, state, zip code)	Kermit, TX 79745		
County/Parish:	Winkler County		
Facility Contacts:	Tommy Johnson	Plant Manager	
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FRS Number:	110015744550		
Identification/Permit Number:	Title V: Site Operating Permit O-2940; RMP 1000 0016 2628		
Media Number:	AFS # 48-495-00006		
NAICS:	486210 (Pipeline Transportation of Natural Gas) 211112 (Natural Gas Liquid Extraction)		
SIC:	4922 (Natural Gas Transmission), 1321 (Natural Gas Liquids)		
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State Inspector(s):	None		
Metadata	Title:	Regency Field Services Keystone Gas Plant Kermit Winkler County TX	
	Author:	US EPA Region 6 Compliance Assurance and Enforcement Division Dallas TX	
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EPA Lead Inspector Signature/Date			1/24/14
		Debbie S. Ford	Date

Supervisor Signature/Date	 Cynthia J. Kaleri	1-24-14 Date
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Section I - INTRODUCTION

PURPOSE OF THE INSPECTION

EPA Region 6 inspectors Debbie Ford, Clint Rachal, and Amanda Ferguson arrived at the Regency Field Services LLC / Keystone Gas Plant (Keystone) at 9:05 am on November 20, 2013 for an unannounced inspection. We located Ms. Judy Williams in the Keystone Receiving Office, identified ourselves, and asked to speak to the Plant Manager or environmental contact. She notified the Plant Manager, who had left the facility earlier that morning, that we were onsite.

Mr. Tommy Johnson, Plant Manager, returned to the plant at 9:30 a.m. I presented my credentials to him at the opening conference and explained that we were at the facility to determine compliance with the facility's Title V permit and the Clean Air Act, and that the inspection was part of EPA Region 6's Energy Extraction and Production Initiative (EEPI).

Mr. Johnson stated that additional personnel were coming to the facility for the inspection:

- Mary Valencia, Specialist Environmental Permitting, was approximately an hour south of Odessa and that she would arrive in approximately two hours. She arrived at 11:00 a.m.
- Mr. Clarence Rasco, Environmental Compliance Coordinator, was driving to the facility from Jal, NM. He arrived at 9:50 a.m.
- Mr. Kelly Jamerson, Director – North Assets, arrived at 11:00 a.m. with Ms. Valencia.

I also informed Mr. Johnson that EPA inspector Dominique Duplechain would be arriving later to conduct a Risk Management Plan inspection, and that she had already notified her contact. She arrived at the facility and met with Mr. Richard Dansby, PSM Specialist, for Regency Energy Partners. She presented her credentials to Mr. Dansby and informed him that this was an EPA Clean Air Act inspection to determine compliance with the 40 Code of Federal Regulations (CFR) Part 68– Chemical Accident Prevention Provisions. ***Note: Dominique's RMP portions of the report are noted separately under the Observations and Areas of Concern Sections below.***

FACILITY DESCRIPTION

The Keystone Gas Plant is a manned facility located approximately 7.4 miles northeast of Kermit, TX. To reach the facility, from the junctions of Highways 18 & 302 in Kermit, go north on Highway 18 for 4.3 miles to junction with FM 874. Go east on FM 874 for 4.5 miles to the junction with FM 1218, go north on FM 1218 for 0.5 miles to junction of CR 301 go east on CR 301. The facility is on the left. Keystone operates 8760 hours per year and currently employees 12 full-time employees (15 at full staff).

The Keystone Gas Plant was originally built in 1948 as a lean oil plant (lean oil absorption) by Sid Richardson. In the mid-70s the company installed the cryogenic unit, which uses a turbo expander process. If the expander is not operational, the facility also has a Joule-Thompson or J-T valve as a backup process. In 2006 Southern Union Gas (SUG) purchased all of the Sid Richardson gas processing facilities in the area. In 2012 Energy Transfer bought SUG. Both SUG and Energy Transfer co-operated the facility for six months. The operating company then became Regency Energy Partners, LP, which is

the indirect parent of Regency Field Services, LLC (see Appendix 5). According to Mr. Johnson, the design capacity of the gas plant is 125 million standard cubic feet per day (MMSCFD), but it averages operations at 85-95 MMSCFD. Mr. Johnson became Plant Manager at Keystone in July 2011.

Mr. Johnson provided a process flow diagram (see Appendix 4) and reviewed current operations at the facility. The Keystone Gas Plant receives gas streams from four inlet pipelines:

- 600 pound (lb) high-pressure gas
- 300 lb inlet gas
- 100 lb inlet gas
- low-pressure (10-19 lbs) inlet gas.

The facility uses various compressors throughout the site to boost pressures of the gas to meet processing and pipeline pressures. The facility also has pigging receivers on the 600 lb and 300 lb inlet pipelines. Keystone processes the condensate in an onsite condensate stabilizer to remove lighter components and then routes these gases to the low-pressure inlet gas stream. Keystone stores the condensate in pressurized tanks before shipment offsite via truck.

The facility uses an H₂S analyzer to monitor the sulfur content of the inlet gas. If the inlet gas has more sulfur content than can be handled by the SRU, the gas is routed to the Acid Gas Flare (FL-1). The inlet gas is typically 1.25% acid gas components: approximately 75-80% carbon dioxide (CO₂) and 20-25% hydrogen sulfide (H₂S). The acid gas is routed through the Amine Unit to remove the CO₂ and H₂S. The rich amine is regenerated in the amine regenerator and the acid gas is routed to the Sulfur Recovery Unit (SRU), which consists of 4 beds: A and D use a SelectOx process; B and C use the Claus process. Molten sulfur collects in the sulfur pit prior to offsite shipment via truck. The SRU has a sulfur production capacity of 20 long tons (LT) per day but averages operation at 12 LT/day.

The Amine Unit's outlet gas containing less than 1 ppm H₂S content is routed through the glycol dehydrator and the molecular (mole) sieve dehydrators to remove moisture from the gas stream prior to the separation stage in the Cryogenic Plant. The mole sieve dehydrators consist of three beds: two are online and the third is regenerating.

The Cryogenic Plant separates gas liquids from methane. The methane stream, or residue gas, is shipped via pipeline to El Paso Energy (aka Kinder Morgan) or Trans Western, which is owned by Energy Transfer. The remaining liquids, consisting of hydrocarbons C2 and higher, is called Y-grade and is shipped via pipeline to Enterprise Products.

PERMIT HISTORY

Permit or PBR number	Date or Regulation	Description
PBR 36121 (exemption registration)	9/8/97 (30 Texas Administrative Code (TAC) §106.183, 106.492, 106.512)	2 new Caterpillar engines (C23, C24); Glycol Heater No. 3; Therminol Heater No. 2; Ellenberger Emergency Flare
PBR 36121	12/18/09 (30 TAC §106.512)	Caterpillar engines C26, C27, C28
PBR 73140	30 TAC §106.492	Grandfathered sources C1-C10, C13-C18, C20; High Pressure Flare
PBR 90277	30 TAC §106.492	Existing process flare as emergency flare.
NSR Permit 2724	3/8/04	SRU/ Amine/ Glycol Unit/ AG Flare, C21, C22,

		LDAR
General Operating Permit (GOP) O-769	Voided 9/17/13	Voided upon issuance of SOP
Site Operating Permit (SOP) O-2940	9/17/13	Includes case-by-case Compliance Assurance Plan (CAM) for SRU catalytic incinerator

Section II – OBSERVATIONS

During the plant tour, Clint Rachal used an infrared camera, FLIR Model GF320 Serial Number 44401279, to detect hydrocarbon emissions at the facility. I carried an MSA Sirius Multigas Detector with Photoionization Detector (PID) Serial Number A3-12746 to detect hydrogen sulfide (H₂S), lower explosive limits (LEL), oxygen (O₂), and volatile organic compounds (VOCs). The Sirius was calibrated at the hotel on the morning of the Keystone inspection (see Appendix 7).

Note: When the data was downloaded from the instrument log, I noted that the time in the data log was approximately 2 hours later than the actual time the instrument was operated. This was the first inspection which used the MSA Sirius since it was purchased by EPA. The instrument time was set to current time after the inspection.

Production Data – Ms. Valencia provided the following production data for Keystone Gas Plant:

	2011	2012	2013
INLET (MCF)	37,131,303	41,020,923	32,680,237
RESIDUE (MCF)	26,042,630	29,326,436	21,706,759
NGL (BBLS)	3,864,618	4,218,528	3,286,769
CONDENSATE (GALLONS)	9,863,696	10,525,539	8,408,191
SULFUR (LONG TONS)	1,205	2,768	2,480

Emission Point Review:

I.D.	Description	Service	Observations
C1	Clark BA-6 1200 HP S/N 36067 Installed: 1971	Inlet compression 300 lb service	Not operating.
C2	Clark BA-6 1200 HP S/N 36068 Installed: 1971	Inlet compression 300 lb service	Operating.
C3	Clark BA-6 1200 HP S/N 36069 Installed: 1971	Inlet compression 300 lb service	Not operating.
C4	Clark BA-6 1200 HP S/N 36070 Installed: 1971	Inlet compression 100 lb service	Operating
C5	Clark BA-6 1200 HP S/N 36071 Installed: 1971	Inlet compression 100 lb service	Operating
C6	Clark HBA-6 1320 HP S/N 36072 Installed: 1971	Inlet compression 100 lb service	Not operating.
C7	Clark HBA-6 1320 HP S/N 36073 Installed: 1971	Inlet compression 100 lb service	Operating.
C8	Clark BA-6 1200 HP S/N 36075 Installed: 1971	Inlet compression	Out of service.
C9	Clark HBA-6 1320 HP	Inlet compression	Out of service.

I.D.	Description	Service	Observations
	S/N 36074 Installed: 1971		
C10	Clark BA-6 1200 HP S/N 36076 Installed: 1971	Inlet compression	Out of service.
C17	Clark HBA-6 1320 HP S/N 36213 Installed: 1971	Recompression	Not operating.
C18	Clark HBA-6 1320 HP S/N 36253 Installed: 1971	Recompression	Not operating.
C20	Cooper Bessemer GMW V-250-8 2700 HP S/N 47619 Installed: 1971	Inlet compression	Not operating.
C21	Cooper Bessemer GMW V-275-8 3200 HP S/N 48257 Installed: 1971	Recompression	Operating.
C22	Cooper Bessemer GMW V-275-8 3200 HP S/N 48258 Installed: 1971	Recompression	Operating.
C23	Cat G3608-8 2350 HP S/N 4WF00067 Installed: Jul 1997	Inlet compression (LP system)	Operating. NSPS Subpart KKK
C24	Cat G3612-12 3530 HP S/N 1YG00118 Installed: 8/4/09 (not subject to NESHAP Subpart ZZZZ since replacement in-kind)	Inlet compression (LP system)	Operating.
C25	Clark HRA6 660 HP S/N 21281 Installed: 1971	Reinjection	
C26	Caterpillar G3516 TALE 4SLB 1340 HP S/N WPW02715 Mfg date: Jan 2009 Oxidation catalyst (CO reduction $\geq$ 93%)	Refrigeration	Operating. NESHAP Subpart ZZZZ NSPS Subpart JJJJ
C27	Caterpillar G3516 TALE 4SLB 1340 HP S/N WPW02697 Mfg date: Dec 2008 Oxidation catalyst (CO reduction $\geq$ 93%)	Refrigeration	Operating. NESHAP Subpart ZZZZ NSPS Subpart JJJJ
C28	Caterpillar G3516 TALE 4SLB 1340 HP S/N WPW02751 Mfg date: Jan 2009 Oxidation catalyst (CO reduction $\geq$ 93%)	Refrigeration	Operating. NESHAP Subpart ZZZZ NSPS Subpart JJJJ
FL-1	Acid Gas (AG) Flare		Operating. Visible emissions observed using FLIR camera.
FL-2	High Pressure (HP) Flare		Operating.
FL-6	Low Pressure (LP) Flare		No flame present *
S-1	SRU Catalytic Incinerator (D Bed) CAM requirements: sulfur dioxide (SO ₂) Continuous Emission Monitoring System (CEMS): SO ₂ hourly average $\leq$ 182.88 lbs/hr		Approximately 10% visible emissions (white) observed. (see SRU below)
	Posey Pond (sump after Acid Gas Knockout Drum in SRU)		Visible emissions observed with FLIR camera
LTN	BN-WWTK Produced Water Tank 210 bbl		Visible emissions observed with FLIR camera
LTS	BS-WWTK Produced Water Tank 210 bbl		Visible emissions observed with FLIR camera

*see discussion under LP Flare below.

Compressors – Caterpillar engines C26, C27, and C28 replaced engines that were damaged in a fire at the facility in 2009. The new engines are 4-stroke, lean burn (4SLB) natural gas-fired engines and are subject to NESHAP Subpart ZZZZ and NSPS Subpart JJJJ.

Requirement	C26	C27	C28
Date of Construction (commenced)	11/3/09	9/10/09	9/10/09
Initial Notification (per 40 CFR 63.6645(c) due no later than 120 days after subject to Subpart ZZZZ)	1/20/10 (due 3/3/10)	1/6/10 (due 1/8/10)	1/6/10 (due 1/8/10)
Actual startup date (notification date – due within 15 days of actual startup)	3/16/10 (3/30/10)	1/24/10 (1/28/10)	1/24/10 (1/28/10)
Installation date	Apr. 2010	Dec. 2009	Dec. 2009
Performance testing –			
NESHAP initial (w/in 180 days of startup) semi-annual	6/24/10 12/21/10 5/24/11 11/22/11 5/23/12 11/12/12 5/14/13 12/19/13	4/28/10 10/26/10 5/24/11 11/22/11 5/23/12 11/12/12 5/14/13 12/19/13	5/11/10 11/09/10 5/24/11 11/22/11 5/31/12 11/12/12 5/5/13 12/19/13
NSPS 8760 testing	6/24/10 5/24/11 5/23/12 5/14/13	6/24/10 5/24/11 5/23/12 5/15/13	6/24/10 5/24/11 5/31/12 5/15/13

Keystone noted on their performance testing reports that after 2 semi-annual compliant tests, they could test annually, but since they had deviations on temperature records, they were continuing with a semi-annual performance test schedule. Keystone noted in the two Title V Deviation Reports reviewed (see Appendices 20 and 21) that the Continuous Monitoring System did not record the temperature as follows:

Compressor	Reporting Period 7/1/12-12/31/12	Reporting Period 1/1/13-6/30/13
C-26	93 hours (2.39% of operating time)	262 hours (6.54% of operating time)
C-27	107 hours (2.53% of operating time)	270 hours (6.6% of operating time)
C-28	103 hours (2.47% of operating time)	261 hours (7.8% of operating time)

I have requested information about the cause of these deviations from Ms. Valencia and will review when I receive the requested information.

Keystone self-reported in the Title V Deviation Report for the period 1/7/13 – 7/6/13 that they failed to submit the NESHAP Subpart ZZZZ Semi-Annual Deviation Report by the due date of 7/30/13 (within 30 days after the reporting period ended on 6/30/13) (see AOC # 1).

Emission Events - Prior to the inspection, I reviewed incidents reported to the Texas Commission on Environmental Quality (TCEQ) Excess Emission Reporting System and Emission Inventory records for 2011. The Keystone Gas Plant experienced the following numbers of events:

	Reportable	Non-reportable*
2013	123	89
2012	99	127
2011	86	n/a
2010	33	n/a

*from Title V Deviation Report for 2H 2012 and 1H 2013. Only represents half of the reporting year.

The causes of the events reviewed often were one or more of the following categories:

- Pigging caused one or more compressors to shut down, thus causing flaring
- Compressor #23 shut down for a variety of reasons, causing flaring
- Field units shut down, causing flaring
- Amine Unit shut down, causing the plant to go sour, thus requiring the plant to flare until the gas could be treated
- SRU shut down due to high temperatures in a bed or the auxiliary burner would not light
- Chiller issues

The AG Flare experienced some significant emission events in 2011:

TCEQ STEERS number	Event Begin Date	Event End Date	Days	SO ₂ (lbs)	SO ₂ (tons)	SO ₂ avg (lbs/hr)
154347	5/10/11	6/24/11	46	1,790,000	895	1,621
156621	7/9/11	7/10/11	2	55,700	27.85	1,160
156718	7/12/11	9/9/11	60	2,700,000	1,350	1,875
159465	9/18/11	10/21/11	34	1,540,000	770	1,887
161142	10/29/11	10/30/11	2	125,000	62.5	2,604
161775	11/8/11	3/28/12	142	11,600,000	5,800	3,403

Due to the large number of events reported to the STEERS database, I have not evaluated all of the events from 2010-2013. I reviewed the 2011 events since the 2011 Emission Inventory reported 9,900 tons of SO₂ in upset emissions from the AG Flare. I am noting that the remaining events should be reviewed as a follow-up to this inspection.

Since the October 2013 turnaround, the facility has continued to have flaring events at the AG Flare (see Appendix 18):

TCEQ STEERS number	Event Begin Date	Event End Date	Days	SO ₂ (lbs)	SO ₂ (tons)	SO ₂ avg (lbs/hr)	
189210	10/14/13	10/22/13	8	150,000	75	781	Producers were informed to shut in gases to the plant for the duration of the shutdown.
190405	11/4/13	11/5/13	2	33,200	16.6	691	Computers in the Distributed Control System shutdown. No uninterrupted power supply for operating the plant. I am noting this for follow-up.

TCEQ STEERS number	Event Begin Date	Event End Date	Days	SO ₂ (lbs)	SO ₂ (tons)	SO ₂ avg (lbs/hr)	
190938	11/17/13	11/18/13	2	31,900	16	664	Heaters shutdown in the SRU due to a false low oil indicator. And the auxiliary burner would not light. *
191652	12/4/13	12/5/13	2	92,100	46	1,918	Auxiliary burner went down and could not relight it.*

*According to Mr. Johnson, during the October turnaround, Keystone upgraded the burner and ignition system on the auxiliary burner to improve reliability.

I am recommending to follow-up on the SO₂ emissions from the facility to ensure that the Keystone Gas Plant has not caused an exceedance of the National Ambient Air Quality Standard for SO₂ or PM_{2.5}.

Flares – The facility uses three flares:

- **AG Flare (Emission Point FL-1)** is an unassisted flare that combusts acid gases when the SRU is down or if the facility inlet gas is too high in sulfur that the SRU cannot properly treat the gas or if the residue gas is off-spec (greater than 4 ppm sulfur) and cannot enter the sales pipeline. The AG Flare also combusts the non-condensable stream from the Glycol Dehydrator reboiler. Site Operating Permit (SOP) O2940 issued 9/17/13 indicates that its operation is authorized under New Source Review (NSR) Permit 2724 issued 3/8/04. The flare is subject to the requirements of 40 CFR 63 Subpart A and 40 CFR 60 Subpart A. I requested testing records for the AG flare, but at the time of this inspection report had not received a response from Keystone.
- **HP Flare (Emission Point FL-2)** is an unassisted flare that combusts the high pressure (600 lb) residue gas from within the plant when the sales meter shuts in the Keystone Gas Plant.
- **LP Flare (Emission Point FL-6)** is an unassisted flare that combusts inlet gases to the plant from the low pressure (300 lb and less) pipeline when the facility compressors are shut down.

SOP Permit O2940 indicates that the operation of the HP and LP Flares are authorized under 30 TAC § 106.492 (see Appendix 10) which requires the flare to be equipped with a “continuously burning pilot or other automatic ignition system that assures gas ignition and provides immediate notification to appropriate personnel when the ignition system ceases to function.” The facility uses indicator lights near the pipe rack for the AG and HP Flares. The indicator light for the LP flare is located on the control panel at the base of the flare and is only visible by walking or driving to the control panel (**see AOC #2**).

When we observed the LP Flare with the FLIR camera, the flare was not lit (see AOC #3). We walked to the control panel and the indicator light was not on. Mr. Thompson opened the control panel and the power was off to the panel. He turned the switch on, but the power did not turn on. He walked to the flare base and reported that the entire ignition system was disassembled. Later, Ms. Valencia reported that the LP Flare had maintenance work on the ignition system performed during the turnaround in October (see Appendix 13). The systems could not be tested until the gas plant came back online. Subsequent to the inspection, Ms. Valencia supplied daily meter flow times and volumes to the LP Flare (see Appendix 11). As reported in a 1/10/14 e-mail from Ms. Valencia, LP Flare igniter system still was not operational. I will continue to follow up on this issue. It should be noted that Keystone reported several Emission Events to TCEQ when they routed emissions to the LP Flare, but no operator noted that the flare was not lit. Mr. Johnson stated that the operators observe the flare indicator lights on their

daily plant walkthroughs. Subsequent to the inspection, Ms. Valencia provided the updated GRU Log Sheet in which the operators must document that the flares are lit.

When we observed the AG Flare with the FLIR camera, we observed that the flare was operating, but we also observed unburned hydrocarbons trailing downwind for a significant distance. This was observed when the flare was operating with a minimal flow. As discussed above, the facility has experienced some flaring events with high quantities of SO₂ emitted. I am recommending a follow-up to ensure that the flows to the AG Flare are within the design specifications of the AG Flare.

Sulfur Recovery Unit (see Appendix 6 for SRU Flow Diagram) – According to Mary Valencia, the SRU is not subject to the LDAR monitoring program since the unit has not been modified or reconstructed to trigger applicability. Mr. Johnson reported that in early 2012, pneumatic controls of the SRU had been changed to programmable logic controls (PLC). Also, Mr. Johnson stated that during the plantwide turnaround October 14-21, Keystone changed a 10" inlet valve to a 14" inlet valve with an actuator, upgraded the auxiliary burner's ignition system and burner to improve reliability, and added more exchangers and condensers. At the time of the inspection, we observed emissions from the vent stack off the incinerator bed (D Bed). Mr. Johnson indicated that the goal was to have no visible emissions from the stack. He explained that Keystone had hired a consultant, Sulfur Experts, to evaluate their SRU about 10 days prior to our inspection. He stated that he had not received a report from the company, but there may be channeling through the D Bed which was affecting the efficiency of the unit.

During the plant tour, the MSA Sirius Multigas Detector alarmed for volatile organic compounds (VOCs) when Clint Rachal observed emissions from multiple open-ended pipes (see Appendix 1 - Photo 3; Appendix 2 – Video MOV_2681.mp4) in an area known as the Posey Pond. Mr. Johnson explained that this was a sump after the acid gas knockout drum. The Keystone Gas Plant's operating permits do not reflect the three point sources observed during the inspection and Keystone does not report these emissions in their emission inventory reporting (see AOC #4). I also observed visible staining of the soil around the sump area. Ms. Valencia reported in the 12/4/13 e-mail that the sump had overflowed when the knockout drum was drained and that the soil had been removed since our visit.

According to the flow diagram, the Posey Pond drains into the Bass Sump, and accumulated liquids pump into the Produced Water Tanks LTN and LTS. These appear to be the tanks BN-WWTK and BS-WWTK, respectively, which are described in the permit application as 210 barrel (bbl) waste water disposal tanks. During the plant tour, Clint Rachal detected visible emissions with the FLIR camera from the vent stack from each tank (see Appendix 1 – Photo 1; Appendix 2 – Video MOV_2678.mp4). Emissions from these tanks are authorized by 30 TAC § 106.352, according to the permit application, which limits "total emissions, including process fugitives, combustion unit stacks, separator, or other process vents, tank vents, and loading emissions from all such facilities constructed at a site under this subsection shall not exceed 25 tpy each of SO₂, all other sulfur compounds combines, or all VOCs combined...." (30 TAC § 106.352(I)(2)). Since the facility called these tanks "produced water tanks" and we observed emissions from the tank vents, I have noted that there should be follow-up to determine actual emissions from the tanks. We discussed the emissions observed with the FLIR camera and the fact that the tank vents did not have a flame arrestor when electrical panels and truck loadout are located at the base of the tanks. Ms. Valencia noted in the 12/4/13 e-mail that Keystone is in the process of generating a work order to install a flame arrestor (Enardo valve) on each tank vent.

During the inspection, I requested the last two Title V Semi-Annual Deviation Reports (see Appendices 20 and 21). During my review of these reports, I noted the following self-reported deviations for the SRU:

Requirement	Reporting Period 7/7/12-1/6/13	Reporting Period 1/7/13-7/6/13
Permit 2724 issued 3/8/04 – Condition 1 - Maximum Allowable Emission Rate (MAERT) for the SRU Stack (Emission Point S-1) is 182.88 lbs/hr of SO ₂ (see AOC #5)	One (1) 24-hour period*	Eight (8) 24-hour periods*
Permit 2724 issued 3/8/04 – Condition 3 – Minimum sulfur recovery efficiency is 95% (see AOC #6)	Eleven (11) 24-hour periods*	Thirteen (13) 24-hour periods*

*Keystone is reporting the deviations for the MAERT emission limit and the efficiency as a 24-hour period. Permit 2724 doesn't indicate that the lb/hr Emission Rate has a 24-hour averaging period and the formula for calculating efficiency is based upon lb/hr. I am noting these issues for follow-up.

Leak Detection and Repair (LDAR) – The Keystone Gas Plant is an onshore natural gas processing plant and is subject to NSPS Subpart KKK for Equipment Leaks of VOC from Onshore Natural Gas Processing Plants. Keystone contracts their monitoring and some first attempt at repair for leaking components to TEAM Industrial Services in Midland, TX. At the time of the inspection I asked for copies of 2012-2013 Daily Work Records and Daily Calibration Forms provided to Keystone whenever TEAM was onsite. The Daily Work Record provides a summary of information such as names and identification numbers of technicians who were onsite, the serial numbers of instruments used that day, number of components monitored or remonitored, how many leaks were found, number of first attempts performed, and times in and out for the workers. The Daily Calibration Form is filled out for each TVA-1000 instrument used to monitor that day. Thus, if the Daily Work Record indicated that there were three technicians onsite, each with a TVA, there should be a corresponding Daily Calibration Form to document the calibration required by EPA Method 21.

I reviewed the records provided (see Appendix 14) and Keystone only provided Daily Work Records and Daily Calibration Forms for 10/10/12 – 9/30/13. I noted in the Follow-up Section below that the additional records should be obtained from Keystone and reviewed. The number of components monitored by technicians per day seemed appropriate. There were some discrepancies noted:

- The number of leaks in the LDAR report for October and November 2012 was one more for each month than was noted on the Daily Work Record sheets.
- Missing Daily Calibration Forms for 1/16/13, 6/26/13, 7/22/13, 7/23/13, 9/30/13.
- On the 2/13/13 Daily Work Record (see Appendix 15), there were 9 leaks documented, but they were not reported in the semi-annual report (see Appendix 16, see AOC #6).
- Keystone did not provide any daily records for March 2013, but the report documented some pump leaks
- No daily records for October 2013.
- One of the Daily Calibration Sheets on 7/23/13 wasn't signed by the technician.
- Technicians are drawing a line through the mid-day and end-of-day calibrations and drift. It is not clear if the technicians are performing calibration checks to quality-assure the monitoring data for the day. Technicians are instructed on the form to put "N/A" for Mid-Day and End-of-Day at appropriate Leak Definitions if NOT used for those periods, but they are not doing so.
- There were several components that had been on the Delay of Repair portion of the report that were removed from Delay of Repair without a unit shutdown.
- Determine what corrective action Keystone has implemented to prevent the shutdown of the DCS system in a power failure situation.

As part of the inspection, I asked for a backup copy of the electronic database that TEAM uses to store monitoring data for the Keystone Plant. I received this from TEAM on 12/4/13. I have noted that this data should be analyzed for compliance with NSPS Subpart KKK requirements. Also, I have asked for a summary of units at Keystone that are subject to monitoring under the LDAR program. At this time, I have not received a reply.

RMP OBSERVATIONS

written by Dominique Duplechain

Subpart A-General

§68.12 General Requirements - Keystone submitted a single Risk Management Plan (RMP) which registered two covered processes Propylene (Refrigerant) and Natural Gas Liquids (NGLs) that are subject to Program 1 requirements. The latest RMP update, dated 8/16/2011, (see Appendix 22) identified two flammable chemicals, propylene (see Appendix 23) and NGL flammable mixture (see Appendix 24), that are above the threshold quantities identified in §68.130.

In order to be eligible for Program 1, a facility must analyze the worst case release scenario and document that the nearest public receptor is beyond the distance to a flammable endpoint, complete a five year accident history, and ensure that response activities are coordinated with emergency planning and response agencies. At the time of the 8/16/2011 RMP update, the facility certified that the distance to the specified endpoint was less than the distance to the nearest public receptor and that it had no accidental release that caused offsite impact.

At the time of the inspection, Keystone provided documentation on the Offsite Consequence Analysis (OCA) (see Appendices 22 and 25). The results of the analysis for both propylene and natural gas liquid flammable mixture indicated that the estimated distance to flammable endpoint was 0.3 miles at 1 psi overpressure. The OCA map did not clearly identify the facility, the point of release, or distance to endpoint. In an email dated 12/13/2013, Mr. David Rider, PSM/RMP Manager for Regency Energy Partners, provided a new OCA map which clearly identified the facility, point of release, public receptors, and distance to endpoint (See Appendix 29). It appears that the facility has public receptors within the distance to endpoint and is subject to Program 3 requirements. §68.12(b)(1) (see AOC # 8).

In emails dated 12/4/13 and 12/5/13, Mr. Rider provided reports for two incidents:

- 3/1/2009 incident (see Appendix 26): an employee used a metal bucket to shield a NGL leak from a valve which resulted in a fire and employee injuries.
- 1/24/2011 incident (see Appendix 27): Unit #24's 2nd stage discharge piping experienced an internal explosion causing a gas release into the Caterpillar compressor building. The accumulated gas flashed injuring an employee and caused damage to the building. A key contributing factor was the failure to use purging and lock out/tag out procedures. Keystone rated this event as catastrophic.

It appears the 3/1/2009 event which involved a release of NGL flammable mixture, a RMP process chemical held above a threshold quantity, and resulted in medical treatment for an employee should have been reported as part of the facility's five year accident history. §68.12(b)(2) (see AOC # 9).

I reviewed EPA's Central Data Exchange to determine if any updates were submitted after 3/1/2009. No updates were submitted between 3/1/2009 and 8/16/2011. It appears that the facility did not correct the RMP submittal within six months of the date of the 3/1/2009 event as required by §68.195(a) (see AOC # 10).

For the 3/1/2009 incident, it appears that Keystone failed to identify hazards associated with the leaking valve and leaking chemical, as well as, failed to minimize the consequences of the NGL release by using a metal bucket to shield the leak. 112(r)(1) (see AOC # 11).

For the 1/24/2011 incident, it appears that Keystone failed to maintain a safe facility and did not take the necessary steps to prevent the gas accumulation and release by failing to utilize purging and lock out/tag out procedures prior to and/or during start up. 112(r)(1) (see AOC # 12).

Keystone provided its Emergency Response Plan (ERP) which was updated on 11/6/2013 (see Appendix 28). According to Mr. Dansby, the plan was coordinated with the Local Emergency Planning Committee (LEPC). The plan identified the LEPC contact information and listed contact numbers for Winkler County emergency response.

Subpart B-Hazard Assessment

§68.22 OCA parameters - The OCA documentation (see Appendix 22) for the worst case scenarios for natural gas liquids indicated the following: Vapor Cloud Explosion and estimated distance to 1 psi overpressure is 0.3 miles. The OCA documentation for the worst case scenarios for propylene indicated the following: Vapor Cloud Explosion, estimated distance to 1 psi overpressure is 0.3 miles, wind speed 1.5 meters/second, stability class F, and a temperature of 77°F. Keystone provided no other documentation at the time of the inspection.

§68.25 Worst-case release scenario analysis - Keystone performed a worst case analysis for propylene and NGL flammable mixture. See the above OCA parameters.

§68.30 Defining offsite impacts-population - At the time of the inspection, Keystone could not provide any documentation which showed the point of the release at the center and radius determined by the distance to endpoint. The OCA map provided at the time of the inspection did not clearly identify the facility, point of release, public receptors, and distance to flammable endpoint. It appears that Keystone failed to appropriately determine its public receptors. §68.30(a) (see AOC # 13).

§68.33 Defining offsite impacts-environment - At the time of the inspection, Keystone could not provide any United States Geological Survey maps or any data source containing USGS data to identify environmental receptors. It appears that Keystone failed to identify environmental receptors within the radius from release to endpoint. §68.33(a) (see AOC #14).

§68.36 Review and update - Keystone provided the 2011 update which included a summary of the worst case scenario analysis. It is unknown if the OCA was reviewed at the time of the update.

§68.39 Documentation - The OCA documentation for the worst case scenarios for NGL flammable mixture indicated the following: Vapor Cloud Explosion and estimated distance to 1 psi overpressure is 0.3 miles. The OCA documentation for the worst case scenarios for propylene indicated the following: Vapor Cloud Explosion, estimated distance to 1 psi overpressure is 0.3 miles, wind speed 1.5 meters/second, stability class F, and a temperature of 77°F (See Appendix 22). Keystone provided no other documentation.

The RMP executive summary indicates that the largest vessel with natural gas liquids was selected for the worst case scenario, but the summary does not mention any vessel containing propylene. The RMP submittal indicates that Keystone has two processes.

It appears that Keystone failed to maintain offsite consequence analysis records for both processes which include: rationale for selection of worst case for each covered process, anticipated effect of

controls and mitigation, documentation of release rate and duration of release, and data used to estimate population. §68.39(a-e) (see AOC #15).

Subpart G Risk Management Plan

§68.155 Executive Summary - I reviewed the Executive Summary in the 2011 RMP update (see Appendix 22). The description of the stationary source indicated that the facility receives natural gas with H₂S and water removed. According to Mr. Dansby, the field handles sour gas. It appears that Keystone failed to accurately identify the type of gas handled at the stationary source. §68.155(b) (see AOC #16).

The executive summary listed Southern Union Gas Services as the parent company with La Grange Acquisitions as the owner/operator. According to Mr. Rider, Southern Union Gas Servicer (SUGS) is now Regency Field Services LLC. The owner/operator is also Regency Field Services LLC. Mr. Rider indicated that corrections to the RMP were submitted to their third party.

At the time of the inspection, Mr. Dansby indicated that Mr. Tommy Johnson, Plant Manager, was the emergency contact for the facility. The RMP lists Dwight Bennett as the emergency contact. Mr. Bennett is a current employee for Keystone but no longer in the same role. It appears that Keystone failed to correct the emergency contact information the RMP within one month as required by §68.195(b) (see AOC #17).

Subpart D Program 3 Prevention Program

Keystone is subject to the OSHA PSM standard. Based on the updated OCA map (See Appendix 29), it appears that the nearest public receptor is within the distance to a flammable endpoint.

Program 3 requirements were not evaluated as a part of this inspection.

Section III – AREAS OF CONCERN

EEPI CLOSEOUT CONFERENCE

At the closeout meeting with Mr. Thompson and Ms. Valencia, I discussed concerns with the produced water tanks and the fact that there was no flame arrestor on the vent pipes for the two tanks. I asked Ms. Valencia to provide documentation about the concentration of hydrocarbons coming from the tank. I have not received this information to date. I also discussed the H₂S and VOC alarms at the Posey Pond. Finally, I discussed the LP Flare that had no pilot. At the time of the inspection, Clint reported that he observed emissions from the LP Flare with the FLIR camera, but after I observed the videos from the office, I determined that the emissions were carryover from the AG Flare. We left the facility at 5:20 pm.

INSPECTION AREAS OF CONCERN

EEPI Areas of Concern:

1. Keystone self-reporting that the company did not submit the NESHAP Subpart ZZZZ Semi-Annual Deviation Report by the due date of 7/30/13 as required by 40 CFR 63.6650.
2. Keystone has not designed the High Pressure Flare and Low Pressure Flare with ignition systems that provide immediate notification to appropriate personnel when the ignition system ceases to function as required by 30 TAC § 106.492(1)(B) as referenced by page 30 of Site Operating Permit O-2940 issued 9/17/13.

3. Keystone operated the Low Pressure Flare after the turnaround that ended 10/21/13 without a flame present as required by 40 CFR 60.18(c)(2) as referenced by page 17 of Site Operating Permit O-2940 issued 9/17/13.
4. Keystone did not receive New Source Review authorization for three emission points from the sump known as the Posey Pond located downstream of the Acid Gas Knockout Drum in the Sulfur Recovery Unit as required by 30 TAC § 116.110(a)(1) and page 1 of Site Operating Permit O2940 issued 9/17/13.
5. Keystone self-reported nine (9) exceedances of the SRU Stack (Emission Point S-1) emission rate limit for the following 24-hour periods: 10/18/12, 2/15-16/13, 4/8/13, 4/16-17/13, 4/21-22/13, and 6/20/13. The emission rate is limited to 182.88 lbs/hr as required by Permit 2724 Condition 1 as referenced by GOP Permit O-0769 Condition (b)(7).
6. Keystone self-reported twenty-four (24) exceedances of the SRU sulfur recovery efficiency for the following 24-hour periods: 7/28/12, 8/16-17/12, 8/22/12, 10/13/12, 10/18/12, 11/7-8/12, 12/23/12, 12/31/12-1/1/13, 1/16-18/13, 2/14-16/13, 3/13-14/13, 3/19-20/13, 3/24-26/13. The sulfur recovery must be at least 95% efficient as required by Permit 2724 Condition 3 as referenced by GOP Permit O-0769 Condition (b)(7).
7. Keystone's LDAR contractor, TEAM Industrial Services, documented 9 (nine) leaking components on the 2/13/13 Daily Work Record, but Keystone did not report any leaking components for the month of February in the Semi-Annual NSPS Subpart KKK Report for October 2012-March 2013 as required by 40 CFR 60.636(a).

RMP Areas of Concern:

8. At the time of the inspection, Keystone provided documentation on the Offsite Consequence Analysis (OCA). The results of the analysis for both propylene and natural gas liquids flammable mixture indicated that the estimated distance to flammable endpoint was 0.3 miles at 1 psi overpressure. The OCA map did not clearly identify the facility, the point of release, or distance to endpoint. In an email dated 12/13/2013, Mr. David Rider, PSM/RMP Manager for Regency Energy Partners, provided a new map OCA which clearly identified the facility, point of release, public receptors, and distance to endpoint (See Appendix 29). It appears that the facility has public receptors within the distance to endpoint and is subject to Program 3 requirements. §68.12(b)(1)
9. It appears the 3/1/2009 event which involved a release of NGL flammable mixture, a RMP process chemical held above a threshold quantity, and resulted in medical treatment for an employee should have been reported as part of the facility's five year accident history. §68.12(b)(2)
10. It appears that the facility did not correct the RMP submittal within six months of the date of the 3/1/2009 event as required by §68.195(a)
11. In regards to the 3/1/2009 incident, it appears that Keystone failed to identify hazards associated with the leaking valve and leaking chemical, as well as, failed to minimize the consequences of the NGL release by using a metal bucket to shield the leak. 112(r)(1)
12. In regards to the 1/24/2011 incident, it appears that Keystone failed to maintain a safe facility and did not take the necessary steps to prevent the gas accumulation and release by failing to utilize purging and lock out/tag out procedures prior to and/or during start up. 112(r)(1)
13. At the time of the inspection, Keystone could not provide any documentation which showed the point of the release at the center and radius determined by the distance to endpoint. The OCA map provided at the time of the inspection did not clearly identify the facility, the point of release, public receptors, or distance to endpoint. It appears that Keystone failed to appropriately determine its public receptors. §68.30(a)
14. At the time of the inspection, Keystone could not provide any United States Geological Survey maps or any data source containing USGS data to identify environmental receptors. It appears that

Keystone failed to identify environmental receptors within the radius from release to endpoint.
§68.33(a)

15. It appears that Keystone failed to maintain offsite consequence analysis records which include: rationale for selection of worst case for each covered process, anticipated effect of controls and mitigation, documentation of release rate and duration of release, and data used to estimate population. §68.39(a-e)
16. It appears that Keystone failed to accurately identify the type of gas handled at the stationary source in the RMP executive summary. §68.155(b)
17. At the time of the inspection, Mr. Dansby indicated that Mr. Tommy Johnson, Plant Manager, was the emergency contact for the facility. The RMP lists Dwight Bennett as the emergency contact. Mr. Bennett is a current employee for Keystone but no longer in the same role. It appears that Keystone failed to correct the emergency contact information in the RMP within one month as required by §68.195(b)

Section IV – FOLLOW UP

The following areas should be further evaluated for compliance:

- Keystone's LDAR contractor, TEAM Industrial Services, provided a backup of their electronic database. This should be loaded into Excel spreadsheets and analyzed to determine compliance with NSPS Subpart KKK.
- Keystone should test the vapor pressure of the material in the LTN and LTS tanks and provide calculations to demonstrate actual emissions from the tanks.
- Keystone did not provide all of the requested TEAM Daily Work Records and Daily Calibration Forms. Due to the discrepancies noted between the records provided and the Semi-Annual LDAR Reports, additional records and reports should be requested and reviewed for compliance issues.
- Keystone has experienced some AG flaring events with significant SO₂ emissions both as total emissions from the event and as a high emission rate. Keystone should demonstrate that they have not caused an exceedance of the National Ambient Air Quality Standard for SO₂ and PM_{2.5}.
- The operation of the AG Flare should be evaluated with respect to the manufacturer's design specifications to determine the cause of the unburned hydrocarbons observed with the FLIR camera.
- All of the performance testing records for Compressor Engines C-26, C-27, C-28 need to be reviewed to ensure that all testing is conducted, as required.
- Review the information from Keystone regarding the problems with recording the temperature for the Compressors C-26, C-27, and C-28.
- As of 1/10/14 the LP Flare igniter system was still not operational.
- Obtain and review testing records for the AG Flare.
- On 12/4/2013, Keystone submitted changes to the RMP which updated the registration information to Regency Field Services and updated the executive summary.
- On 12/12/2013, Mr. David Rider, PSM/RMP Manager for Regency Energy Partners, emailed (see Appendix 29) a new OCA map which identified industrial receptors within the distance to endpoint. He indicated that Regency Field Services intended to resubmit the RMP for Keystone as a Program level 3.

Section V – LIST OF APPENDICES

Appendix 1 – Photo Log – 11 photos taken 11/20/13

Appendix 2 – Video Log – 8 FLIR videos taken 11/20/13

Appendix 3 – Opening conference sign-in sheet

Appendix 4 – Process flow diagrams:

- General Process Flow
- Glycol Flow
- Cryogenic System

Appendix 5 – Mary Valencia e-mail dated 12/4/13

Appendix 6 – SRU H₂S Flow Diagram

Appendix 7 – MSA Sirius Multigas Detector with PID (S/N A3-12746) data log for 11/20/13

Appendix 8 – Site Operating Permit O2940 issued 9/17/13 – selected pages

Appendix 9 – Update to Initial Site Operating Permit Application dated 9/16/11 – selected pages

Appendix 10 – 30 TAC § 106.492 – Flares

Appendix 11 – Low Pressure Flare flow meter (KP-19) hours and rate from 10/22/13 – 12/3/13

Appendix 12 – 30 TAC § 116.110 – New Source Review Permits – Permit Application

Appendix 13 – Keystone Shutdown Project List for October 14-21, 2013 Turnaround

Appendix 14 – LDAR Analysis of Daily Work Record and Semi-Annual NSPS Subpart KKK Reports

Appendix 15 – TEAM Industrial Services – Daily Work Record dated 2/13/13

Appendix 16 – Semi-Annual 40 CFR 60, Subpart KKK Report for October 2012-March 2013 dated 4/25/13

Appendix 17 – 6 Emission Events reported to TCEQ in 2011

Appendix 18 – 4 Emission Events reported to TCEQ since October 2013

Appendix 19 – Permit 2424 renewal dated 3/8/04 – selected pages

Appendix 20 – Title V Permit O-769 Semi-Annual Deviation Report for 7/7/12-1/6/13 dated 2/5/13 – selected pages

Appendix 21 - Title V Permit O-769 Semi-Annual Deviation Report for 1/7/13-7/6/13 dated 8/5/13 – selected pages

Appendix 22 – RMP update dated 08/16/11

Appendix 23 – Material Safety Data Sheet (MSDS) for Propylene

Appendix 24– MSDS for Natural Gas Liquids

Appendix 25 – OCA old map (supplied at time of the inspection)

Appendix 26 – Incident Report dated 3/1/09

Appendix 27 – Incident Report dated 1/24/11

Appendix 28 – ERP dated 11/6/13

Appendix 29 – E-mail from John Rider dated 12/13/13 with attachments

Appendix 1

Photograph Log



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Photograph Log

Appendix 1

Photo No. 1

Location: Regency Field Services, LLC – Keystone Gas Plant		
City: Kermit	Winkler County	State: TX

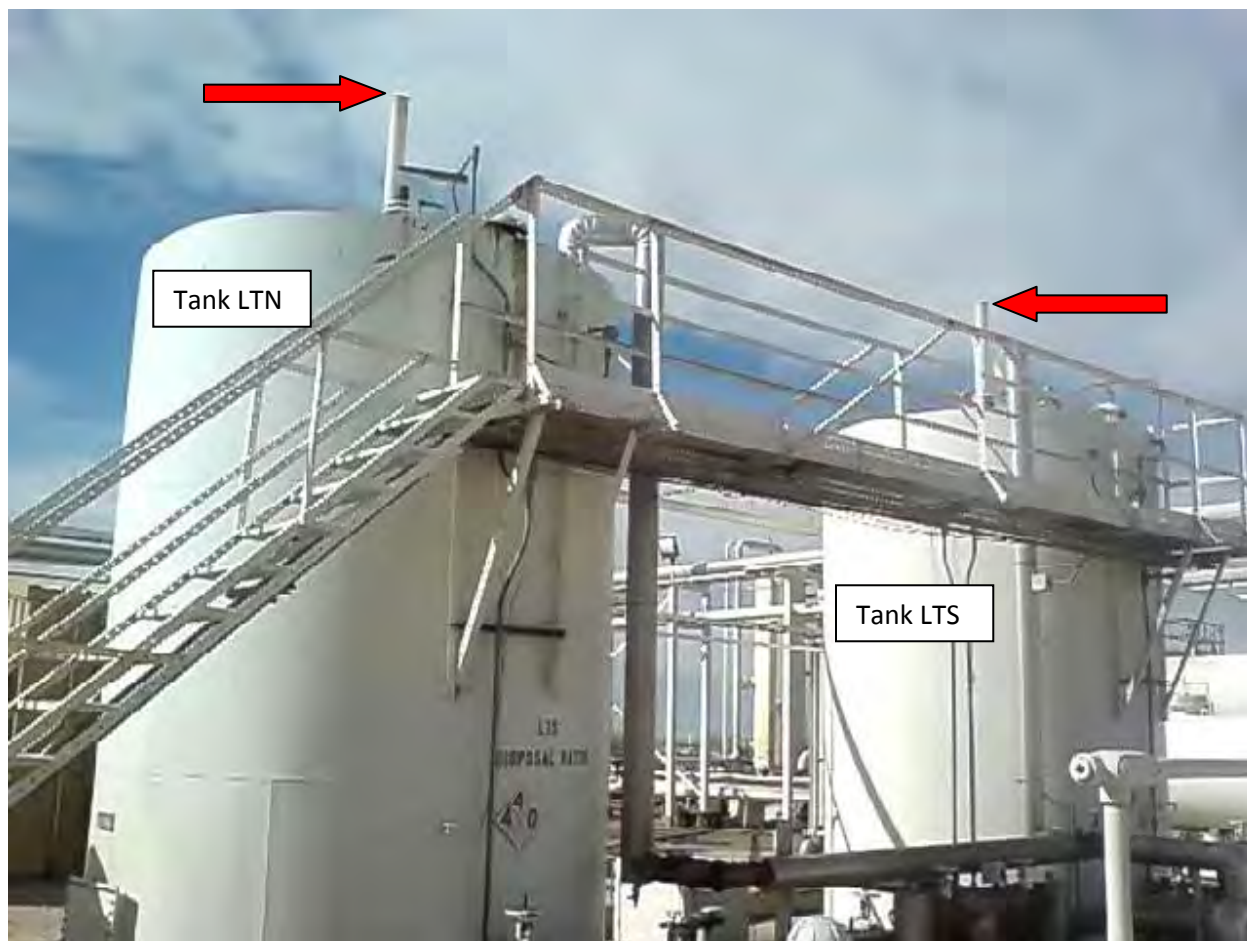


Photo File Name: DC_2677 new.jpg (The original file DC_2677.jpg did not record properly in the FLIR camera. The photo was to have been the same as the visible light image recorded at the beginning of Video 2678. Using the software, FLIR Video Report, I pulled the image from Video 2678....D. Ford)

Date of Photo: 11/20/2013

Time of Photo: 1:27 pm (approximately)

Photographer: Clint Rachal

Description: Produced water tanks LTN (north tank) and LTS (south tank). Visible emissions observed from vent pipe at the top of each tank where the red arrows are pointing.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Photograph Log

Photo No. 2

Location: Regency Field Services, LLC – Keystone Gas Plant		
City: Kermit	Winkler County	State: TX



Photo File Name: DC_2679.jpg

Date of Photo: 11/20/2013

Time of Photo: 1:32 pm

Photographer: Clint Rachal

Description: Produced water tanks LTN (north tank) and LTS (south tank). Visible emissions observed from vent pipe at the top of each tank.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Photograph Log

Appendix 1

Photo No. 3

Location: Regency Field Services, LLC – Keystone Gas Plant		
City: Kermit	Winkler County	State: TX



Photo File Name: DC_2680.jpg

Date of Photo: 11/20/2013

Time of Photo: 1:37 pm

Photographer: Clint Rachal

Description: Acid Gas Flare sump (knock out prior to flare). Receives gas stream from 4th bed of the Sulfur Recovery Unit. Also known at the facility as the Posey Pond. Visible emissions observed with the FLIR camera at the red arrows. Also, staining in the sand indicates that the sump had overflowed in the past.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Photograph Log

Appendix 1

Photo No. 4

Location: Regency Field Services, LLC – Keystone Gas Plant		
City: Kermit	Winkler County	State: TX



Photo File Name: DC_2682.jpg

Date of Photo: 11/20/2013

Time of Photo: 1:44 pm

Photographer: Clint Rachal

Description: Three (3) facility flares: (l-r) High Pressure, Acid Gas, Low Pressure Flares. Low pressure flare was not lit.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Photograph Log

Appendix 1

Photo No. 5

Location: Regency Field Services, LLC – Keystone Gas Plant		
City: Kermit	Winkler County	State: TX



Photo File Name: DC_2687.jpg
Date of Photo: 11/20/2013
Time of Photo: 2:27 pm
Photographer: Clint Rachal
Description: Clark Recompressor #18



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Photograph Log

Appendix 1

Photo No. 6

Location: Regency Field Services, LLC – Keystone Gas Plant		
City: Kermit	Winkler County	State: TX



Photo File Name: DC_2689.jpg
Date of Photo: 11/20/2013
Time of Photo: 2:49 pm
Photographer: Clint Rachal
Description: Skimmer sump.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Appendix 1

Photograph Log

Photo No. 7

Location: Regency Field Services, LLC – Keystone Gas Plant		
City: Kermit	Winkler County	State: TX



Photo File Name: DC_2691.jpg

Date of Photo: 11/20/2013

Time of Photo: 3:00 pm

Photographer: Clint Rachal

Description: Visible leak with FLIR camera observed from top of sight glass at valve 0399 at Product Accumulator tank.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Appendix 1

Photograph Log

Photo No. 8

Location: Regency Field Services, LLC – Keystone Gas Plant		
City: Kermit	Winkler County	State: TX



Photo File Name: DC_2693.jpg

Date of Photo: 11/20/2013

Time of Photo: 3:02 pm

Photographer: Clint Rachal

Description: Visible emissions with FLIR camera observed from piping on the Product Accumulator Tank. This piping had been used during the recent turnaround to relieve pressure.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Appendix 1

Photograph Log

Photo No. 9

Location: Regency Field Services, LLC – Keystone Gas Plant		
City: Kermit	Winkler County	State: TX



Photo File Name: RIMG0006.JPG

Date of Photo: 11/20/2013

Time of Photo: 1:09 pm

Photographer: Amanda Ferguson

Description: Sulfur Recovery Unit (SRU). Stacks, I-r, Sulfur Pit and Incinerator Stack.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Photograph Log

Appendix 1

Photo No. 10

Location: Regency Field Services, LLC – Keystone Gas Plant		
City: Kermit	Winkler County	State: TX



Photo File Name: RIMG0007.JPG
Date of Photo: 11/20/2013
Time of Photo: 1:13 pm
Photographer: Amanda Ferguson
Description: SRU close up. Beds 1-4, left to right.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Photograph Log

Photo No. 11

Location: Regency Field Services, LLC – Keystone Gas Plant		
City: Kermit	Winkler County	State: TX



Photo File Name: RIMG0008.JPG
Date of Photo: 11/20/2013
Time of Photo: 1:16 pm
Photographer: Amanda Ferguson
Description: SRU Sulfur pit. Note spilled molten sulfur has cooled and hardened.

Appendix 2

Video Log



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Appendix 2

Video Log

Location: Regency Field Services, LLC – Keystone Gas Plant		
City: Kermit	Winkler County	State: TX



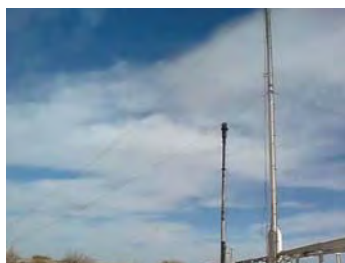
Video File Name: [MOV_2678.mp4](#)
 Date of Video: 11/20/2013
 Time of Video: 1:30 pm
 Videographer: Clint Rachal
 Description: Produced water tanks LTN (north tank) and LTS (south tank). Visible emissions observed from vent pipe at the top of each tank.



Video File Name: [MOV_2681.mp4](#)
 Date of Video: 11/20/2013
 Time of Video: 1:39 pm
 Videographer: Clint Rachal
 Description: Acid Gas Flare sump (knock out prior to flare). Receives gas stream from 4th bed of the Sulfur Recovery Unit. Also known at the facility as the Posey Pond. Visible emissions observed with the FLIR camera. Also, staining in the sand indicates that the sump had overflowed in the past.



Video File Name: [MOV_2683.mp4](#)
 Date of Video: 11/20/2013
 Time of Video: 1:46 pm
 Videographer: Clint Rachal
 Description: Three (3) facility flares: (l-r) High Pressure, Acid Gas, Low Pressure Flares. Low pressure flare was not lit. Visible emissions observed from Acid Gas Flare.



Video File Name: [MOV_2686.mp4](#)
 Date of Video: 11/20/2013
 Time of Video: 1:58 pm
 Videographer: Clint Rachal
 Description: Low Pressure Flare on the left. No flame present at time of inspection.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Appendix 2

Video Log

Location: Regency Field Services, LLC – Keystone Gas Plant		
City: Kermit	Winkler County	State: TX



Video File Name: [MOV_2688.mp4](#)
 Date of Video: 11/20/2013
 Time of Video: 2:28 pm
 Videographer: Clint Rachal
 Description: Clark Recompressor #18



Video File Name: [MOV_2690.mp4](#)
 Date of Video: 11/20/2013
 Time of Video: 2:51 pm
 Videographer: Clint Rachal
 Description: Skimmer sump.



Video File Name: [MOV_2692.mp4](#)
 Date of Video: 11/20/2013
 Time of Video: 3:01 pm
 Videographer: Clint Rachal
 Description: Visible leak with FLIR camera observed from top of sight glass at valve 0399 at Product Accumulator tank.



Video File Name: [MOV_2694.mp4](#)
 Date of Video: 11/20/2013
 Time of Video: 3:03 pm
 Videographer: Clint Rachal
 Description: Visible emissions with FLIR camera observed from piping on the Product Accumulator Tank. This piping had been used during the recent turnaround to relieve pressure.

Appendix 3

Opening Conference Sign-In Sheet



Meeting with REGENCY FIELD SERVICES, LLC - KEYSTONE GAS PLANT Date: 11/20/13
 Purpose of meeting: CAA INSPECTION - OPENING CONFERENCE

	Name	Title	Representing	e-Mail	Phone
1	Debbie Ford	ENV. SCIENTIST	U.S. EPA	ford.debbie@epa.gov	214-665-7235
2	Amanda Ferguson	Enforcement Officer	US EPA	ferguson.amanda@epa.gov	214-665-8420
3	Clint Rachal	Enforcement Officer	USEPA	rachal.clint@epa.gov	214-665-6474
4	Tim Johnson	Plant Manager	Regency Energy Partners	Tammy.Johnson@Regencygas.com	432-631-2344
5	Clarence E. Rasco	Envir. Compl. Coordinator	Regency Energy PART	CLARENCE.RASCO@RegencyGas.com	575-390-6032
6	Maria Valencera	Env. Specialist	Regency	Mary.Valencera@Regencygas.com	432-940-1439
7	Kelly Jamerson	Director - Operations	Regency	Kelly.Jamerson@regencygas.com	432-468-9186
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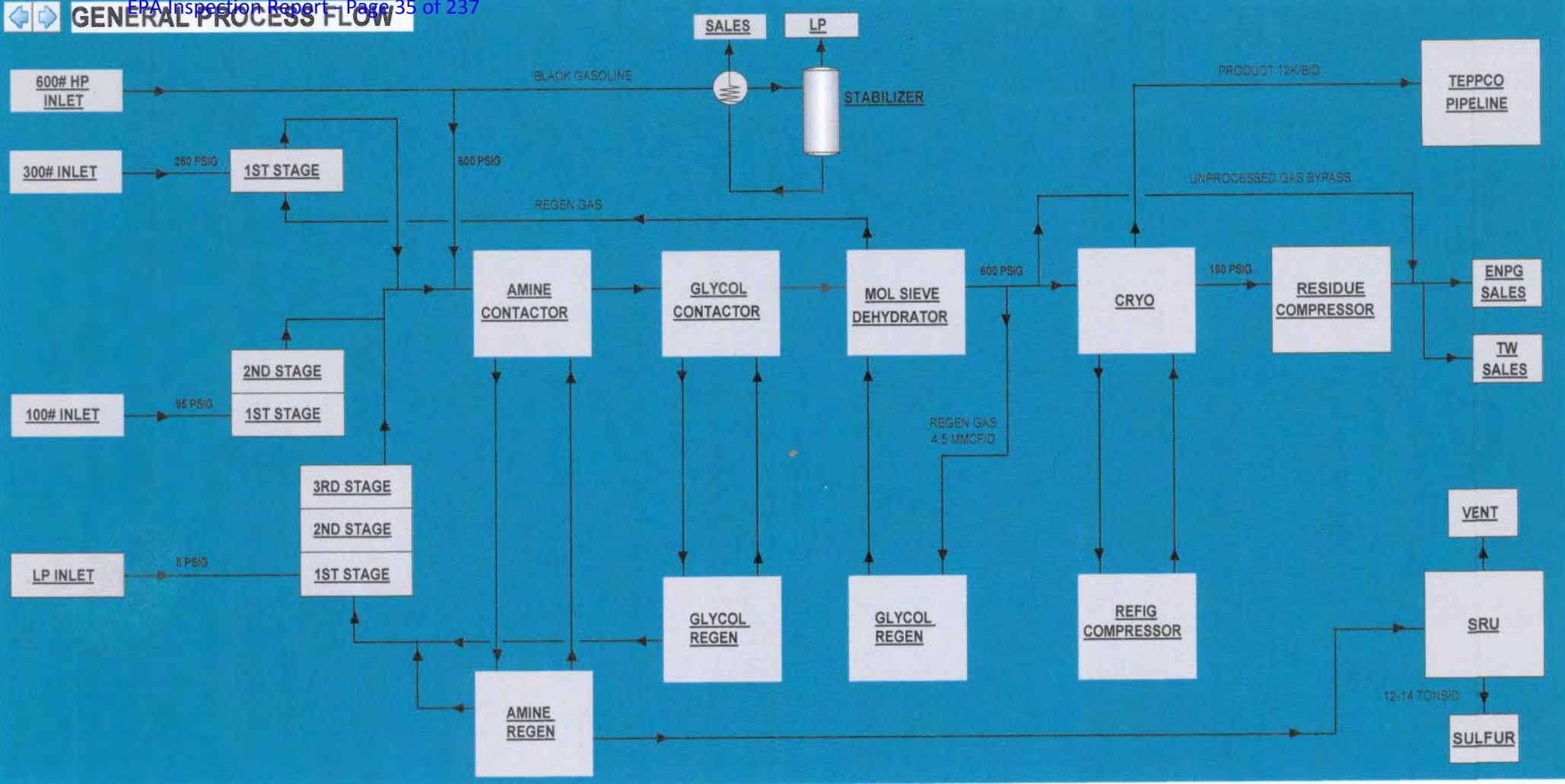
Appendix 4

Process Flow Diagrams:

- General Process Flow
- Glycol Flow
- Cryogenic System

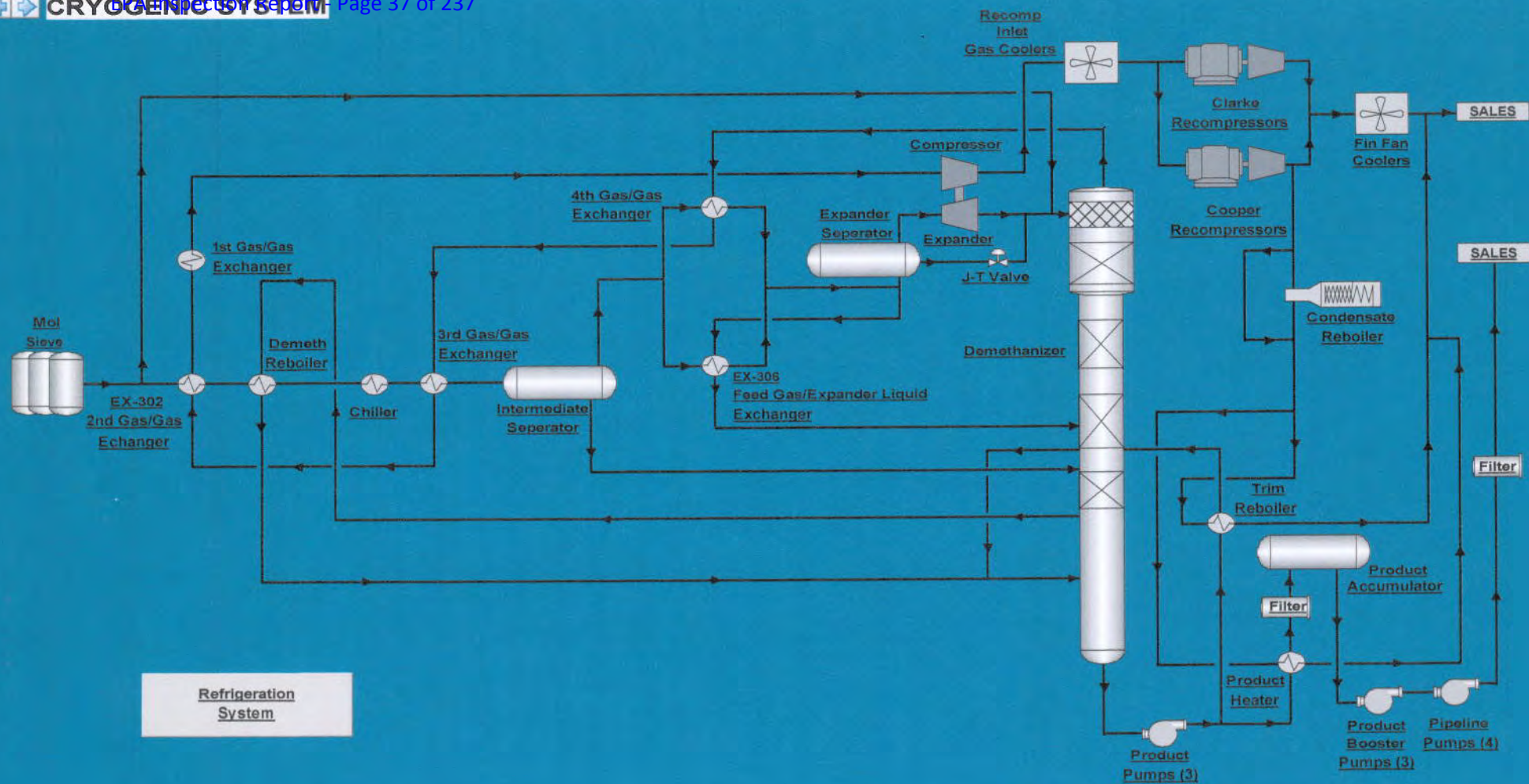


GENERAL PROCESS FLOW



KE9002





12/29/00-1

Appendix 5
e-Mail from Mary Valencia dated 12/4/13

Ford, Debbie

From: Valencia, Mary [Mary.Valencia@RegencyGas.com]
Sent: Wednesday, December 04, 2013 12:16 PM
To: Ford, Debbie
Cc: Johnson, Tommy
Subject: RE: Keystone inspection - status of outstanding records
Attachments: SRU Block Flow Diagram.pdf; KP-19 low pressure flare meter volumes since plant back on after shutdown Oct 2013.xlsx; #2 GRU Log Sheet.pdf; Keystone October 2013 Shutdown Project list to EPA.xlsx

Sorry, time got away from me this morning. Please find our responses in red below. Please let me know if you need anything else. Thanks,

From: Ford, Debbie [<mailto:Ford.Debbie@epa.gov>]
Sent: Monday, December 02, 2013 4:02 PM
To: Valencia, Mary
Cc: Johnson, Tommy
Subject: Keystone inspection - status of outstanding records

Hi Mary,

I hope you had a good Thanksgiving.

I still have not received the records requested at the Keystone Gas Plant inspection from 11/20/13.

Specifically,

- The backup files for the LeakDAS LDAR database **Team should of fedexed flash drive to you with this data. It should be arriving today**
- The explanation of the corporate relationships of Energy Transfer, Regency Energy Partners, and Regency Field Services. **Regency Energy Partners LP is the indirect Parent of Regency Field Services LLC. Energy Transfer Equity LP is the indirect owner of the General Partner of the General Partner of Regency Energy Partners LP**
- The process flow diagram for the SRU (be sure to include the Acid Gas Flare knockout sump (aka the "Posey Pond"), the flare, and the produced water tanks and associated sump) **Please find it attached**
- Response to the question about the underground drain system and whether this is monitored under the LDAR program or should be. **it is grandfathered from KKK as it has been in place prior to 1992**

At the time of the inspection, I also asked for the flow to the Low Pressure Flare for the date of the inspection, but instead, please provide the following information:

- The actual dates of the turnaround in October **Shutdown 10/14/13, back on 10/21/13**
- The flow to the Low Pressure Flare since the end of the turnaround **Low Pressure meter KP-19 volumes attached from 10/22/13 to present**
- Documentation on the scope of work for the turnaround **please find it attached**
- Specific information on the work performed on the Low Pressure Flare (there was reference to work during the turnaround, but I would like specific work done on the igniter system, whether performed before, during, or after the turnaround). **both control boxes were changed, the upper track was repaired, the SO cable used for ignition and monitoring thermocouple was changed, and all hardware was inspected. This work was done during the turnaround however, the system could not be tested until the plant was brought back up after the turnaround as we didn't have power to the system until the electrical upgrade was complete and we also didn't have any pilot gas with the plant depressured.**

- Regulatory analysis (i.e. applicability) for the Low Pressure and the Acid Gas Flares. Low pressure flare is permitted under 30 TAC 106.492. Acid Gas flare is permitted under NSR permit 2724.
- Information on apparent spills observed on the ground
 - o near the Low Pressure Flare ignition panel The stained soil near the low pressure flare ignition panel was removed. A 3" line that belongs to producer in the area was exposed and no leaks were identified. The area will continue to be periodically monitored for any future releases.
 - o at the Posey Pond It ran over while draining the Acid gas Knockout Drum. The liquids from this drum consist mainly of condensed steam (water). The stained soil has been removed.
- Written procedures used by operations for observation of flares, pumps, other equipment. Include the scope, frequency, and how these observations are documented? The written procedures are the reading sheets we use for monitoring the plant. I changed the #2 GRU sheet to include a flare pilot monitoring column. See log sheet attached

Can you provide any follow-up taken on the produced water tanks such as monitoring of the exhaust vents, sampling/analysis of the liquids in the tank, etc? Tanks were completely emptied out after inspection. Work order being generated to install flame arrestors (enardo valves) on each tank vent

Please provide this information by COB tomorrow. If you have any problems with this deadline, please let me know as soon as possible.

Thanks,

Debbie S. Ford

Environmental Scientist
U.S. EPA - Region 6 (MC 6EN-AA)
1445 Ross Avenue - Suite 1200
Dallas, TX 75202 2733

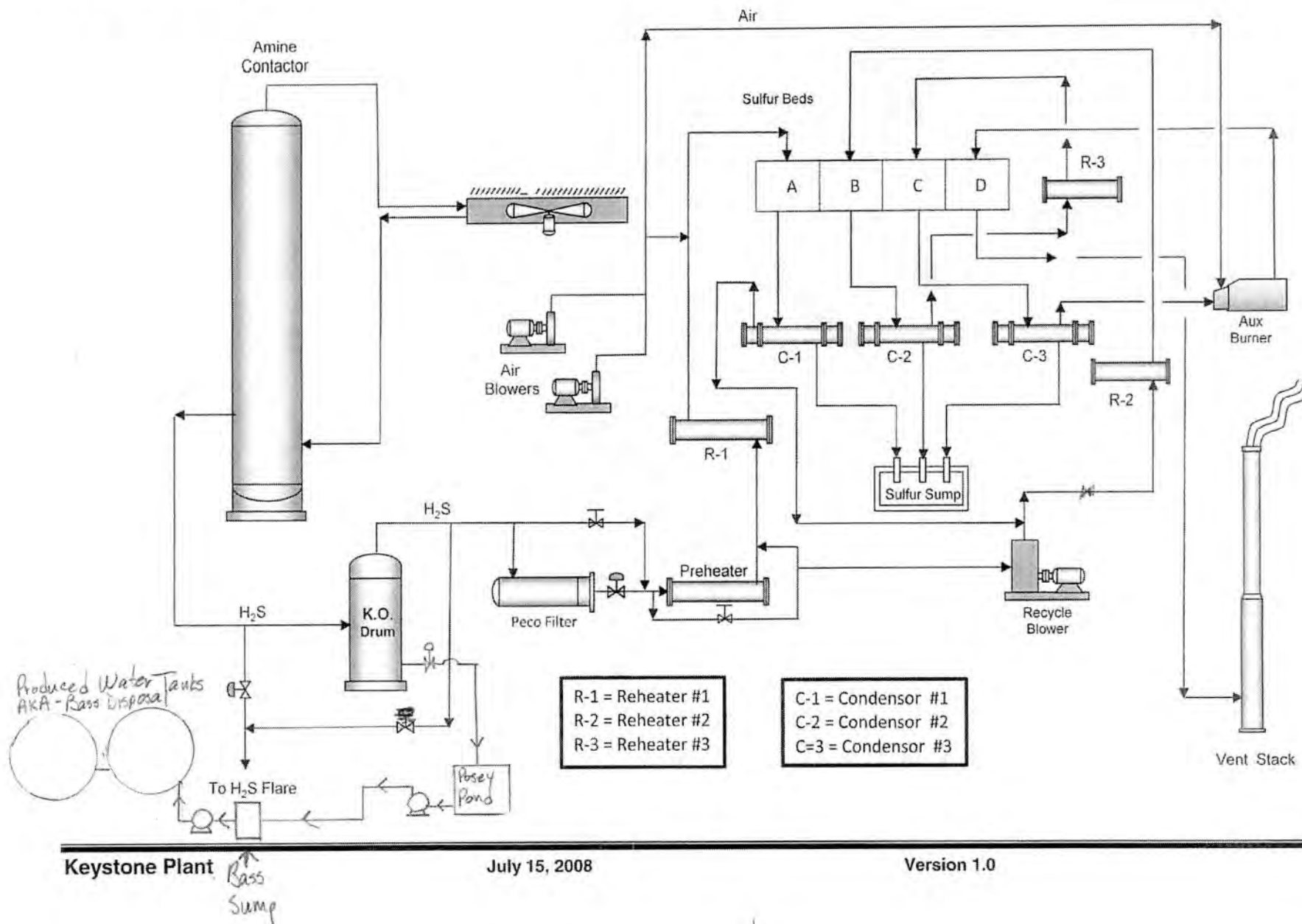
(214) 665-7235 (desk) (214) 665-3177 (fax)
ford.debbie@epa.gov

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Private and confidential as detailed [here](#). If you cannot access hyperlink, please e-mail sender.

Appendix 6

SRU H₂S Flow Diagram

H₂S Flow Diagram

Appendix 7

MSA Sirius Multigas Detector w/ PID
S/N A3-12746 data log for 11/20/13

Regency Field Svcs - Keystone Gas Plant
MSA Sirius Multigas Detector with PID S/N A3-12746

Date *	COMB		O2		CO		H2S		VOC		°C	Comments
	Avg	Peak	Min	Max	Avg	Peak	Avg	Peak	Avg	Peak		
11/20/2013 9:33:00 AM	0	0	20.8	20.8	0	0	0	0	0	0	19	
11/20/2013 9:36:00 AM	0	53	14.9	20.8	0	50	0	16	0	100	19	
11/20/2013 3:01:45 PM	0	0	20.8	20.8	0	0	0	0	0	0	20	
11/20/2013 3:04:45 PM	0	0	20.8	20.8	0	0	0	0	0	0	20	
11/20/2013 3:07:45 PM	0	1	20.8	20.8	0	0	0	0	0	0	20	
11/20/2013 3:10:45 PM	0	1	20.8	20.8	0	0	0	0	0	0	20	
11/20/2013 3:13:45 PM	0	1	20.8	20.8	0	0	0	0	0	0	20	
11/20/2013 3:17:00 PM	0	1	20.8	20.8	0	0	0	0	0	0	24	
11/20/2013 3:20:00 PM	0	1	20.8	20.8	0	0	0	0	0	0	24	
11/20/2013 3:23:00 PM	0	1	20.8	20.8	0	0	0	0	0	0	24	
11/20/2013 3:26:00 PM	0	1	20.8	20.8	0	0	0	0	0	0	24	
11/20/2013 3:29:00 PM	0	1	20.8	20.8	0	0	0	0	0	0	24	
11/20/2013 3:32:00 PM	0	1	20.8	20.8	0	0	0	0	0	0	28	
11/20/2013 3:35:00 PM	0	1	20.8	20.8	0	0	0	0	0	0	28	
11/20/2013 3:38:00 PM	0	1	20.8	20.8	0	0	0	0	0	0	28	
11/20/2013 3:41:00 PM	0	1	20.8	20.8	0	0	0	0	0	0	28	
11/20/2013 3:44:00 PM	0	6	20.8	20.8	0	0	0	4	0	199.8	28	
11/20/2013 3:47:00 PM	0	2	20.8	20.8	0	0	0	0	0	23.5	31	
11/20/2013 3:50:00 PM	0	4	20.8	20.8	0	0	0	0	0	77.7	31	
11/20/2013 3:53:00 PM	0	1	20.8	20.8	0	1	0	0	0	2.9	31	
11/20/2013 3:56:00 PM	0	1	20.8	20.8	0	3	0	0	0	0	31	
11/20/2013 3:59:00 PM	0	1	20.8	20.8	0	5	0	0	0	15.3	31	
11/20/2013 4:02:15 PM	0	1	20.8	20.8	0	5	0	0	0	7.4	33	
11/20/2013 4:05:15 PM	0	1	20.8	20.8	0	7	0	0	0	0	33	
11/20/2013 4:08:15 PM	0	1	20.8	20.8	0	5	0	0	0	0	33	
11/20/2013 4:11:15 PM	0	1	20.8	20.8	0	7	0	0	0	2.9	33	
11/20/2013 4:14:15 PM	0	1	20.8	20.8	0	7	0	0	0	0	33	
11/20/2013 4:17:15 PM	0	1	20.8	20.8	0	5	0	0	0	0	35	
11/20/2013 4:20:15 PM	0	1	20.8	20.8	0	5	0	0	0	0	35	
11/20/2013 4:23:15 PM	0	1	20.8	20.8	0	5	0	0	0	0	35	
11/20/2013 4:26:15 PM	0	1	20.8	20.8	0	5	0	0	0	0	35	
11/20/2013 4:29:15 PM	0	1	20.8	20.8	0	5	0	0	0	0	35	
11/20/2013 4:32:15 PM	0	1	20.8	20.8	0	3	0	0	0	0	35	
11/20/2013 4:35:15 PM	0	4	20.8	20.8	0	1	0	0	0	0	35	
11/20/2013 4:38:15 PM	0	2	20.8	20.8	0	1	0	0	0	0	35	
11/20/2013 4:41:15 PM	0	1	20.8	20.8	0	0	0	0	0	0	35	
11/20/2013 4:44:15 PM	0	1	20.8	20.8	0	0	0	0	0	0	35	
11/20/2013 4:47:30 PM	0	1	20.8	20.8	0	0	0	0	0	0	34	
11/20/2013 4:50:30 PM	0	2	20.8	20.8	0	0	0	0	0	0	34	
11/20/2013 4:53:30 PM	0	1	20.8	20.8	0	0	0	0	0	1.4	34	
11/20/2013 4:56:30 PM	0	1	20.8	20.8	0	0	0	0	0	3.5	34	
11/20/2013 4:59:30 PM	0	1	20.8	20.8	0	0	0	0	0	0	34	
11/20/2013 5:02:30 PM	0	2	20.8	20.8	0	0	0	0	0	0	34	
11/20/2013 5:05:30 PM	0	1	20.8	20.8	0	0	0	0	0	0	34	
11/20/2013 5:08:30 PM	0	1	20.8	20.8	0	0	0	0	0	0	34	
11/20/2013 5:11:30 PM	0	1	20.8	20.8	0	0	0	0	0	0	34	
11/20/2013 5:14:30 PM	0	1	20.8	20.8	0	0	0	0	0	0	34	
11/20/2013 5:17:45 PM	0	2	20.8	20.8	0	0	0	0	0	1	35	
11/20/2013 5:20:45 PM	0	1	20.8	20.8	0	0	0	0	0	0	35	
11/20/2013 5:23:45 PM	0	1	20.8	20.8	0	0	0	0	0	0	35	
11/20/2013 5:26:45 PM	0	1	20.8	20.8	0	0	0	0	0	0	35	
11/20/2013 5:29:45 PM	0	1	20.8	20.8	0	0	0	0	0	0	35	

Regency Field Svcs - Keystone Gas Plant
MSA Sirius Multigas Detector with PID S/N A3-12746

Date *	COMB		O ₂		CO		H ₂ S		VOC		°C	Comments
	Avg	Peak	Min	Max	Avg	Peak	Avg	Peak	Avg	Peak		
11/20/2013 5:32:45 PM	0	1	20.8	20.8	0	0	0	0	0	0	36	
11/20/2013 5:35:45 PM	0	1	20.8	20.8	0	0	0	0	0	0	36	
11/20/2013 5:38:45 PM	0	1	20.8	20.8	0	0	0	0	0	0	36	
11/20/2013 5:41:45 PM	0	1	20.8	20.8	0	0	0	0	0	0	36	

* Note: the time was not accurate. It was approximately 2 hours ahead of actual time.

Appendix 8
Site Operating Permit O2940 Issued 9/17/13 –
selected pages

Bryan W. Shaw, Ph.D., *Chairman*
Toby Baker, *Commissioner*
Zak Covar, *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

September 17, 2013

MR RICHARD REHM
VICE PRESIDENT OPERATIONS
REGENCY FIELD SERVICES LLC
600 N MARIENFELD ST STE 700
MIDLAND TX 79701-4395

Re: Effective Site Operating Permit Approval and
Void of General Operating Permit Authorization to Operate
Initial Issuance
Permit Numbers: **02940 (SOP Initial)**
0769 (GOP Void)
Regency Field Services LLC
Keystone Gas Plant
Kermit, Winkler County
Regulated Entity Number: RN100238633
Customer Reference Number: CN603263823
Account Number: WM-0011-U

Dear Mr. Rehm:

The effective federal operating permit (FOP) for Regency Field Services LLC, Keystone Gas Plant, is enclosed. This FOP constitutes authority to operate the emission units identified in the FOP application.

All site operating permits are subject to public petition for 60 days following the expiration of the 45-day U.S. Environmental Protection Agency (EPA) review. The public petition period for the FOP extends from September 7, 2013 until November 5, 2013. If the EPA receives a valid petition and objects to the above-referenced permit, you will be notified promptly by the Texas Commission on Environmental Quality (TCEQ).

In addition, the authorization to operate Keystone Gas Plant under the provisions of the Oil and Gas General Operating Permit (GOP) Number 514 has been voided and the renewal application withdrawn. As required by Title 30 Texas Administrative Code Chapter 122 (30 TAC Chapter 122), you must submit a compliance certification (Form PCC) for the GOP for the period from the date of the most recent certification to the date of this letter (not to exceed 12 months). This compliance certification must be submitted within 30 days of this letter to the TCEQ Midland Regional Office, 9900 W Interstate 20 Ste 100, Midland, Texas 79706-2636. Contact the regional office should you have any questions regarding the compliance certification process.

Mr. Richard Rehm
Page 2
September 17, 2013

It should be noted that from the date of this letter Regency Field Services LLC, Keystone Gas Plant must operate in accordance with the requirements of 30 TAC Chapter 122 and the FOP. Some of the terms and conditions contained in the FOP include recordkeeping conditions, reporting conditions (which includes deviation reporting), and compliance certification conditions. All reports, along with any questions regarding the reports, shall be forwarded to the TCEQ Midland Regional Office, 9900 W Interstate 20 Ste 100, Midland, Texas 79706-2636.

Consistent with 30 TAC Chapter 122, Subchapter C, the permit holder shall submit an application to the Air Permits Division (APD) for a revision to an FOP for those activities at a site which change, add, or remove one or more FOP terms or conditions. The permit holder shall also submit an application to the APD for a revision to a permit to address the following: the adoption of an applicable requirement previously designated as federally enforceable only; the promulgation of a new applicable requirement; the adoption of a new state-only requirement; or a change in a state-only designation.

Thank you again for your cooperation in this matter. If you have questions concerning the review or this notice, please contact Mr. Chuck Lowary, P.E. at (512) 239-1263.

This action is taken under authority delegated by the Executive Director of the TCEQ.

Sincerely,



Michael Wilson, P.E., Director
Air Permits Division
Office of Air
Texas Commission on Environmental Quality

MPW/EL/el

cc: Ms. Maria Valencia, Specialist Environmental Permitting, Regency Field Services LLC,
Midland
Mr. Bart Collins, Senior Regional Operations Director, Regency Field Services LLC,
Midland
Air Section Manager, Region 7 - Midland

Enclosure: Effective Permit

cc: Air Permit Section Chief, U.S. Environmental Protection Agency, Region 6, Dallas

Project Numbers: 10146 (SOP Initial)
10171 (GOP Void)

FEDERAL OPERATING PERMIT

A FEDERAL OPERATING PERMIT IS HEREBY ISSUED TO

Regency Field Services LLC

AUTHORIZING THE OPERATION OF

Keystone Plant

Crude Petroleum and Natural Gas

LOCATED AT

Winkler County, Texas

Latitude 31° 56' 45" Longitude 103° 2' 33"

Regulated Entity Number: RN100238633

This permit is issued in accordance with and subject to the Texas Clean Air Act (TCAA), Chapter 382 of the Texas Health and Safety Code and Title 30 Texas Administrative Code Chapter 122 (30 TAC Chapter 122), Federal Operating Permits. Under 30 TAC Chapter 122, this permit constitutes the permit holder's authority to operate the site and emission units listed in this permit. Operations of the site and emission units listed in this permit are subject to all additional rules or amended rules and orders of the Commission pursuant to the TCAA.

This permit does not relieve the permit holder from the responsibility of obtaining New Source Review authorization for new, modified, or existing facilities in accordance with 30 TAC Chapter 116, Control of Air Pollution by Permits for New Construction or Modification.

The site and emission units authorized by this permit shall be operated in accordance with 30 TAC Chapter 122, the general terms and conditions, special terms and conditions, and attachments contained herein.

This permit shall expire five years from the date of issuance. The renewal requirements specified in 30 TAC § 122.241 must be satisfied in order to renew the authorization to operate the site and emission units.

Permit No: 02940 Issuance Date: September 17, 2013


For the Commission

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
FL-1	FLARES	N/A	R1111-1	30 TAC Chapter 111, Visible Emissions	No changing attributes.
FL-1	FLARES	N/A	60A-1	40 CFR Part 60, Subpart A	No changing attributes.
FL-1	FLARES	N/A	63A-1	40 CFR Part 63, Subpart A	No changing attributes.
FL-2	FLARES	N/A	R1111-1	30 TAC Chapter 111, Visible Emissions	No changing attributes.
FL-2	FLARES	N/A	60A-1	40 CFR Part 60, Subpart A	No changing attributes.
FL-6	FLARES	N/A	R1111-1	30 TAC Chapter 111, Visible Emissions	No changing attributes.
FL-6	FLARES	N/A	60A-1	40 CFR Part 60, Subpart A	No changing attributes.
AREA FUG	FUGITIVE EMISSION UNITS	N/A	60KKK-1	40 CFR Part 60, Subpart KKK	No changing attributes.
AREA FUG	FUGITIVE EMISSION UNITS	N/A	63HH-1	40 CFR Part 63, Subpart HH	No changing attributes.
PROAMINE	GAS SWEETENING/SULFUR RECOVERY UNITS	N/A	R2007-1	30 TAC Chapter 112, Sulfur Compounds	No changing attributes.
DEHY	GLYCOL DEHYDRATION	N/A	63HH-2	40 CFR Part 63, Subpart HH	No changing attributes.

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
					§ 60.18(e)				
FL-6	EU	R1111-1	OPACITY	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(4)(A)	Visible emissions from a process gas flare shall not be permitted for more than five minutes in any two-hour period, except for emission event emissions as provided in §101.222(b).	§ 111.111(a)(4)(A)(i) § 111.111(a)(4)(A)(ii)	§ 111.111(a)(4)(A)(ii)	None
FL-6	CD	60A-1	OPACITY	40 CFR Part 60, Subpart A	§ 60.18(b) § 60.18(c)(1) § 60.18(c)(2) § 60.18(c)(3)(ii) § 60.18(c)(4)(ii) § 60.18(c)(6) § 60.18(e)	Flares shall comply with paragraphs (e)-(f) of § 60.18.	§ 60.18(d) § 60.18(f)(1) § 60.18(f)(2) § 60.18(f)(3) § 60.18(f)(4)	None	None
AREA FUG	EU	60KKK-1	VOC	40 CFR Part 60, Subpart KKK	§ 60.632(a) § 60.18 § 60.482-1(a) § 60.482-1(b) § 60.482-10(d) § 60.482-10(e) § 60.482-10(m) § 60.633(g)	Comply with the requirements for flares as stated in §60.482-10 and §60.482-1(a), (b) and (d), except as provided in §60.633.	§ 60.485(a) [G]§ 60.485(e) § 60.485(d) § 60.485(d)(2) § 60.485(d)(3) § 60.485(f) [G]§ 60.485(g) § 60.632(d) [G]§ 60.633(h)	[G]§ 60.486(a) [G]§ 60.486(d) § 60.486(e) § 60.486(e)(1) § 60.632(c) § 60.635(a)	§ 60.487(a) [G]§ 60.487(b) [G]§ 60.487(c) § 60.487(e) § 60.632(e) [G]§ 60.636
AREA FUG	EU	60KKK-1	VOC	40 CFR Part 60, Subpart KKK	§ 60.633(f)	Reciprocating compressors in wet gas service are exempt from the compressor control requirements of §60.482-3.	None	§ 60.486(j) § 60.635(a) § 60.635(c)	None
AREA FUG	EU	63HH-1	112(B) HAPS	40 CFR Part 63, Subpart HH	§ 63.760(g)(1)	After the compliance date, ancillary equipment and compressors subject to this subpart and 40 CFR Part 60, subpart KKK are only required to comply with the	None	§ 63.774(b)(9)	None

CAM Summary

Unit/Group/Process Information	
ID No.: PROAMINE	
Control Device ID No.: TGI	Control Device Type: Catalytic Incinerator
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 112, Sulfur Compounds	SOP Index No.: R2007-1
Pollutant: SO ₂	Main Standard: § 112.7(a)
Monitoring Information	
Indicator: SO ₂ CEMS	
Minimum Frequency: Four equally-spaced data points from each one-hour period	
Averaging Period: Hourly average concentrations	
Deviation Limit: > 182.88 lbs/hr SO ₂	
CAM Text: The permit holder shall install, calibrate, and maintain a continuous emission monitoring system (CEMS) to measure and record the in-stack SO₂ concentration from the catalytic incinerator. A. The CEMS shall meet the design and performance specifications, pass the field tests, and meet the installation requirements and the data analysis and reporting requirements specified in the applicable Performance Specification Nos. 1 through 9, Title 40 Code of Federal Regulation Part 60 (40 CFR Part 60), Appendix B. If there are no applicable performance specifications in 40 CFR Part 60, Appendix B, contact the TCEQ Office of Air, Air Permits Division for requirements to be met. B. Section 1 below applies to sources subject to the quality-assurance requirements of 40 CFR Part 60, Appendix F; section 2 applies to all other sources: (1) The permit holder shall assure that the CEMS meets the applicable quality-assurance requirements specified in 40 CFR Part 60, Appendix F, Procedure 1. Relative accuracy exceedances, as specified in 40 CFR Part 60, Appendix F, Section 5.2.3 and any CEMS downtime shall be reported to the appropriate TCEQ Regional Manager, and necessary corrective action shall be taken. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Manager. (2) The system shall be zeroed and spanned daily, and corrective action taken when the 24-hour span drift exceeds two times the amounts specified in the applicable Performance Specification Nos. 1 through 9, 40 CFR Part 60, Appendix B, or as specified by the TCEQ if not specified in Appendix B. Zero and span is not required on weekends and plant holidays if instrument technicians are not normally scheduled on those days. Each monitor shall be quality-assured at least quarterly using Cylinder Gas Audits (CGA) in accordance with 40 CFR Part 60, Appendix F, Procedure 1, Section 5.1.2, with the following exception: a relative accuracy test audit (RATA) is not required once every four quarters (i.e.,	

four successive quarterly CGA may be conducted). An equivalent quality-assurance method approved by the TCEQ may also be used. Successive quarterly audits shall occur no closer than two months.

All CGA exceedances of ± 15 percent accuracy indicate that the monitor is out of control.

C. The monitoring data shall be reduced to hourly average concentrations at least once everyday, using a minimum of four equally-spaced data points from each one-hour period. The individual average concentrations shall be reduced to units of pounds per hour at least once every week as follows:

The measured hourly average concentration from the CEMS converted to percent SO_2 by volume shall be multiplied by the estimated total exhaust flow in standard cubic feet per hour (SCFH) from the exhaust stack divided by 0.166 to convert to lbs/hr.. The estimated total exhaust flow for each hour shall be determined by the sum of the average acid gas flow measured, the average process air flow measured and adjusted for nitrogen flow only, the average auxiliary burner fuel flow measured, and the average auxiliary burner air flow measured in SCF.

Each flow monitoring device shall be calibrated at a frequency in accordance with the manufacturers' specifications, other written procedures that provide adequate assurance that the device is calibrated accurately, or at least annually, whichever is more frequent, and shall be accurate to within one of the following:

- (1) $\pm 2\%$ of span; or
- (2) $\pm 5\%$ of design flow rate.

D. All monitoring data and quality-assurance data shall be maintained by the source. The data from the monitoring system may, at the discretion of the TCEQ, be used to determine compliance with the conditions of this permit.

E. The appropriate TCEQ Regional Office shall be notified at least 30 days prior to any required RATA in order to provide them the opportunity to observe the testing.

F. Quality-assured (or valid) data must be generated when the SRU is operating except during the performance of a daily zero and span check. Loss of valid data due to periods of monitor break down, out-of-control operation (producing inaccurate data), repair, maintenance, or calibration may be exempted provided it does not exceed 5 percent of the time (in minutes) that the SRU operated over the previous rolling 12-month period. The measurements missed shall be estimated using engineering judgement and the methods used recorded. Options to increase system reliability to an acceptable value, including a redundant CEMS, may be required by the TCEQ Regional Manager

New Source Review Authorization References

The New Source Review authorizations listed in the table below are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Title 30 TAC Chapter 116 Permits, Special Permits, and Other Authorizations (Other Than Permits By Rule, PSD Permits, or NA Permits) for the Application Area.	
Authorization No.: 2724	Issuance Date: 06/03/2007
Authorization No.: 73600	Issuance Date: 05/18/2007
Permits By Rule (30 TAC Chapter 106) for the Application Area	
Number: 106.183	Version No./Date: 06/18/1997
Number: 106.183	Version No./Date: 09/04/2000
Number: 106.352	Version No./Date: 09/04/2000
Number: 106.352	Version No./Date: 02/27/2011
Number: 106.492	Version No./Date: 09/04/2000
Number: 106.511	Version No./Date: 09/04/2000
Number: 106.512	Version No./Date: 03/14/1997
Number: 106.512	Version No./Date: 07/16/1997
Number: 106.512	Version No./Date: 06/13/2001
Number: 7	Version No./Date: 05/05/1976
Number: 80	Version No./Date: 06/07/1996

New Source Review Authorization References by Emissions Unit

The following is a list of New Source Review (NSR) authorizations for emission units listed elsewhere in this operating permit. The NSR authorizations are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Unit/Group/Process ID No.	Emission Unit Name/Description	New Source Review Authorization
AREA FUG	AREA FUGITIVES	2724
BN-WWTK	210-BBL WASTE WATER DISPOSAL TANK - BASE NORTH	106.352/09/04/2000
BS-WWTK	210-BBL WASTE WATER DISPOSAL TANK - BASE SOUTH	106.352/09/04/2000
DEHY	GLYCOL DEHYDRATOR	2724
EMERG	273-HP CLARK TK6HU F80 EMERGENCY ENGINE	106.511/09/04/2000
ENG1001	1200-HP CLARK BA-6 COMPRESSOR ENGINE	73600
ENG1002	1200-HP CLARK BA-6 COMPRESSOR ENGINE	73600
ENG1003	1200-HP CLARK BA-6 COMPRESSOR ENGINE	73600
ENG1004	1200-HP CLARK BA-6 COMPRESSOR ENGINE	73600
ENG1005	1200-HP CLARK BA-6 COMPRESSOR ENGINE	73600
ENG1006	1320-HP CLARK HBA-6 COMPRESSOR ENGINE	73600
ENG1007	1320-HP CLARK HBA-6 COMPRESSOR ENGINE	73600
ENG1008	1200-HP CLARK BA-6 COMPRESSOR ENGINE	73600
ENG1009	1320-HP CLARK HBA-6 COMPRESSOR ENGINE	73600
ENG1010	1200-HP CLARK BA-6 COMPRESSOR ENGINE	73600
ENG1017	1320-HP CLARK HBA-6 COMPRESSOR ENGINE	73600
ENG1018	1320-HP CLARK HBA-6 COMPRESSOR ENGINE	73600
ENG1019	1320-HP CLARK HBA-6 COMPRESSOR ENGINE	73600

New Source Review Authorization References by Emissions Unit

The following is a list of New Source Review (NSR) authorizations for emission units listed elsewhere in this operating permit. The NSR authorizations are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Unit/Group/Process ID No.	Emission Unit Name/Description	New Source Review Authorization
ENG1020	COOPER BESSEMER 8V-250 COMPRESSOR ENGINE	73600
ENG1021	COOPER BESSEMER 8V-275 COMPRESSOR ENGINE	2724
ENG1022	COOPER BESSEMER 8V-275 COMPRESSOR ENGINE	2724
ENG1023	CATERPILLAR G3608TA COMPRESSOR ENGINE	106.512/07/16/1997
ENG1024	CATERPILLAR G3612TA COMPRESSOR ENGINE	106.512/07/16/1997
ENG1026	1340-HP CATERPILLAR G3516LE COMPRESSOR ENGINE	106.512/06/13/2001
ENG1027	1340-HP CATERPILLAR G3516LE COMPRESSOR ENGINE	106.512/06/13/2001
ENG1028	1340-HP CATERPILLAR G3516LE COMPRESSOR ENGINE	106.512/06/13/2001
ENG1HRA	CLARK HRA-6 COMPRESSOR ENGINE	73600
FL-1	ACID GAS FLARE	2724
FL-2	HIGH PRESSURE FLARE	106.492/09/04/2000
FL-6	LOW PRESSURE FLARE	106.492/09/04/2000
L-1	3000 BBL CONDENSATE TANK	106.352/02/27/2011
L-3	3000 BBL CONDENSATE TANK	106.352/02/27/2011
PROAMINE	SULFUR RECOVERY UNIT/AMINE UNIT (SRU/S-1)	2724
T-13	500 BBL SCRUBBER OIL TANK	106.352/02/27/2011
T-17	750 BBL WATER KNOCKOUT TANK	106.352/02/27/2011

New Source Review Authorization References by Emissions Unit

The following is a list of New Source Review (NSR) authorizations for emission units listed elsewhere in this operating permit. The NSR authorizations are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Unit/Group/Process ID No.	Emission Unit Name/Description	New Source Review Authorization
TNK 1001	3000-BBL SCRUBBER OIL TANK G-2	106.352/09/04/2000

Appendix 9
Update to Initial Site Operating Permit Application
dated 9/16/11 – selected pages

RC-901-41



OFFICES: NATIONWIDE • 11000 CONGRESS ROAD

12770 Merit Drive, Suite 900, Dallas, TX 75251 • S.A. • (972) 661-8100 • Fax: (972) 661-8200

September 16, 2009

Chuck Lowary
Texas Commission on Environmental Quality
Air Permits Division
12100 Park 35 Circle
Mail Code 165, Bldg C
Austin, TX 78755-1808

RE **Update to Initial Site Operating Permit Application**
Southern Union Gas Services, Ltd.
Keystone Gas Plant - Winkler County
Site Operating Permit No. **O-2940**
TCEQ Account No. WM-0011-U CN603004664 RN100238633

Dear Mr. Lowary:

Southern Union Gas Services, Ltd. (SUGS) owns and operates a natural gas processing plant near Kermit, Texas (Keystone Gas Plant), which is located in Winkler County. The Keystone Gas Plant currently operates under General Operating Permit (GOP) No. 514, Permit No. O-769.

SUGS submitted an Initial Site Operating Permit (SOP) application in March 2007.¹ Also in March 2007, the Texas Commission on Environmental Quality (TCEQ) marked GOP Permit No. O-769 to be voided upon issuance of the SOP Permit No. O-2940. The technical review of the initial SOP application was placed on management delay in March 2009, pending the incorporation of case-by-case compliance assurance monitoring into the NSR permit.²

With this submittal, SUGS would like to update the initial SOP application to incorporate changes made at the site since the initial application was submitted in March 2007. Units at the Keystone Gas Plant that are specifically identified as off-permit sources in TCEQ guidance documents and associated forms are not specifically addressed in the updates to the initial SOP application.

If you have any questions regarding this application, please feel free to call either Ms. Maria Valencia with SUGS at (817) 302-9780 or me at (972) 661-8100 should you have any questions or if you require additional information.

Sincerely,

Jessica Coleman
Senior Consultant

¹ 50 TAC 122 Initial Site Operating Permit Application, March 2007, Southern Union Gas Services, Ltd. Keystone Gas Plant, TCEQ Project No. 10146 Permit No. 2940.

² Email from Ms. Vickie McLean, TCEQ Region 7, to Ms. Maria Valencia, SUGS, on March 9, 2009.



Texas Commission on Environmental Quality
Federal Operating Permit Program
Individual Unit Summary
Form OP-SUM
Table 1

Date: 09/16/2011	Regulated Entity No.: RN100238633	Permit No.: 02940
Company Name: Southern Union Gas Services, Ltd.	Area Name: Keystone Gas Plant	

Unit/Process ID No.	Applicable Form	Unit Name/Description	CAM	Preconstruction Authorizations		Group ID No.	Plant ID No.
				30 TAC Chapter 116/30 TAC Chapter 106	Title I		
FL-1	OP-UA7	Acid Gas Flare		2724			
FL-2	OP-UA7	High Pressure Flare		106.492/09/04/2000			
FL-6	OP-UA7	Low Pressure Flare		106.492/09/04/2000			
FL-3	OP-UA7	Low Pressure Flare		106.492/09/04/2000			
FL-4	OP-UA7	Process Flare		080/06/07/1996			
ENG1026	OP-UA2	1340-hp Caterpillar G3516LE Compressor Engine		106.512/06/13/2001		GRPENG2	
ENG1027	OP-UA2	1340-hp Caterpillar G3516LE Compressor Engine		106.512/06/13/2001		GRPENG2	
ENG1028	OP-UA2	1340-hp Caterpillar G3516LE Compressor Engine		106.512/06/13/2001		GRPENG2	
EMERG	OP-UA2	273-hp Clark TK6H4U P80 Emergency Engine		106.511/09/04/2000			
HTR1003	OP-REQ2	2.0 MMBtu/hr Glycol Reboiler #3		106.183/06/18/1997		GRPCOMB	
HTR1007	OP-REQ2	1.9 MMBtu/hr Glycol Heater		106.183/06/18/1997		GRPCOMB	
HTR1004	OP-REQ2	9.16 MMBtu/hr Old Amine Heater		2724		GRPCOMB	
ENG1013	OP-REQ2	1200-HP Clark BA-6 Compressor Engine		93600		GRPENG1	

TCEQ 10007 (Revised 04/10) OP-SUM

This form is for use by facilities subject to air quality

permit requirements and may be revised periodically. (APDG 5837v2)

Appendix 10

30 TAC § 106.492 – Flares

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TITLE 30**ENVIRONMENTAL QUALITY****PART 1****TEXAS COMMISSION ON ENVIRONMENTAL QUALITY****CHAPTER 106****PERMITS BY RULE****SUBCHAPTER V****THERMAL CONTROL DEVICES****RULE §106.492****Flares**

Smokeless gas flares which meet the following conditions of this section are permitted by rule:

(1) design requirements.

(A) The flare shall be equipped with a flare tip designed to provide good mixing with air, flame stability, and a tip velocity less than 60 feet per second (ft/sec) for gases having a lower heating value less than 1,000 British thermal units per cubic foot (Btu/ft³) or a tip velocity less than 400 ft/sec for gases having a lower heating value greater than 1,000 Btu/ft³.

(B) The flare shall be equipped with a continuously burning pilot or other automatic ignition system that assures gas ignition and provides immediate notification of appropriate personnel when the ignition system ceases to function. A gas flare which emits no more than 4.0 pounds per hour (lb/hr) of reduced sulfur compounds, excluding sulfur oxides, is exempted from the immediate notification requirement, provided the emission point height meets the requirements of §106.352(4) of this title (relating to Oil and Gas Production Facilities).

(C) A flare which burns gases containing more than 24 parts per million by volume (ppmv) of sulfur, chlorine, or compounds containing either element shall be located at least 1/4 mile from any recreational area or residence or other structure not occupied or used solely by the owner or operator of the flare or the owner of the property upon which the flare is located.

(D) The heat release of a flare which emits sulfur dioxide (SO²) or hydrogen chloride (HCl) shall be greater than or equal to the following values:

Attached Graphic

(2) operational conditions.

(A) The flare shall burn a combustible mixture of gases containing only carbon, hydrogen, nitrogen, oxygen, sulfur, chlorine, or compounds derived from these elements. When the gas stream to be burned has a net or lower heating value of more than 200 Btu/ft³ prior to the addition of air, it may be considered combustible.

(B) A flare which burns gases containing more than 24 ppmv of sulfur, chlorine, or compounds containing either element shall be registered with the commission's Office of Permitting, Remediation, and Registration in Austin using Form PI-7 prior to construction of a new flare or prior to the use of an existing flare for the new service.

(C) Under no circumstances shall liquids be burned in the flare.

Source Note: The provisions of this §106.492 adopted to be effective March 14, 1997, 22 TexReg 2439; amended to be effective September 4, 2000, 25 TexReg 8653

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Appendix 11
Low Pressure Flare flow meter (KP-19)
hours and rate from 10/22/13 – 12/3/13

METER_NUMBER	DATE	FLOW_HOURS	MCF
KP-19	10/22/2013 7:00	17.53333	4446.6
KP-19	10/23/2013 7:00	19.88333	6027
KP-19	10/24/2013 7:00	17.2	4818.2
KP-19	10/25/2013 7:00	9.2	2298.7
KP-19	10/26/2013 7:00	20.2	7092.9
KP-19	10/27/2013 7:00	17.56667	6300.7
KP-19	10/28/2013 7:00	7.433333	1990
KP-19	10/29/2013 7:00	3.85	514.5
KP-19	10/30/2013 7:00	2.6	241.8
KP-19	10/31/2013 7:00	3	731.3
KP-19	11/1/2013 7:00	0	0
KP-19	11/2/2013 7:00	0	0
KP-19	11/3/2013 7:00	0	0
KP-19	11/4/2013 7:00	21.45	7837.2
KP-19	11/5/2013 7:00	3.316667	410.6
KP-19	11/6/2013 7:00	2.05	264.8
KP-19	11/7/2013 7:00	5.433333	1576.4
KP-19	11/8/2013 7:00	0	0
KP-19	11/9/2013 7:00	0.55	54.9
KP-19	11/10/2013 7:00	0.5833333	47
KP-19	11/11/2013 7:00	0.35	34
KP-19	11/12/2013 7:00	8.4	2049.9
KP-19	11/13/2013 7:00	7.116667	1028
KP-19	11/14/2013 7:00	0.2833333	33
KP-19	11/15/2013 7:00	0.1333333	8
KP-19	11/16/2013 7:00	2.116667	171.8
KP-19	11/17/2013 7:00	1	75.9
KP-19	11/18/2013 7:00	0	0
KP-19	11/19/2013 7:00	0.1166667	8
KP-19	11/20/2013 7:00	0	0
KP-19	11/21/2013 7:00	0	0
KP-19	11/22/2013 7:00	4.433333	516.5
KP-19	11/23/2013 7:00	10.85	3535.5
KP-19	11/24/2013 7:00	24	8949.1
KP-19	11/25/2013 7:00	9.3	1950.1
KP-19	11/26/2013 7:00	10.15	3357.6
KP-19	11/27/2013 7:00	2.633333	750.3
KP-19	11/28/2013 7:00	0	0
KP-19	11/29/2013 7:00	1.816667	308.7
KP-19	11/30/2013 7:00	0	0
KP-19	12/1/2013 7:00	1.67E-02	1
KP-19	12/2/2013 7:00	4.333333	1144.6
KP-19	12/3/2013 7:00	3	805.2

Appendix 12
30 TAC § 116.110 – New Source Review Permits –
Permit Application

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TITLE 30

ENVIRONMENTAL QUALITY

PART 1

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

CHAPTER 116

CONTROL OF AIR POLLUTION BY PERMITS FOR NEW CONSTRUCTION OR MODIFICATION

SUBCHAPTER B

NEW SOURCE REVIEW PERMITS

DIVISION 1

PERMIT APPLICATION

RULE §116.110

Applicability

(a) **Permit to construct.** Before any actual work is begun on the facility, any person who plans to construct any new facility or to engage in the modification of any existing facility which may emit air contaminants into the air of this state shall either:

(1) **obtain a permit under §116.111 of this title (relating to General Application);**

(2) satisfy the conditions for a standard permit under the requirements in:

(A) Subchapter F of this chapter (relating to Standard Permits);

(B) Chapter 321, Subchapter B of this title (relating to Concentrated Animal Feeding Operations);

(C) Chapter 332 of this title (relating to Composting); or

(D) Chapter 330, Subchapter N of this title (relating to Landfill Mining);

(3) satisfy the conditions for a flexible permit under the requirements in Subchapter G of this chapter (relating to Flexible Permits);

(4) satisfy the conditions for facilities permitted by rule under Chapter 106 of this title (relating to Permits by Rule); or

(5) satisfy the criteria for a de minimis facility or source under §116.119 of this title (relating to De Minimis Facilities or Sources).

(b) Modifications to existing permitted facilities. Modifications to existing permitted facilities may be handled through the amendment of an existing permit.

(c) Compliance history. For all authorizations listed in subsections (a) and (b) of this section or §116.116 of this title (relating to Changes to Facilities), compliance history reviews may be required under Chapter 60 of this title (relating to Compliance History).

(d) Exclusion. Owners or operators of affected sources (as defined in §116.15(1) of this title (relating to Section 112(g) Definitions)) subject to Subchapter C of this chapter (relating to Hazardous Air Pollutants: Regulations Governing Constructed or Reconstructed Major Sources (FCAA, §112(g), 40 Code of Federal Regulations Part 63)) are not authorized to use:

(1) a permit by rule under Chapter 106 of this title;

(2) standard permits under Subchapter F of this chapter that do not meet the requirements of Subchapter C of this chapter; or

(3) §116.116(e) of this title (relating to Changes to Facilities).

(e) Change in ownership.

(1) Within 30 days after the change of ownership of a facility permitted under this chapter, the new owner shall notify the commission and certify the following:

(A) the date of the ownership change;

(B) the name, address, phone number, and contact person for the new owner;

(C) an agreement by the new owner to be bound by all permit conditions and all representations made in the permit application and any amendments and alterations;

(D) there will be no change in the type of pollutants emitted; and

(E) there will be no increase in the quantity of pollutants emitted.

(2) The new owner shall comply with all permit conditions and all representations made in the permit application and any amendments and alterations.

(f) Submittal under seal of Texas licensed professional engineer. Applications for permit or permit amendment with an estimated capital cost of the project above \$2 million, and not subject to any exemption contained in the Texas Engineering Practice Act (TEPA), shall be submitted under seal of a Texas licensed professional engineer. However, nothing in this subsection shall limit or affect any requirement which may apply to the practice of engineering under the TEPA or the actions of the Texas Board of Professional Engineers. The estimated capital cost is defined in §116.141 of this title (relating to Determination of Fees).

(g) Responsibility for permit application. The owner of the facility or the operator of the facility authorized to act for the owner is responsible for complying with this section.

Source Note: The provisions of this §116.110 adopted to be effective July 8, 1998, 23 TexReg 6973; amended to be effective September 4, 2000, 25 TexReg 8668; amended to be effective August 29, 2002, 27 TexReg 7910

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Appendix 13
Keystone Shutdown Project List
for October 14-21, 2013 Turnaround


KEYSTONE SHUTDOWN PROJECT LIST

AREA	LOCATION	DESCRIPTION
Air System	Throughout the plant	Instrument air leaks. To be identified and repaired by plant operators
Boiler / Steam System		Test PSV's on steam sytem. Remove any block valves located below the PSV's.
Cyrogenics Process	Mole Sieve Beds	Mol Sieve change out
	Mole Sieve Beds	Maintenance on dehy valves (6-10" 600 ANSI and 6-4" 600 ANSI)
	Chiller	Sightglass on Chiller changed out, pull insulation and check corrosion in process on Chiller / product lines. Add a transmitter.
		Dehy piping inlet / discharge - Down stream filter case.
	Cryo	Dew Point moisture analyzer (sample points need fabrication). Connections for the probes need to be installed at the TA, the analyzer can be installed after the TA.
	Cryo	Clean Exchangers - John Lehman will provide list of (3) exchangers that need cleaning. Project will consist of removing end blinds from shell/tube exchangers and lancing out the tubes (rich side).
		Replace (3) butterfly valves in unit - Theses are under DCS project- (2) 12" valves & (1) 6" valve. Project will include modification or replacement of existing spools as takeout of the new valves is different
	V-302 & V303	Potential Leaks around bridle on V-302 or V-303. Project will consist of removing the insulation, inspecting, making repairs as needed, re-installing insulation.
DCS System		PLC-DCS tie-ins for chillers
		New Control Room - DCS
		Block Valves behind transmitters / instruments
ESD System		Check ESD's when plant is shut- Function Tests
Flare System	LP Flare	Repair the ignition system on the LP Flare.
Fuel System	Clark inlet compressors	Fuel valves to Clark engines are leaking (9-3" 150 ANSI valves)
	Cooper Building	Fuel line to Cooper starters & Turbo assists - Bolt up

	Clark & Cooper Compression	Fuel line to Coopers and Cats /bolt up new header/meter run KP-22. Need Pressure Control Valve.
		Keystone Spill to 24"
		Fuel Buyback - 2"
Glycol System	Glycol Contractor and pump skid	Glycol Contactor - This project includes replacement of existing Kimray Glycol Pumps with new electric driven pumps, replacement of about 200' of underground piping with above ground pipeline, installation of level controls on the glycol dehydrator, glycol dehydrator dump valve, and I&E work.
	Glycol contactor	Glycol Contactor - Change block valves on contactor
	Glycol contactor	Repair Glycol Contactor better from previous repair due to timing/outage
Inlet	LP Inlet	Install new meter on KP-95
	Mole sieve area	V-301 Horizontal Filter Separator - Replace the existing inlet filter located immediately upstream of the mole sieve beds. Build a bypass around filter. All pipe has been pre-fabricated. TAR scope is a bolt up.
	West Field LP Inlet	24" Inlet line that has a clamp. TAR scope of work will consist of replacing 300' of 24" pipe with 20" pipe. This pipe is on stansions with 50% in the plant and 50% outside the plant.
		Replacement of Unit #24 installation
	Clark and Cooper Compressors	Roll valves for possible actuatiing valves for future - (Tommy going to check with valve company if needed) Unit 1-3 suction/discharge valves. Roll valves on units from 4-7 and #17/#18/#21/#22
		Clark Fuel block valves - 3"-150# on Units #1 thru #7
Inlet Compression		PM work
		Loading valves
Inlet Receivers System		
NGL Pumps / System		Product booster pumps, suction and discharge lines, block valves will be replaced. New spools have been fabricated for new valve take outs. TAR scope of work is a bolt up.
Refrigeration System		
Relief Valve Work		Tommy will investigate if block valves under relief valves on air system and air tanks have to be removed
		Test PSV's that could not be tested during last inspection because of leaking block valves. Replace leaking block valves. Need a list from Tommy Johnson.
		Test PSV's on the SRU
Regen System		Regen Heater - Internal mechanical integrity inspection
Residue System		

Stabilizer / VRU / Cond.Storage		6" Vapor line from P-tanks to heater stabilizer, tie-in with E. Field Pipeline. All the piping has been pre-fabricated. TAR scope is a bolt up.
SRU		"A" Bed Catalyst - TAR scope of work will require removing the selectox in the 1st bed and replacing.
		3rd Condensor - test the jacketed piping for thermolene leaks
		Replace the 10" inlet control valve with a new 14" control valve with a actuator.
Treating		Replacement of the amine still and removal an old idle still.
		Install new spools with block valves for Middle Contactor Amine Inlet
		Install new spools with block valves for North Contactor Amine Inlet
		Amine Reboiler - Internal mechanical integrity inspection
		Upgrade LEL system on Reboiler
		Amine Flash Vessel Discharge Piping
Water Cooling System		Lube oil water header @ Gas Tower, can't isolate, corrosion is bad. Need to replace - New route away from tower. Tee and block valve will be installed at TAR.
		Clark Jacket water separation for new fan service from happies, spool built and ready per MOC. TA scope will consist of 1-30" weld on water piping to remove deadleg.
		#18 - 8" outlet gate valve on jacket water system needs to be replaced. TAR scope is a bolt up.
		(3) Exchangers will be installed - Engineering
Measurement		Liquid separation, slug catching and liquid measurement - 1 Outlet
		Elimination of SRE issues at compressor discharge / suction meters - 6 Inlets
		Also possible meter between 600# system to 300# system.
Mechanical Integrity Issues		No piping replacements
Valve List		
		WTG 1st Stage Inlet to Scrubber
		237 B - Coastal getting quotes. Replace valve. TA scope is a bolt up.
I&E Work		Power supply to water wells. Brackets on primary feed need to be removed.
		East side of plant power feed, should be down for removal of abandoned power lines running N&S @ fence.
		Check underground bunkers in plant during outage for possible gas leaks through conduit
		Electrical Upgrade
Field Work		WTG 10" pipeline (replacement of several sections of line)

		Field group will be gathering data on Lawson, Caprock, and WTG on 300# pound flgs. To 600# pound flgs. Replace 4-300 ANSI valves to 600 ANSI valves.
		West Eunice to Keystone 16" pipeline. Scope of work is to replace bad pipe that was identified by smart pigging. Three sections (266', 88', 64'). Project also included replacement of one 16" inline block valve. C113
VOC Repairs		Refer to delay of repair list from Team
Vessel Inspections		Clean & inspect V-237
		Clean & inspect V-238
		Clean & inspect V-242
		Clean & inspect P-7
#23 Piping		Demo - Install Piping after demo
South Jal		Remove amine coil-Install after Huffman repairs

Appendix 14
LDAR Analysis of Daily Work Record
and Semi-Annual NSPS Subpart KKK Reports

LDAR Analysis of Daily Work Record, Daily Calibration Form, and NSPS Subpart KKK Report

[illegible]

Appendix 15
TEAM Industrial Services – Daily Work Record
dated 2/13/13



Team Industrial Services

EMISSIONS CONTROL SERVICES / DAILY WORK RECORD

DATE: 2/15/12JOB NO. 2-1162344

- ☒ VOC
☐ NGPP
☐ NSPS
☐ NESHAP
☐ MACT
☐ OTHER

Customer Name & Location

Customer P.O. No.

Customer Representative

Unit / Area

Customer Acknowledgement

Sign: _____

Date: _____

Customer Address

Per Component Fee:	Quantity	Amt. Each	Total	Per Component Fee:	Quantity	Amt. Each	Total
Identification				Simple maintenance			
Tagging				Maintenance			
Difficult to tag				Bagging			
Identification & tagging				Difficult to bag			
Monitoring	50			Leaks	3		
Remonitoring				Other:			
Difficult to monitor				Other:			
Identification, tagging & monitoring				Other:			
SUBTOTAL:				TOTAL:			

Comments

Job Review

Additions:

Deletions:

No Tags:

Needs Plugs/Blinds:

First Attempt Due Date:

Completed Due Date:

ID/Ser. No:

Technician: S. R. H. 4080054Equipment: TVA 80000204Technician: P. D. M. 4060254

Equipment:

Vehicle: Cummins 43018000

Labor	Time	Total	Charge	Rate	Amount	Total
Pre-Job Preparation	<u>0800</u>					
Travel to Job	<u>0900</u>					
Job Site In	<u>1000</u>					
Lunch						
Job Site Out	<u>1400</u>					
Travel From Job Site	<u>1500</u>					
Post-Job Preparation	<u>1550</u>					
TOTALS						

Material Description	Qty.	Amt. Each	Total
<u>Cummins 4</u>	<u>1</u>		
<u>TVA 8000</u>	<u>1</u>		
<u>TVA 8000</u>	<u>1</u>		
<u>P. D. M. 40</u>	<u>1</u>		

Material Total:

Labor Total:

Other:

GRAND TOTAL:

Appendix 16
Semi-Annual 40 CFR 60, Subpart KKK Report
for October 2012 – March 2013 dated 4/25/13

FILE COPY
RE4019



SOUTHERN UNION GAS SERVICES
An ENERGY TRANSFER Company

600 N. Marienfeld, Suite 700 Midland, Texas 79701 (817) 302-9780

April 25, 2013

Texas Commission on Environmental Quality
Region 7 – Midland
9900 W IH-20, Suite 100
Midland, Texas 79706

Re: Semi-Annual 40 CFR 60, Subpart KKK Report
Permit No. O-0769
Keystone Gas Plant
RN100238633, CN603004664, WM-0011-U

Southern Union Gas Services, Ltd. (SUGS) owns and operates the Keystone Gas Plant located in Winkler County, Texas. Attached is the NSPS Subpart KKK Semi-Annual Report for October 2012 through March 2013.

If you have any questions, please call me at the number listed above or at mary.valencia@sug.com.

Sincerely,

Maria M. Valencia
Specialist – Environmental Permits

Enclosures

NSPS SEMIANNUAL REPORT (40 CFR 60, SUBPART KKK)

PART I

COMPANY: Southern Union Gas Services, Ltd.

PLANT: Keystone Gas Plant

PROCESS UNIT IDENTIFICATION: Inlet. Dehy. Amine. Cryogenic Processes and Methanal tank in Cryo Aea

REPORTING PERIOD: 10/12 through 03/13

PART II

	10/12	11/12	12/12	01/13	02/13	03/13
No. of pressure relief devices for which leaks have been detected	3	0	0	0	0	0
No. of pressure relief devices for which leaks have not been repaired	0	0	0	0	0	0
No. of valves for which leaks have been detected	10	7	0	1	0	0
No. of valves for which leaks have not been repaired	3	5	0	0	0	0
No. of pumps for which leaks have been detected	1	3	0	1	0	2
No. of pumps for which leaks have not been repaired	0	1	0	0	0	0
No. of compressors for which leaks have been detected	2	0	0	0	0	0
No. of compressors for which leaks have not been repaired	0	0	0	0	0	0

Appendix 17
6 Emission Events reported to TCEQ
in 2011

**SITE SEARCH:**

please enter search ph

SUBJECT INDEX
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[Wa](#)
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Emission Event Reporting Database

Regulated entity name	KEYSTONE GAS PLANT	Physical location	FR JUNCTION OF HWY 18 & 302 IN KERMIT GO N ON HWY 18 FOR 4.3 TO JUNCTION WITH FM 874 GO E (FM 874 FOR 4.5 MI TO JUNCTION I FM 1218 GO N ON FM 1218 FOR 0. TO JUNCTION OF CR 301 GO E ON 301 TO FACILITY ON LEFT
Regulated entity RN number	RN100238633	City, County	KERMIT, WINKLER
Type(s) of air emissions event:	EMISSIONS EVENT	Event began:	05/10/2011 4:50AM
This is based on the:	FINAL REPORT	Event ended:	06/24/2011 11:30AM
Cause	Flaring due to SRU taken down to cool down and safely repair leak found on recycle blower. Leak on recycle blower was due to labryth seal that failed and began blowing H2S. Labryth was used due to was designed to not ever leak, however due to leaking failure, plant has remodified recycle blower with packing instead of using labryth seal. When recycle blower was removed, piping was discovered plugged up with sulfur. Leaks were also detected on thermolene i reheaters and water leak in #3 condensor. Maintenance was called began repair work. Once all repairs were made, unit was placed back in service and off flare.		
Action taken	Maintenance dept began cleaning and chipping out sulfur; removed four of the butterfly valves and sent them to Permian Valve to be cleaned. Pressure tested tubes for any leaks. Found thermolene leak reheaters and water leak in #3 condensor. Cleaned and washed tubes and condensor. Cleaned gaskets. Pull head on condensor to clean thermolene. Cleaned drain lines on condensers. Replaced gasket head		

	Replaced lap top on opto 22 temp display. Once repairs were made aux burner lighted and acid gas brought in, slowly brought temps normal and began to load SRU. SRU placed back in service and of flare.
Emissions estimation method	Flare/Vent Upset Log POLLUTANT Flow to Chemical RQ Incinerator/Vent Emission Factor/Basis Exceed RQ Pollutant Form (lbs) Emission Basis Units (Mscf) Nitrogen Oxides NOX 5000 0.09 lb/MM Btu feed (Permit Allowable Basis) - Nitrogen Dioxide NO2 5000 0.01 NO2/NOx (Assuming all NOx is NO2) 153525.3 Nitric Oxide NO 5000 0.01 NO/NOx (Assuming all NOx is NO) 153525.3 Carbon Monoxide (CO) 5000 0.019 lb/MM Btu feed (Permit Allowable Basis) 769243 Natural Gas (Incinerating)* NG 5000 1.00% Uncombusted waste gas 387 Natural Gas (Venting)* NG 5000 100.00% Uncombusted waste gas 387 Sulfur Dioxide SO2 500 100.00% Conversion of H2S to SO2 if incinerated 21 Hydrogen Sulfide H2S 100 143662 PPMV in gas, 1% if incinerated, 100% if vented 775 Incinerated, 8 Vented Particulate Matter PM10/TSP Visible emissions reportable after 11 minutes duration in any two hour period. * Excluding methane and ethane STREAM COMPOSITION (A)/100 X (A)/100 X (C) (A) (B) (C) (B) E (LHV) Mole or Molecular LHV lb/lb-mol Weight per scf Component Volume, % Weight (Btu/scf) Feed Gas Percent Feed Gas Nitrogen 28.01 0 0.18 0.52% 0.0 Carbon Dioxide 57.47 44.01 0 25.29 72.0 0.0 Methane 26.72 16.04 911 4.29 12.29% 243.4 Ethane 0.80 30.16 22 0.24 0.69% 13.0 Propane 0.01 44.09 2322 0.00 0.00% 0.2 Isobutane 0.00 58.12 3009 0.00 0.00% 0.0 n-Butane 0.00 58.12 0.00 0.00% 0.0 Isopentane 0.00 72.15 3708 0.00 0.00% 0.0 n-Pentane 0.00 72.15 3717 0.00 0.00% 0.0 n-Hexane 0.00 86.17 4000 0.00 0.00% 0.0 Hydrogen Sulfide 14.37 34.08 595 4.90 14.04% 100.01 34.90 100.00% 342.1 * HHV/LHV data are from Steam, I Generation and Use (Babcock & Wilcox, 1972) Flare/Vent Upset Log Flaring Venting Date "Volume (Mscf)" Source (Flare/Vent) "NOx (lb/day)" "CO (lb/day)" "Natural Gas (lb/day)" "SO2 (lb/day)" "Hydrogen Sulfide (lb/day)" RQ(s) Potentially Exceeded "Natural Gas (lb/day)" "Hydrogen Sulfide (lb/day)" RQ Potentially Exceeded 5/73688 flare 25200 479 9510 1790000 19000 NOX, NG, SO2, H2S NA NA 6/24/11 0 0 0 0 0 0 None 0 0 None

Source 1: Acid Gas Flare , EPN number FL-1

Contaminant	Authorization	Limit	Amount Released
Carbon Monoxide	Permit 2724	0.0	479.0 lbs (est.)
Hydrogen Sulfide	Permit 2724	0.0	19000.0 lbs (est.)
NATURAL GAS	Permit 2724	0.0	9510.0 lbs (est.)

NOX	Permit 2724	0.0	25200.0 lbs (est.)
Sulfur dioxide	Permit 2724	0.0	1790000.0 lbs (est.)

Source 2: Keystone Plant - Sulfur Recovery Unit , FIN numbe

Source 3: Sulfur Recovery Unit , FIN number SRU

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Regulated entity name	KEYSTONE GAS PLANT	Physical location	FR JUNCTION OF HWY 18 & 302 IN KERMIT GO N ON HWY 18 FOR 4.3 TO JUNCTION WITH FM 874 GO E (FM 874 FOR 4.5 MI TO JUNCTION I FM 1218 GO N ON FM 1218 FOR 0. TO JUNCTION OF CR 301 GO E ON 301 TO FACILITY ON LEFT
Regulated entity RN number	RN100238633	City, County	KERMIT, WINKLER
Type(s) of air emissions event:	EMISSIONS EVENT	Event began:	07/09/2011 10:00PM
This is based on the:	FINAL REPORT	Event ended:	07/10/2011 2:22PM
Cause	Flare due to blockage in rundown of block valve on #1 condenser caused by sulfur buildup in block valve. Long-looped. Maintenance called immediately to work on blockage; maintenance rodded out line to clear blockage. Once blockage was removed, SRU was war up, placed back in service and off flare.		
Action taken	Maintenance was called immediately to work on blockage; maintenance rodded out the line to clear blockage. Once blockage removed, SRU was warmed up, placed back in service and off flar		
Emissions estimation method	Flare/Vent Upset Log POLLUTANT Flow to Chemical RQ Flare/Vent Emission Factor/Basis Exceed RQ Pollutant Formula (lbs) Emission Basis Units (Mscf) Nitrogen Oxides NOX 5000 0.0952 lb/MM Btu fi (Permit Allowable Basis) - Nitrogen Dioxide NO2 5000 1 NO2/NOx (Assuming all NOx is NO2) 172200.0 Nitric Oxide NO 5000 1 NO/I (Assuming all NOx is NO) 172200.0 Carbon Monoxide CO 5000 0. lb/MM Btu feed (Permit Allowable Basis) 862813 Natural Gas		

(Incinerating)* NG 5000 1.00% Uncombusted waste gas 34509
Natural Gas (Venting)* NG 5000 100.00% Uncombusted waste gas
345 Sulfur Dioxide SO2 500 100.00% Conversion of H2S to SO2 if
incinerated 18 Hydrogen Sulfide H2S 100 161538 PPMV in gas, 161538
if incinerated, 100% if vented 689 Incinerated, 7 Vented Particulate
Matter PM10/TSP Visible emissions reportable after 11 minutes
duration in any two hour period. * Excluding methane and ethane
STREAM COMPOSITION (A)/100 X (A)/100 X (C) (A) (B) (C) (B) E
(LHV) Mole or Molecular LHV lb/lb-mol Weight per scf Component
Volume, % Weight (Btu/scf) Feed Gas Percent Feed Gas Nitrogen
28.01 0 0.16 0.44% 0.0 Carbon Dioxide 60.77 44.01 0 26.74 74.
0.0 Methane 21.97 16.04 911 3.52 9.76% 200.1 Ethane 0.53 30.
1622 0.16 0.44% 8.6 Propane 0.01 44.09 2322 0.00 0.00% 0.2
Isobutane 0.00 58.12 3009 0.00 0.00% 0.0 n-Butane 0.00 58.12
0.00 0.00% 0.0 Isopentane 0.00 72.15 3708 0.00 0.00% 0.0 n-
Pentane 0.00 72.15 3717 0.00 0.00% 0.0 n-Hexane 0.00 86.17 4
0.00 0.00% 0.0 Hydrogen Sulfide 16.15 34.08 595 5.50 15.24%
100.00 36.08 99.99% 305.0 * HHV/LHV data are from Steam, Its
Generation and Use (Babcock & Wilcox, 1972) Flare/Vent Upset L
Flaring Venting Date "Volume (Mscf)" Source (Flare/Vent) "NOx
(lb/day)" "CO (lb/day)" "Natural Gas (lb/day)" "SO2 (lb/day)"
"Hydrogen Sulfide (lb/day)" RQ(s) Potentially Exceeded "Natural Gas
(lb/day)" "Hydrogen Sulfide (lb/day)" RQ Potentially Exceeded 7-
to ongoing 1430 flare 436 8.29 207 39000 415 SO2, H2S NA NA
22:00 - ongoing 0 0 0 0 0 0 None 0 0 None 0 0 0 0 0 0 None 0 0
0 0 0 0 0 0 None 0 0 None

Source 1: Acid Gas Flare , EPN number FL1

Contaminant	Authorization	Limit	Amount Released
Carbon Monoxide	2724	0.0	7.17 lbs (est.)
Hydrogen Sulfide	2724	0.0	593.0 lbs (est.)
NATURAL GAS	2724	0.0	296.0 lbs (est.)
NOX	2724	0.0	377.0 lbs (est.)
Sulfur dioxide	2724	0.0	55700.0 lbs (est.)

Source 2: Keystone Gas Plant , FIN number

Source 3: SRU , FIN number SRU

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Emission Event Reporting Database

Regulated entity name	KEYSTONE GAS PLANT	Physical location	FR JUNCTION OF HWY 18 & 302 IN KERMIT GO N ON HWY 18 FOR 4.3 MI TO JUNCTION WITH FM 874 GO E ON FM 874 FOR 4.5 MI TO JUNCTION WITH FM 1218 GO N ON FM 1218 FOR 0.5 MI TO JUNCTION OF CR 301 GO E ON CR 301 TO FACILITY ON LEFT
Regulated entity RN number	RN100238633	City, County	KERMIT, WINKLER
Type(s) of air emissions event:	EMISSIONS EVENT	Event began:	07/12/2011 10:56AM
This is based on the:	FINAL REPORT	Event ended:	09/09/2011 10:56AM
Cause	Sulfur plant went down due to loss of efficiency as a result from problems with catalyst beds A, B and C. Contract company replaced beds, however contract company installed improper materials and did not test thermalane tubing, therefore resulted in additional problems with sulfur recovery unit. By contract company not testing thermalane tubing bundles, created liquid problems in system. During bed changes, contractor allowed materials into condensor and continued maintenance was needed to clean this material from system. Extended work from bed changes were result of careless workmanship provided by contractor. Maintenance department conducted their own independent test and found six more leaks in thermalane system. Maintenance department repaired leaks. Contractor changed beds after waiting for correct materials for replacements. Once all repairs and replacements were completed, sulfur recovery unit was reloaded, placed back in service and off flare.		
Action taken	Contract company replaced beds, however contract company installed incorrect materials and did not test thermalane tubing for any leaks, therefore resulted in additional problems with sulfur recovery unit. By contract company not testing thermalane tubing bundles, created liquid problems in system. During bed changes, contractor allowed		

	materials into condensor and continued maintenance was needed to clean this material from system. Extended work from bed changes were result of careless workmanship provided by contractor. Maintenance department conducted their own independent test and found six more leaks in thermalane system. Maintenance department repaired leaks. Contractor changed beds after waiting for correct materials for replacements. Once all repairs and replacements were completed, sulfur recovery unit was reloaded, placed back in service and off flare.
Emissions estimation method	Flare/Vent Upset Log POLLUTANT Flow to Chemical RQ Incinerator/Vent Emission Factor/Basis Exceed RQ Pollutant Formula (lbs) Emission Basis Units (Mscf) Nitrogen Oxides NOX 5000 0.0952 lb/MM Btu feed (Permit Allowable Basis) - Nitrogen Dioxide NO2 5000 1 NO2/NOx (Assuming all NOx is NO2) 206857.1 Nitric Oxide NO 5000 1 NO/NOx (Assuming all NOx is NO) 206857.1 Carbon Monoxide CO 5000 0.019 lb/MM Btu feed (Permit Allowable Basis) 1036463 Natural Gas (Incinerating)* NG 5000 1.00% Uncombusted waste gas 33595 Natural Gas (Venting)* NG 5000 100.00% Uncombusted waste gas 336 Sulfur Dioxide SO2 500 100.00% Conversion of H2S to SO2 if incinerated 18 Hydrogen Sulfide H2S 100 165757 PPMV in gas, 1% if incinerated, 100% if vented 672 Incinerated, 7 Vented Particulate Matter PM10/TSP Visible emissions reportable after 11 minutes duration in any two hour period. * Excluding methane and ethane GAS STREAM COMPOSITION (A)/100 X (A)/100 X (C) (A) (B) (C) (B) Btu (LHV) Mole or Molecular LHV lb/lb-mol Weight per scf Component Volume, % Weight (Btu/scf) Feed Gas Percent Feed Gas Nitrogen 0.42 28.01 0 0.12 0.32% 0.0 Carbon Dioxide 66.30 44.01 0 29.18 77.44% 0.0 Methane 16.30 16.04 911 2.61 6.93% 148.5 Ethane 0.40 30.07 1622 0.12 0.32% 6.5 Propane 0.01 44.09 2322 0.00 0.00% 0.2 Isobutane 0.00 58.12 3009 0.00 0.00% 0.0 n-Butane 0.00 58.12 3018 0.00 0.00% 0.0 Isopentane 0.00 72.15 3708 0.00 0.00% 0.0 n-Pentane 0.00 72.15 3717 0.00 0.00% 0.0 n-Hexane 0.00 86.17 4415 0.00 0.00% 0.0 Hydrogen Sulfide 16.58 34.08 595 5.65 14.99% 98.7 100.01 37.68 100.00% 253.9 * HHV/LHV data are from Steam, Its Generation and Use (Babcock & Wilcox, 1972) Flare/Vent Upset Log Flaring Venting Date "Volume (Mscf)" Source (Flare/Vent) "NOx (lb/day)" "CO (lb/day)" "Natural Gas (lb/day)" "SO2 (lb/day)" "Hydrogen Sulfide (lb/day)" RQ(s) Potentially Exceeded "Natural Gas (lb/day)" "Hydrogen Sulfide (lb/day)" RQ Potentially Exceeded 7/12/11 -9/7/11 96370 flare 24500 465 14300 2700000 28700 NOX, NG, SO2, H2S NA NA NA

Source 1: Acid Gas Flare , EPN number FL1

Contaminant	Authorization	Limit	Amount Released
Carbon Monoxide	2724	0.0	465.0 lbs (est.)
Hydrogen Sulfide	2724	0.0	28700.0 lbs (est.)

NATURAL GAS	2724	0.0	14300.0 lbs (est.)
NOX	2724	0.0	24500.0 lbs (est.)
Sulfur dioxide	2724	0.0	2700000.0 lbs (est.)

Source 2: Keystone Gas Plant , FIN number

Source 3: SRU , FIN number SRU

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Regulated entity name	KEYSTONE GAS PLANT	Physical location	FR JUNCTION OF HWY 18 & 302 IN KERMIT GO N ON HWY 18 FOR 4.3 TO JUNCTION WITH FM 874 GO E (FM 874 FOR 4.5 MI TO JUNCTION V FM 1218 GO N ON FM 1218 FOR 0. TO JUNCTION OF CR 301 GO E ON 301 TO FACILITY ON LEFT
Regulated entity RN number	RN100238633	City, County	KERMIT, WINKLER
Type(s) of air emissions event:	EMISSIONS EVENT	Event began:	09/18/2011
This is based on the:	FINAL REPORT	Event ended:	10/21/2011
Cause	Some piping on the SRU is full of sulfur and the recycle blower is replaced. This was caused from heat traced lines failed, recycle bl failed and the heat exchanger's head gasket failed. There was no indication of problems due to the location of the blower and piping		
Action taken	Maintenance cleaned out piping and removed recycle blower and repairs made at a machine shop. The heat tracing issues were rep and additional backup tracing was installed. Repairs made to seat gasket seals was conducted. Recycle blower repairs were expedite get SRU back in service quickly. Once all repairs were completed, operations placed SRU back in service and off flare.		
Emissions estimation method	Flare/Vent Upset Log POLLUTANT Flow to Chemical RQ Incinerator/Vent Emission Factor/Basis Exceed RQ Pollutant Form (lbs) Emission Basis Units (Mscf) Nitrogen Oxides NOX 5000 0.09 lb/MM Btu feed (Permit Allowable Basis) - Nitrogen Dioxide NO2 5 1 NO2/NOx (Assuming all NOx is NO2) 209413.9 Nitric Oxide NO		

1 NO/NOx (Assuming all NOx is NO) 209413.9 Carbon Monoxide (5000 0.019 lb/MM Btu feed (Permit Allowable Basis) 1049274 Nat Gas (Incinerating)* NG 5000 1.00% Uncombusted waste gas 332 Natural Gas (Venting)* NG 5000 100.00% Uncombusted waste gas 333 Sulfur Dioxide SO2 500 100.00% Conversion of H2S to SO2 if incinerated 18 Hydrogen Sulfide H2S 100 167089 PPMV in gas, 1% incinerated, 100% if vented 666 Incinerated, 7 Vented Particulate Matter PM10/TSP Visible emissions reportable after 11 minutes duration in any two hour period. * Excluding methane and ethane

STREAM COMPOSITION (A)/100 X (A)/100 X (C) (A) (B) (C) (B) E (LHV) Mole or Molecular LHV lb/lb-mol Weight per scf Component Volume, % Weight (Btu/scf) Feed Gas Percent Feed Gas Nitrogen 28.01 0 0.10 0.26% 0.0 Carbon Dioxide 66.84 44.01 0 29.42 77. 0.0 Methane 15.44 16.04 911 2.48 6.55% 140.7 Ethane 0.63 30. 1622 0.19 0.50% 10.2 Propane 0.02 44.09 2322 0.01 0.03% 0.5 Isobutane 0.00 58.12 3009 0.00 0.00% 0.0 n-Butane 0.00 58.12 0.00 0.00% 0.0 Isopentane 0.00 72.15 3708 0.00 0.00% 0.0 n-Pentane 0.00 72.15 3717 0.00 0.00% 0.0 n-Hexane 0.00 86.17 4 0.00 0.00% 0.0 Hydrogen Sulfide 16.71 34.08 595 5.69 15.02% 99.99 37.89 100.01% 250.8 * HHV/LHV data are from Steam, Its Generation and Use (Babcock & Wilcox, 1972) Flare/Vent Upset L Flaring Venting Date "Volume (Mscf)" Source (Flare/Vent) "NOx (lb/day)" "CO (lb/day)" "Natural Gas (lb/day)" "SO2 (lb/day)" "Hydrogen Sulfide (lb/day)" RQ(s) Potentially Exceeded "Natural (lb/day)" "Hydrogen Sulfide (lb/day)" RQ Potentially Exceeded 9/ - 10/22/11 54693 flare 13700 261 8220 1540000 16400 NOX, NC SO2, H2S NA NA NA

Source 1: Acid Gas Flare , EPN number FL1

Contaminant	Authorization	Limit	Amount Released
Carbon Monoxide	Permit 2724	0.0	261.0 lbs (est.)
Hydrogen Sulfide	Permit 2724	0.0	16400.0 lbs (est.)
NATURAL GAS	Permit 2724	0.0	8220.0 lbs (est.)
NOX	Permit 2724	0.0	13700.0 lbs (est.)
Sulfur dioxide	Permit 2724	0.0	1540000.0 lbs (est.)

Source 2: Keystone Gas Plant SRU , FIN number

Source 3: Sulfur Recovery Unit , FIN number SRU

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Regulated entity RN number	RN100238633	City, County	KERMIT, WINKLER
Type(s) of air emissions event:	EMISSIONS EVENT	Event began:	10/29/2011 8:45AM
This is based on the:	FINAL REPORT	Event ended:	10/30/2011 1:45PM
Cause	Flaring acid gas due to Sulfur Recovery Unit was taken down to make necessary repairs. Maintenance discovered a packing leak on the recycle blower of the SRU. This piece of equipment rotates during operation and cannot be foreseen of failure due to location of equipment. Maintenance repaired packing leak and placed SRU back in service and off flare.		
Action taken	Maintenance was immediately contacted to investigate situation. Gas was shut in at plant during this event. Once the packing leak was discovered, maintenance repaired packing leak and placed SRU back in service and off flare.		
Emissions estimation method	Flare/Vent Upset Log POLLUTANT Flow to Chemical RQ Incinerator/Vent Emission Factor/Basis Exceed RQ Pollutant Formula (lbs) Emission Basis Units (Mscf) Nitrogen Oxides NOX 5000 0.0952 lb/MM Btu feed (Permit Allowable Basis) - Nitrogen Dioxide NO2 5000 1 NO2/NOx (Assuming all NOx is NO2) 146747.7 Nitric Oxide NO 5000 1 NO/NOx (Assuming all NOx is NO) 146747.7 Carbon Monoxide CO 5000 0.019 lb/MM Btu feed (Permit Allowable Basis) 735283 Natural Gas (Incinerating)* NG 5000 1.00% Uncombusted waste gas 26577 Natural Gas (Venting)* NG 5000 100.00% Uncombusted waste gas		

266 Sulfur Dioxide SO2 500 100.00% Conversion of H2S to SO2 if incinerated 14 Hydrogen Sulfide H2S 100 208954 PPMV in gas, 1% if incinerated, 100% if vented 533 Incinerated, 5 Vented Particulate Matter PM10/TSP Visible emissions reportable after 11 minutes duration in any two hour period. * Excluding methane and ethane GAS STREAM COMPOSITION (A)/100 X (A)/100 X (C) (A) (B) (C) (B) Btu (LHV) Mole or Molecular LHV lb/lb-mol Weight per scf Component Volume, % Weight (Btu/scf) Feed Gas Percent Feed Gas Nitrogen 0.55 28.01 0 0.15 0.43% 0.0 Carbon Dioxide 53.73 44.01 0 23.65 67.48% 0.0 Methane 23.81 16.04 911 3.82 10.90% 216.9 Ethane 0.97 30.07 1622 0.29 0.83% 15.7 Propane 0.04 44.09 2322 0.02 0.06% 0.9 Isobutane 0.00 58.12 3009 0.00 0.00% 0.0 n-Butane 0.00 58.12 3018 0.00 0.00% 0.0 Isopentane 0.00 72.15 3708 0.00 0.00% 0.0 n-Pentane 0.00 72.15 3717 0.00 0.00% 0.0 n-Hexane 0.00 86.17 4415 0.00 0.00% 0.0 Hydrogen Sulfide 20.90 34.08 595 7.12 20.31% 124.4 100.00 35.05 100.01% 357.9 * HHV/LHV data are from Steam, Its Generation and Use (Babcock & Wilcox, 1972) Flare/Vent Upset Log Flaring Venting Date "Volume (Mscf)" Source (Flare/Vent) "NOx (lb/day)" "CO (lb/day)" "Natural Gas (lb/day)" "SO2 (lb/day)" "Hydrogen Sulfide (lb/day)" RQ(s) Potentially Exceeded "Natural Gas (lb/day)" "Hydrogen Sulfide (lb/day)" RQ Potentially Exceeded 10/29/11 3547 flare 1270 24.1 667 125000 1330 SO2, H2S NA NA NA

Source 1: Acid Gas Flare , EPN number FL1

Contaminant	Authorization	Limit	Amount Released
Carbon Monoxide	Permit 2724	0.0	24.1 lbs (est.)
Hydrogen Sulfide	Permit 2724	0.0	1330.0 lbs (est.)
NATURAL GAS	Permit 2724	0.0	667.0 lbs (est.)
NOX	Permit 2724	0.0	1270.0 lbs (est.)
Sulfur dioxide	Permit 2724	0.0	125000.0 lbs (est.)

Source 2: Keystone Gas Plant SRU , FIN number

Source 3: Sulfur Recovery Unit , FIN number SRU

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Regulated entity RN number	RN100238633	City, County	KERMIT, WINKLER
Type(s) of air emissions event:	EMISSIONS EVENT	Event began:	11/08/2011 8:00AM
This is based on the:	FINAL REPORT	Event ended:	03/28/2012 6:00PM
Cause	SRU taken down due to failure of the control system, recycle blow packing failure and testing jacketed sections of the plant for possi hot oil and/or steam leaks. Had to shut down SRU and put in long until packing can be replaced. Principal Technology was contacted design and install a new updated control system complete with ne end devices, PLC's and new ADA. All jacketed sections of the plan were tested and found the "boot" on the bottom #2 condenser lea and a section of the drain piping on #3 condenser leaking. Leakin piping was replaced. A different style of packing for recycle blowe ordered and installed for better reliability. Duration of event was necessary to install new control system and programming; wait fo ordered parts, such as end devices, PLC's and ADA; locating and repairing leaks in jacketed parts of the plant. This could not have avoided due this type of issues arise from continual operation of equipment. Upon completion of all repairs, unit was placed back		

	service while tuning on the control system was performed for proper operation. Unit was placed back in service and plant off flare.
Action taken	SRU shut down and put in long loop until packing can be replaced Principal Technology was contacted to design and install a new updated control system complete with new end devices, PLC's and ADA. All jacketed sections of the plant were tested and found the "boot" on the bottom #2 condenser leaking and a section of the piping on #3 condenser leaking. Leaking piping was replaced. A different style of packing for recycle blower was ordered and installed for better reliability. Duration of event was necessary to install new control system and programming; wait for ordered parts, such as devices, PLC's and ADA; locating and repairing leaks in jacketed piping of the plant. This could not have been avoided due to this type of issue arise from continual operation of equipment. Upon completion of repairs, unit was placed back in service while tuning on the control system was performed for proper operation. Unit was placed back in service and plant off flare.
Emissions estimation method	Flare/Vent Upset Log POLLUTANT Flow to Chemical RQ Incinerator/Vent Emission Factor/Basis Exceed RQ Pollutant Form (lbs) Emission Basis Units (Mscf) Nitrogen Oxides NOx 5000 0.09 lb/MM Btu feed (Permit Allowable Basis) - Nitrogen Dioxide NO2 5000 1.00 NO2/NOx (Assuming all NOx is NO2) 178582.1 Nitric Oxide NO 5000 0.01 NO/NOx (Assuming all NOx is NO) 178582.1 Carbon Monoxide (CO) 5000 0.019 lb/MM Btu feed (Permit Allowable Basis) 894791 Natural Gas (Incinerating)* NG 5000 1.00% Uncombusted waste gas 220 Natural Gas (Venting)* NG 5000 100.00% Uncombusted waste gas 221 Sulfur Dioxide SO2 500 100.00% Conversion of H2S to SO2 if incinerated 12 Hydrogen Sulfide H2S 100 252249 PPMV in gas, 100% if incinerated, 100% if vented 441 Incinerated, 4 Vented Particulate Matter PM10/TSP Visible emissions reportable after 11 minutes duration in any two hour period. * Excluding methane and ethane STREAM COMPOSITION (A)/100 X (A)/100 X (C) (A) (B) (C) (B) E (LHV) Mole or Molecular LHV lb/lb-mol Weight per scf Component Volume, % Weight (Btu/scf) Feed Gas Percent Feed Gas Nitrogen 28.01 0 0.11 0.30% 0.0 Carbon Dioxide 58.86 44.01 0 25.90 69.0 0.0 Methane 15.15 16.04 911 2.43 6.54% 138.0 Ethane 0.37 30.16 22 0.11 0.30% 6.0 Propane 0.00 44.09 2322 0.00 0.00% 0.0 Isobutane 0.00 58.12 3009 0.00 0.00% 0.0 n-Butane 0.00 58.12 0.00 0.00% 0.0 Isopentane 0.00 72.15 3708 0.00 0.00% 0.0 n-Pentane 0.00 72.15 3717 0.00 0.00% 0.0 n-Hexane 0.00 86.17 40.00 0.00% 0.0 Hydrogen Sulfide 25.22 34.08 595 8.59 23.13% 99.99 37.14 100.01% 294.1 * HHV/LHV data are from Steam, Its Generation and Use (Babcock & Wilcox, 1972) Flare/Vent Upset Log Flaring Venting Date "Volume (Mscf)" Source (Flare/Vent) "NOx (lb/day)" "CO (lb/day)" "Natural Gas (lb/day)" "SO2 (lb/day)"

"Hydrogen Sulfide (lb/day)" RQ(s) Potentially Exceeded "Natural (lb/day)" "Hydrogen Sulfide (lb/day)" RQ Potentially Exceeded 11-3/29/12 271408 flare 79800 1520 61400 11600000 123000 NO_x NG, SO₂, H₂S NA NA NA

Source 1: Acid Gas Flare , EPN number FL1

Contaminant	Authorization	Limit	Amount Released
Carbon Monoxide	2724	0.0	1520.0 lbs (est.)
Hydrogen Sulfide	2724	0.0	123000.0 lbs (est.)
NATURAL GAS	2724	0.0	61400.0 lbs (est.)
NO _x	2724	0.0	79800.0 lbs (est.)
Sulfur dioxide	2724	0.0	11600000.0 lbs (est.)

Source 2: Keystone Gas Plant , FIN number

Source 3: SRU , FIN number SRU

No other sources

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Appendix 18
4 Emission Events reported to TCEQ
since October 2013



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

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Emission Event Reporting Database

Regulated entity name	KEYSTONE GAS PLANT	Physical location	FR JUNCTION OF HWY 18 & 302 IN KERMIT GO N ON HWY 18 FOR 4.3 TO JUNCTION WITH FM 874 GO E FM 874 FOR 4.5 MI TO JUNCTION FM 1218 GO N ON FM 1218 FOR 0 TO JUNCTION OF CR 301 GO E ON 301 TO FACILITY ON LEFT
Regulated entity RN number	RN100238633	City, County	KERMIT, WINKLER
Type(s) of air emissions event:	MAINTENANCE	Event began:	10/14/2013 12:00PM
This is based on the:	FINAL REPORT	Event ended:	10/22/2013 11:30AM
Cause	Scheduled plant shutdown on starting midnight 10/14/2013 to pr various required maintenance on equipment throughout the plant Flared various types of gases from through out the plant in order safely make these repairs and perform required maintenance on equipment. The duration listed above is the duration of the Plant shutdown and not the duration of the flaring. Flaring of these gas was intermittently between this shutdown period at shutdown and startup.		
Action taken	All producers sending gas to our plant were informed to shut in th gas coming into our plant. All resources, crews, equipment for all projects were on hand for this shutdown to help minimize amount time to have the plant shut in.		
Emissions estimation method	POLLUTANT Flow to Chemical RQ Incinerator/Vent Emission Factor/Basis Exceed RQ Pollutant Formula (lbs) Emission Basis Ur (Mscf) Nitrogen Oxides NOX 5000 0.0952 lb/MM Btu feed (Permit		

Allowable Basis) - Nitrogen Dioxide NO2 5000 1 NO2/NOx (Assum
all NOx is NO2) 134359.2 Nitric Oxide NO 5000 1 NO/NOx (Assum
all NOx is NO) 134359.2 Carbon Monoxide CO 5000 0.019 lb/MM
feed (Permit Allowable Basis) 673210 Natural Gas (Incinerating)*
5000 1.00% Uncombusted waste gas 26024 Natural Gas (Venting
NG 5000 100.00% Uncombusted waste gas 260 Sulfur Dioxide SO
500 100.00% Conversion of H2S to SO2 if incinerated 14 Hydroge
Sulfide H2S 100 213475 PPMV in gas, 1% if incinerated, 100% if
vented 522 Incinerated, 5 Vented Particulate Matter PM10/TSP Vi
emissions reportable after 11 minutes duration in any two hour p
* Excluding methane and ethane GAS STREAM COMPOSITION (A)
X (A)/100 X (C) (A) (B) (C) (B) Btu(LHV) Mole or Molecular LHV li
mol Weight per scf Component Volume, % Weight (Btu/scf) Feed
Percent Feed Gas Nitrogen 0.63 28.01 0 0.18 0.53% 0.0 Carbon
Dioxide 49.81 44.01 0 21.92 64.39% 0.0 Methane 27.25 16.04 9
4.37 12.84% 248.2 Ethane 0.94 30.07 1622 0.28 0.82% 15.2 Pro
0.02 44.09 2322 0.01 0.03% 0.5 Isobutane 0.00 58.12 3009 0.0
0.00% 0.0 n-Butane 0.00 58.12 3018 0.00 0.00% 0.0 Isopentane
72.15 3708 0.00 0.00% 0.0 n-Pentane 0.00 72.15 3717 0.00 0.0
0.0 n-Hexane 0.00 86.17 4415 0.00 0.00% 0.0 Hydrogen Sulfide
21.35 34.08 595 7.28 21.39% 127.0 100.00 34.04 100.00% 390
HHV/LHV data are from Steam, Its Generation and Use (Babcock
Wilcox, 1972) Incinerator/Vent Upset Log Incinerating Date "Volu
(Mscf)" Source (Incinerator/Vent) "NOx (lb/day)" "CO (lb/day)"
"Natural Gas (lb/day)" "SO2 (lb/day)" "Hydrogen Sulfide (lb/day)"
(s) Potentially Exceeded 10/14/13 - 10/21/13 4160 Flare 1630 30
799 150000 1590 SO2, H2S Plant scheduled shutdown 0 0 0 0 0
None

Source 1: Acid Gas Flare , EPN number FL-1

Contaminant	Authorization	Limit	Amount Released
Carbon Monoxide	2724	0.0	30.9 lbs (est.)
Hydrogen Sulfide	2724	0.0	1590.0 lbs (est.)
NATURAL GAS	2724	0.0	799.0 lbs (est.)
NOX	2724	0.0	1630.0 lbs (est.)
Sulfur dioxide	2724	0.0	150000.0 lbs (est.)

Source 2: All emission sources at the plant , FIN number All

Source 3: High Pressure Flare , EPN number FL-2

Contaminant	Authorization	Limit	Amount Released
Carbon Monoxide	73140	0.0	1740.0 lbs (est.)
NATURAL GAS	73140	0.0	1610.0 lbs (est.)
NOX	73140	0.0	872.0 lbs (est.)

Source 4: Keystone Gas Plant , FIN number

Source 5: Low Pressure Flare , EPN number FL-6

Contaminant	Authorization	Limit	Amount Released
Carbon Monoxide	90277	0.0	12860.0 lbs (est.)
Hydrogen Sulfide	90277	0.0	63.7 lbs (est.)
NATURAL GAS	90277	0.0	2156.0 lbs (est.)
NOX	90277	0.0	2370.0 lbs (est.)
Sulfur dioxide	90277	0.0	5980.0 lbs (est.)

No other sources

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Emission Event Reporting Database

Regulated entity name	KEYSTONE GAS PLANT	Physical location	FR JUNCTION OF HWY 18 & 302 IN KERMIT GO N ON HWY 18 FOR 4.3 TO JUNCTION WITH FM 874 GO E (FM 874 FOR 4.5 MI TO JUNCTION \ FM 1218 GO N ON FM 1218 FOR 0. TO JUNCTION OF CR 301 GO E ON 301 TO FACILITY ON LEFT
Regulated entity RN number	RN100238633	City, County	KERMIT, WINKLER
Type(s) of air emissions event:	EMISSIONS EVENT	Event began:	11/04/2013 7:15AM
This is based on the:	INITIAL REPORT	Event ended:	11/05/2013 4:20AM
Cause	Electrical breaker tripped on the chiller area. This caused all the computers in the DCS to shutdown which in turn caused the entire plant to go sour due to DCS down gives us no control of the plant also caused flared valves to open up and flare all gases throughout plant.		
Action taken	The breaker was immediately replaced and operators started bring the plant back on line. Took all day and into the night to sweeten and stabilize the plant,		
Emissions estimation method	POLLUTANT Flow to Chemical RQ Incinerator/Vent Emission Factor/Basis Exceed RQ Pollutant Formula (lbs) Emission Basis Ur (Mscf) Nitrogen Oxides NOX 5000 0.0952 lb/MM Btu feed (Permit Allowable Basis) - Nitrogen Dioxide NO2 5000 1 NO2/NOx (Assume all NOx is NO2) 161156.8 Nitric Oxide NO 5000 1 NO/NOx (Assume all NOx is NO) 161156.8 Carbon Monoxide CO 5000 0.019 lb/MM feed (Permit Allowable Basis) 807480 Natural Gas (Incinerating)*		

5000 1.00% Uncombusted waste gas 23169 Natural Gas (Venting
 NG 5000 100.00% Uncombusted waste gas 232 Sulfur Dioxide SC
 500 100.00% Conversion of H2S to SO2 if incinerated 12 Hydroge
 Sulfide H2S 100 240009 PPMV in gas, 1% if incinerated, 100% if
 vented 464 Incinerated, 5 Vented Particulate Matter PM10/TSP Vi
 emissions reportable after 11 minutes duration in any two hour p
 * Excluding methane and ethane GAS STREAM COMPOSITION (A)
 X (A)/100 X (C) (A) (B) (C) (B) Btu(LHV) Mole or Molecular LHV li
 mol Weight per scf Component Volume, % Weight (Btu/scf) Feed
 Percent Feed Gas Nitrogen 0.44 28.01 0 0.12 0.33% 0.0 Carbon
 Dioxide 56.00 44.01 0 24.65 68.11% 0.0 Methane 18.89 16.04 9
 3.03 8.37% 172.1 Ethane 0.65 30.07 1622 0.20 0.55% 10.5 Prop
 0.02 44.09 2322 0.01 0.03% 0.5 Isobutane 0.00 58.12 3009 0.01
 0.00% 0.0 n-Butane 0.00 58.12 3018 0.00 0.00% 0.0 Isopentane
 72.15 3708 0.00 0.00% 0.0 n-Pentane 0.00 72.15 3717 0.00 0.0
 0.0 n-Hexane 0.00 86.17 4415 0.00 0.00% 0.0 Hydrogen Sulfide
 24.00 34.08 595 8.18 22.60% 142.8 100.00 36.19 99.99% 325.9
 HHV/LHV data are from Steam, Its Generation and Use (Babcock
 Wilcox, 1972) Incinerator/Vent Upset Log Incinerating Date "Volu
 (Mscf)" Source (Incinerator/Vent) "NOx (lb/day)" "CO (lb/day)"
 "Natural Gas (lb/day)" "SO2 (lb/day)" "Hydrogen Sulfide (lb/day)"
 (s) Potentially Exceeded 04-Nov-13 818.75 Flare 267 5.07 177 33
 353 SO2, H2S

Source 1: Acid Gas Flare , EPN number FL-1

Contaminant	Authorization	Limit	Amount Released
Carbon Monoxide	2724	0.0	5.07 lbs (est.)
Hydrogen Sulfide	2724	0.0	353.0 lbs (est.)
NATURAL GAS	2724	0.0	177.0 lbs (est.)
NOX	2724	0.0	267.0 lbs (est.)
Sulfur dioxide	2724	0.0	33200.0 lbs (est.)

Source 2: Electrical Breaker , FIN number N/A

Source 3: High Pressure Flare , EPN number FL-2

Contaminant	Authorization	Limit	Amount Released
Carbon Monoxide	73140	0.0	10600.0 lbs (est.)
NATURAL GAS	73140	0.0	56.1 lbs (est.)

NOX	73140	0.0	1240.0 lbs (est.)
-----	-------	-----	-------------------

Source 4: Keystone Gas Plant , FIN number

Source 5: Low Pressure Flare , EPN number FL-6

Contaminant	Authorization	Limit	Amount Released
Carbon Monoxide	90277	0.0	475.0 lbs (est.)
Hydrogen Sulfide	90277	0.0	13.4 lbs (est.)
NATURAL GAS	90277	0.0	440.0 lbs (est.)
NOX	90277	0.0	238.0 lbs (est.)
Sulfur dioxide	90277	0.0	1260.0 lbs (est.)

No other sources

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Emission Event Reporting Database

Regulated entity name	KEYSTONE GAS PLANT	Physical location	FR JUNCTION OF HWY 18 & 302 IN KERMIT GO N ON HWY 18 FOR 4.3 TO JUNCTION WITH FM 874 GO E (FM 874 FOR 4.5 MI TO JUNCTION I FM 1218 GO N ON FM 1218 FOR 0. TO JUNCTION OF CR 301 GO E ON 301 TO FACILITY ON LEFT
Regulated entity RN number	RN100238633	City, County	KERMIT, WINKLER
Type(s) of air emissions event:	EMISSIONS EVENT	Event began:	11/17/2013 12:00PM
This is based on the:	INITIAL REPORT	Event ended:	11/18/2013 2:14AM
Cause	Both Eclipse HMO heaters in the SRU went down on a false low oi shutdown. And AUX bruner would not lite		
Action taken	Got both Eclipse heaters going and AUX bruner on		
Emissions estimation method	POLLUTANT Flow to Chemical RQ Incinerator/Vent Emission Factor/Basis Exceed RQ Pollutant Formula (lbs) Emission Basis Ur (Mscf) Nitrogen Oxides NOX 5000 0.0952 lb/MM Btu feed (Permit Allowable Basis) - Nitrogen Dioxide NO2 5000 1 NO2/NOx (Assun all NOx is NO2) 192314.2 Nitric Oxide NO 5000 1 NO/NOx (Assun all NOx is NO) 192314.2 Carbon Monoxide CO 5000 0.019 lb/MM feed (Permit Allowable Basis) 963595 Natural Gas (Incinerating)* 5000 1.00% Uncombusted waste gas 36756 Natural Gas (Venting NG 5000 100.00% Uncombusted waste gas 368 Sulfur Dioxide SO2 500 100.00% Conversion of H2S to SO2 if incinerated 20 Hydrogen Sulfide H2S 100 151209 PPMV in gas, 1% if incinerated, 100% if		

vented 736 Incinerated, 7 Vented Particulate Matter PM10/TSP Vi
 emissions reportable after 11 minutes duration in any two hour p
 * Excluding methane and ethane GAS STREAM COMPOSITION (A)
 X (A)/100 X (C) (A) (B) (C) (B) Btu(LHV) Mole or Molecular LHV li
 mol Weight per scf Component Volume, % Weight (Btu/scf) Feed
 Percent Feed Gas Nitrogen 0.44 28.01 0 0.12 0.32% 0.0 Carbon
 Dioxide 64.88 44.01 0 28.55 77.04% 0.0 Methane 18.89 16.04 9
 3.03 8.18% 172.1 Ethane 0.65 30.07 1622 0.20 0.54% 10.5 Prop
 0.02 44.09 2322 0.01 0.03% 0.5 Isobutane 0.00 58.12 3009 0.0
 0.00% 0.0 n-Butane 0.00 58.12 3018 0.00 0.00% 0.0 Isopentane
 72.15 3708 0.00 0.00% 0.0 n-Pentane 0.00 72.15 3717 0.00 0.0
 0.0 n-Hexane 0.00 86.17 4415 0.00 0.00% 0.0 Hydrogen Sulfide
 15.12 34.08 595 5.15 13.90% 90.0 100.00 37.06 100.01% 273.1
 HHV/LHV data are from Steam, Its Generation and Use (Babcock
 Wilcox, 1972) Incinerator/Vent Upset Log Incinerating Venting Da
 "Volume (Mscf)" Source (Incinerator/Vent) "NOx (lb/day)" "CO
 (lb/day)" "Natural Gas (lb/day)" "SO2 (lb/day)" "Hydrogen Sulfide
 (lb/day)" RQ(s) Potentially Exceeded "Natural Gas (lb/day)" 17-N
 1250 Flare 341 6.49 170 31900 339 SO2, H2S NA

Source 1: Acid Gas Flare , EPN number FL-1

Contaminant	Authorization	Limit	Amount Released
Carbon Monoxide	2724	0.0	6.49 lbs (est.)
Hydrogen Sulfide	2724	0.0	339.0 lbs (est.)
NATURAL GAS	2724	0.0	170.0 lbs (est.)
NOX	2724	0.0	341.0 lbs (est.)
Sulfur dioxide	2724	0.0	31900.0 lbs (est.)

Source 2: Keystone Gas Plant , FIN number

Source 3: Sulfur Recovery Unit , FIN number SRU

No other sources

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Emission Event Reporting Database

Regulated entity name	KEYSTONE GAS PLANT	Physical location	FR JUNCTION OF HWY 18 & 302 IN KERMIT GO N ON HWY 18 FOR 4.3 TO JUNCTION WITH FM 874 GO E (FM 874 FOR 4.5 MI TO JUNCTION I FM 1218 GO N ON FM 1218 FOR 0. TO JUNCTION OF CR 301 GO E ON 301 TO FACILITY ON LEFT
Regulated entity RN number	RN100238633	City, County	KERMIT, WINKLER
Type(s) of air emissions event:	EMISSIONS EVENT	Event began:	12/04/2013 8:00PM
This is based on the:	FINAL REPORT	Event ended:	12/05/2013 8:00PM
Cause	Auxillary burner went down and unable to relight it		
Action taken	I & E Tech worked on problem and was able to relight it and put 5 back on line		
Emissions estimation method	POLLUTANT Flow to Chemical RQ Incinerator/Vent Emission Factor/Basis Exceed RQ Pollutant Formula (lbs) Emission Basis Ur (Mscf) Nitrogen Oxides NOX 5000 0.0952 lb/MM Btu feed (Permit Allowable Basis) - Nitrogen Dioxide NO2 5000 1 NO2/NOx (Assum all NOx is NO2) 168282.6 Nitric Oxide NO 5000 1 NO/NOx (Assum all NOx is NO) 168282.6 Carbon Monoxide CO 5000 0.019 lb/MM feed (Permit Allowable Basis) 843185 Natural Gas (Incinerating)* 5000 1.00% Uncombusted waste gas 25640 Natural Gas (Venting NG 5000 100.00% Uncombusted waste gas 256 Sulfur Dioxide SO2 500 100.00% Conversion of H2S to SO2 if incinerated 14 Hydrogen Sulfide H2S 100 216809 PPMV in gas, 1% if incinerated, 100% if vented 514 Incinerated, 5 Vented Particulate Matter PM10/TSP Vi		

emissions reportable after 11 minutes duration in any two hour p
* Excluding methane and ethane GAS STREAM COMPOSITION (A)
X (A)/100 X (C) (A) (B) (C) (B) Btu(LHV) Mole or Molecular LHV ll
mol Weight per scf Component Volume, % Weight (Btu/scf) Feed
Percent Feed Gas Nitrogen 0.44 28.01 0 0.12 0.33% 0.0 Carbon
Dioxide 58.32 44.01 0 25.67 70.48% 0.0 Methane 18.89 16.04 9
3.03 8.32% 172.1 Ethane 0.65 30.07 1622 0.20 0.55% 10.5 Prop
0.02 44.09 2322 0.01 0.03% 0.5 Isobutane 0.00 58.12 3009 0.01
0.00% 0.0 n-Butane 0.00 58.12 3018 0.00 0.00% 0.0 Isopentane
72.15 3708 0.00 0.00% 0.0 n-Pentane 0.00 72.15 3717 0.00 0.0
0.0 n-Hexane 0.00 86.17 4415 0.00 0.00% 0.0 Hydrogen Sulfide
21.68 34.08 595 7.39 20.29% 129.0 100.00 36.42 100.00% 312
HHV/LHV data are from Steam, Its Generation and Use (Babcock
Wilcox, 1972) Incinerator/Vent Upset Log Incinerating Date "Volu
(Mscf)" Source (Incinerator/Vent) "NOx (lb/day)" "CO (lb/day)"
"Natural Gas (lb/day)" "SO2 (lb/day)" "Hydrogen Sulfide (lb/day)"
(s) Potentially Exceeded 04-Dec-13 2515.625 Flare 785 14.9 491
92100 980 SO2, H2S 0 0 0 0 0 None

Source 1: Acid Gas Flare , EPN number FL-1

Contaminant	Authorization	Limit	Amount Released
Carbon Monoxide	2724	0.0	14.9 lbs (est.)
Hydrogen Sulfide	2724	0.0	980.0 lbs (est.)
NATURAL GAS	2724	0.0	491.0 lbs (est.)
NOX	2724	0.0	785.0 lbs (est.)
Sulfur dioxide	2724	0.0	92100.0 lbs (est.)

Source 2: Keystone Gas Plant , FIN number

Source 3: Sulfur Recovery Unit , FIN number SRU

No other sources

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Appendix 19
Permit Number 2724 renewal dated 3/8/04 –
selected pages

MAR. 15. 2004 12:05PM ADMIN/R&D

NO. 700 P. 1/12

Kathleen Hartnett White, *Chairman*
R. B. "Ralph" Marquez, *Commissioner*
Larry R. Soward, *Commissioner*
Margaret Hoffman, *Executive Director*



POSTED

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY ^{C: mms}*Protecting Texas by Reducing and Preventing Pollution*

March 8, 2004

*Expires 3/8/2014
Submit Renewal Application by 9/8/2013*

Mr. Herb Harless
Director, Environmental, Health, and Safety
Sid Richardson Energy Services, Limited
201 Main Street, Suite 3000
Fort Worth, Texas 76102

RECEIVED

MAR 15 2004

EH & S DEPARTMENT
Sid Richardson Carbon & Energy Co.

Re: Permit Renewal
Permit Number: 2724
Keystone Gas Processing Plant
Kermit, Winkler County
Regulated Entity Number: RN100238633
Customer Reference Number: CN600131189

XC: Bill Webb

Dear Mr. Harless:

This is in response to your renewal application, Form PI-1R, entitled "Renewal Application," concerning the proposed renewal of Permit Number 2724. As indicated in Title 30 Texas Administrative Code § 116.314(a) and based on our review, your permit is hereby renewed. Enclosed is a permit for your facility. Also enclosed are new conditions and a maximum allowable emission rates table. We appreciate your careful review of the conditions of the permit and assuring that all requirements are consistently met. This permit will be in effect for ten years from the date of approval.

Please reference the regulated entity number (RN), customer reference number (CN), and permit number noted in this document in all your future correspondence for the referenced facility or site. The RN replaces the former Texas Commission on Environmental Quality account number for the facility (if portable) or site (if permanent). The CN is a unique number assigned to the company or corporation and applies to all facilities and sites owned or operated by this company or corporation.

SPECIAL CONDITIONS

Permit Number 2724

EMISSION STANDARDS

1. This permit authorizes emissions only from those points listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates," and the facilities covered by this permit are authorized to emit subject to the emission rate limits on that table and other operating conditions specified in this permit.
2. Acid gas from these permitted facilities shall be directed to the sulfur recovery unit and then directed to the catalytic incinerator. The glycol dehydrator regenerator vent shall be directed to the acid gas flare. Start-up, shutdown, and maintenance emissions sent to the catalytic incinerator and acid gas flare from these permitted facilities are not authorized by this special condition. Glycol flash tank overhead vent flash gas shall be directed to the plant inlet gas for processing.
3. Sulfur fed to the sulfur recovery unit (SRU) shall not exceed 20 long tons per day (LTPD). The minimum sulfur recovery efficiency for this permit unit shall be 95.0 percent. The sulfur recovery efficiency shall be determined by calculation as follows:

$$\text{Efficiency} = \frac{(\text{S recovered}) (100)}{(\text{S in acid gas})}$$

Where:

Efficiency = sulfur recovery efficiency, percent
S recovered = total sulfur recovered, pounds per hour (lbs/hr)
S in acid gas = total sulfur in acid gas stream, lbs/hr

Total sulfur recovered shall be calculated as follows:

$$\text{S recovered} = \text{S in acid gas} - \text{S in incinerator stack}$$

Where:

S in incinerator stack = total sulfur in tail gas incinerator stack, lbs/hr.

Permit Number 2724

Page 2

EMISSION SOURCES - MAXIMUM ALLOWABLE EMISSION RATES

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	AIR CONTAMINANTS DATA	
			Emission Rates lb/hr	TPY **
H-301	Regenerative Heater	CO	0.40	1.76
		NO _x	0.48	2.09
		PM ₁₀	0.04	0.16
		SO ₂	0.01	0.01
		VOC	0.03	0.12
H-1402	Thermal Heater Therminol Heater	CO	0.25	1.08
		NO _x	0.29	1.29
		PM ₁₀	0.02	0.10
		SO ₂	0.01	0.01
		VOC	0.02	0.07
S-1	SRU Stack	CO	0.22	0.97
		H ₂ S	1.87	8.18
		NO _x	0.26	1.16
		PM ₁₀	0.02	0.09
		SO ₂	182.88	801.00
		VOC	0.66	2.90
S-PIT	Sulfur Pit	H ₂ S	0.01	0.01
S-TRUCK	Sulfur Tank Truck Loading	H ₂ S	0.01	0.01
F-1	Area Process Fugitives (4)	H ₂ S	0.05	0.23
		VOC	1.25	6.36

- (1) Emission point identification - either specific equipment designation or emission point number from plot plan.
- (2) Specific point source name. For fugitive sources use area name or fugitive source name.
- (3) CO - carbon monoxide
 NO_x - total oxides of nitrogen
 PM₁₀ - particulate matter (PM) equal to or less than 10 microns in diameter. Where PM is not listed, it shall be assumed that no particulate matter greater than 10 microns is emitted.
 SO₂ - sulfur dioxide
 VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
 H₂S - hydrogen sulfide

Appendix 20

Title V Permit O-769 Semi-Annual Deviation Report
for 7/7/12 – 1/6/13 dated 2/5/13 – selected pages



SOUTHERN UNION GAS SERVICES
An ENERGY TRANSFER Company

COPY

KEY 015

600 N. Marlenfeld, Suite 700 | Midland, Texas 79701 | (817) 302-9780

February 5, 2013

Texas Commission on Environmental Quality (TCEQ)
Region 7 - Midland
Air Program
9900 W IH-20, Suite 100
Midland, Texas 79701

Subject: Semi-Annual Deviation Report
Permit NO. O-0769
Keystone Gas Plant
CN: 603004664: RN100238633: WM-0011-U

Southern Union Gas Services, Ltd (SUGS) owns and operates the Keystone Gas Plant located in Winkler County, Texas. Attached is the Semi-Annual Deviation Report for the reporting period of July 7, 2012 through January 6, 2013.

If you need additional information, please contact me at the above number or at mary.valencia@sug.com.

Sincerely,

Maria M. Valencia
Air Quality Program



Form OP-CRO1
Certification by Responsible Official
Federal Operating Permit Program

All initial permit application, revision, renewal, and reopening submittals requiring certification must be addressed using this form. Updates to site operating permit (SOP) and temporary operating permit (TOP) applications, other than public notice verification materials, must be certified prior to authorization of public notice or start of public announcement. Updates to general operating permit (GOP) applications must be certified prior to receiving an authorization to operate under a GOP.

I. IDENTIFYING INFORMATION		
A. RN: 100238633	B. CN: 603004664	C. Account No.: WM-0011-U
D. Permit No.: O769	E. Project No.: n/a	
F. Area Name: Keystone Gas Plant		
G. Company Name: Southern Union Gas Services, Ltd.		
II. CERTIFICATION TYPE <i>(Please mark the appropriate box)</i>		
A. ☐ Responsible Official:		B. ☒ Duly Authorized Representative:
III. SUBMITTAL TYPE <i>(Place an "X" in the appropriate box) (Only one response can be accepted per form)</i>		
☐ SOP/TOP Initial Permit Application	☐ Update to Permit Application	
☐ GOP Initial Permit Application	☐ Permit Revision, Renewal, or Reopening	
☒ Other: <u>Semi-Annual Deviation Report 7/7/12 – 1/6/13</u>		
IV. CERTIFICATION OF TRUTH		
This certification does not extend to information which is designated by the TCEQ as information for reference only.		
I, <u>John Delaney</u> , certify that I am the <u>DAR</u> for this application <i>(Certifier Name printed or typed)</i> <i>(RO or DAR)</i>		
and that, based on information and belief formed after reasonable inquiry, the statements and information dated during the time period in Section IV.A below, or on the specific date(s) in Section IV.B below, are true, accurate, and complete:		
<i>Note: Enter EITHER a Time Period OR Specific Date(s) for each certification. This section must be completed. The certification is not valid without documentation date(s).</i>		
A. Time Period: From _____ to _____ <i>Start Date*</i> <i>End Date*</i>		
OR		
B. Specific Dates: <u>2/5/13</u>		
<i>Date 1*</i>	<i>Date 2*</i>	<i>Date 3*</i>
<i>Date 4*</i>	<i>Date 5*</i>	<i>Date 6*</i>
<i>Date 7*</i>	<i>Date 8*</i>	
*The Time Period option may only be used when the "Submittal Type" is "Update to Permit Application" and there are multiple uncertified submittals; or a submittal package has multiple dates recorded in the documentation. Do not use the Time Period option if the "Submittal Type" is "Other."		
Signature: <u></u>		Signature Date: <u>2-5-13</u>
Title: <u>Sr. Director of Operations</u>		



AIR CO/ RN100238633 /RJ

**Texas Commission on Environmental Quality
Federal Operating Permit Deviation Report Form
Form Dev Rep (Part 1)**

Permit Holder Name		Southern Union Gas Services, Ltd.				Customer Number	CN603004664	
Area Name		Keystone Gas Plant				Account Number	WM-0011-U	
Report Period Start Date	7/7/2012	Report Period End Date	1/6/2013	Operating Permit Number	O-0769	Report Submittal Date	2/5/2013	
Operating Permit Requirement for Which Deviations are Being Reported								
ID Number		Term & Condition No.	Pollutant	Regulatory Requirement Citation	Type of Requirement	SOP or GOP Index Number	Monitoring Method	Monitoring Frequency
Unit ID	Group ID							
SRU (S-1)	n/a	GOP condition (b)(7); Permit 2724 Condition 1 and 3		116.115(b)(2)(G) and (c)	MAERT limits, Sulfur recovery efficiency	n/a	n/a	daily

Dev Item No.	STEERS Incident No.	Deviation Period				No. of Dev	Cause of Deviation	Corrective Action Taken to Remedy or Mitigate Deviation Situation
		Start		End				
		Date	Time	Date	Time			
82	n/a	10/18/12	7:00 AM	10/19/12	7:00 AM	1	Exceeded S-1 SO2 emission limits of 182.88 lbs/hr due to the SRU not meeting efficiency. It was 189.6 lbs/hr	SUGS has been working on getting the SRU back in compliance. SUGS has made numerous repairs to the SRU, most of which have been summarized in emission event reports and affirmative defenses submitted to TCEQ.
83	n/a	7/28/12	7:00 am	7/29/12	7:00 am	1	Failure to maintain 95% SRU efficiency. It was 94.4% on this day	SUGS has been working on getting the SRU back in compliance. SUGS has made numerous repairs to the SRU, most of which have been summarized in emission event reports and affirmative defenses submitted to TCEQ.
84	n/a	8/16/12	7:00 am	8/17/12	7:00 am	1	Failure to maintain 95% SRU efficiency. It was 94.2% on this day	SUGS has been working on getting the SRU back in compliance. SUGS has made numerous repairs to the SRU, most of which have been summarized in emission event reports and affirmative defenses submitted to TCEQ.

Page 2 of 7

TCEQ-10101 [04/09]

Form DevRep: This form for use by Federal Operating Permit holders and may be revised periodically.

AIR CO/ RN100238633 /RP

85	n/a	8/17/12	7:00 am	8/18/12	7:00 am	1	Failure to maintain 95% SRU efficiency. It was 94.32% on this day	SUGS has been working on getting the SRU back in compliance. SUGS has made numerous repairs to the SRU, most of which have been summarized in emission event reports and affirmative defenses submitted to TCEQ.
86	n/a	8/22/12	7:00 am	8/23/12	7:00 am	1	Failure to maintain 95% SRU efficiency. It was 94.4% on this day	SUGS has been working on getting the SRU back in compliance. SUGS has made numerous repairs to the SRU, most of which have been summarized in emission event reports and affirmative defenses submitted to TCEQ.
87	n/a	10/13/12	7:00 am	10/14/12	7:00 am	1	Failure to maintain 95% SRU efficiency. It was 93.7% on this day	SUGS has been working on getting the SRU back in compliance. SUGS has made numerous repairs to the SRU, most of which have been summarized in emission event reports and affirmative defenses submitted to TCEQ.
88	n/a	10/18/12	7:00 am	10/19/12	7:00 am	1	Failure to maintain 95% SRU efficiency. It was 92.76% on this day	SUGS has been working on getting the SRU back in compliance. SUGS has made numerous repairs to the SRU, most of which have been summarized in emission event reports and affirmative defenses submitted to TCEQ.
89	n/a	11/7/12	7:00 am	11/8/12	7:00 am	1	Failure to maintain 95% SRU efficiency. It was 93.77% on this day	SUGS has been working on getting the SRU back in compliance. SUGS has made numerous repairs to the SRU, most of which have been summarized in emission event reports and affirmative defenses submitted to TCEQ.
90	n/a	11/8/12	7:00 am	11/9/12	7:00 am	1	Failure to maintain 95% SRU efficiency. It was 93.1% on this day	SUGS has been working on getting the SRU back in compliance. SUGS has made numerous repairs to the SRU, most of which have been summarized in emission event reports and affirmative defenses submitted to TCEQ.
91	n/a	12/23/12	7:00 am	12/24/12	7:00 am	1	Failure to maintain 95% SRU efficiency. It was 94.19% on this day	SUGS has been working on getting the SRU back in compliance. SUGS has made numerous repairs to the SRU, most of which have been summarized in emission event reports and affirmative defenses submitted to TCEQ.
92	n/a	12/31/12	7:00 am	1/1/13	7:00 am	1	Failure to maintain 95% SRU efficiency. It was 93.89% on this day	SUGS has been working on getting the SRU back in compliance. SUGS has made numerous repairs to the SRU, most of which have been summarized in emission event reports and affirmative defenses submitted to TCEQ.
93	n/a	1/1/13	7:00 am	1/2/13	7:00 am	1	Failure to maintain 95% SRU efficiency. It was 94.34% on this day	SUGS has been working on getting the SRU back in compliance. SUGS has made numerous repairs to the SRU, most of which have been summarized in emission event reports and affirmative defenses submitted to TCEQ.

								AIR CO/ <u>RN100238633</u> /RP submitted to TCEQ
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AIR CO/ RN100238633 /RP

**Texas Commission on Environmental Quality
Federal Operating Permit Deviation Report Form
Form Dev Rep (Part 1)**

Permit Holder Name		Southern Union Gas Services, Ltd.				Customer Number	CN603004664	
Area Name		Keystone Gas Plant				Account Number	WM-0011-U	
Report Period Start Date	7/7/2012	Report Period End Date	1/6/2013	Operating Permit Number	O-0769	Report Submittal Date	2/5/2013	
Operating Permit Requirement for Which Deviations are Being Reported								
ID Number		Term & Condition No.	Pollutant	Regulatory Requirement Citation	Type of Requirement	SOP or GOP Index Number	Monitoring Method	Monitoring Frequency
Unit ID	Group ID							
C-26, C-27 & C-28	n/a	GOP Condition (b)(20)	n/a	40 CFR 63.6640(a)	Monitoring	n/a	CMS	continuous

Dev Item No.	STEERS Incident No.	Deviation Period				No. of Dev	Cause of Deviation	Corrective Action Taken to Remedy or Mitigate Deviation Situation
		Start		End				
		Date	Time	Date	Time			
94	n/a					93	SEE COPY OF SEMI-ANNUAL ZZZZ COMPLIANCE REPORT SUBMITTED 1/2013 FOR UNIT #26	
95	n/a					107	SEE COPY OF SEMI-ANNUAL ZZZZ COMPLIANCE REPORT SUBMITTED 1/2013 FOR UNIT #27	
96	n/a					103	SEE COPY OF SEMI-ANNUAL ZZZZ COMPLIANCE REPORT SUBMITTED 1/2013 FOR UNIT #28	
Total Deviations:							Is there a Part 3 Miscellaneous Monitoring/Credible Evidence form supporting this deviation report?	YES ☒ NO

Keystone Plant Unit 26
40 CFR 63.6650 Semi-annual Compliance Report
July 1, 2012 - December 31, 2012

63.6650 (e). For each deviation from an emission or operating limitation occurring for a stationary RICE where you are using a CMS to comply with the emission and operating limitations in this subpart, you must include information in paragraphs (c)(1) through (4) and (e)(1) through (12) of this section.

(c)(4): N/A. Not required to have Startup; Shutdown and Malfunction Plan at this time.

(e)(1) The date and time that each malfunction occurred.
There were no malfunctions during this report period.

Date	Start	End
N/A		

Date	Start	End
N/A		

(e)(2) The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks.

There were no periods that the CMS was inoperative.

Date	Time	Duration
N/A		

Date	Start	Duration
N/A		

(e)(3) N/A. CMS was not out of control during this report period.

(e)(4) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period.

Date	Start Time	Date	End Time	Deviation
7/5/12	8:00	7/5/12	14:00	Temp not recorded
9/6/12	1:00	9/7/12	0:00	Temp not recorded
9/9/12	1:00	9/9/12	7:00	Temp not recorded
10/19/12	1:00	10/19/12	19:00	Temp not recorded
10/26/12	8:00	10/26/12	19:00	Temp not recorded
10/29/12	10:00	10/29/12	19:00	Temp not recorded
12/21/12	5:00	12/21/12	6:00	Temp not recorded
12/21/12	12:00	12/21/12	18:00	Temp not recorded
12/25/12	1:00	12/25/12	6:00	Temp not recorded

(e)(5) A summary of the total duration of the deviations during the report period, and the total duration as a percent of the total source operating time during that reporting period.

Date	Duration	Hours Oper.	Percent
7/5/12	6 hours	3896 hours	0.15%
9/6/12	24 hours	3896 hours	0.61%
9/9/12	7 hours	3896 hours	0.18%
10/19/12	19 hours	3896 hours	0.49%
10/26/12	12 hours	3896 hours	0.31%
10/29/12	10 hours	3896 hours	0.26%

12/21/12	2 hours	3896 hours	0.05%
12/21/12	7 hours	3896 hours	0.18%
12/25/12	6 hours	3896 hours	0.15%
TOTAL	93 hours	3896 hours	2.39%

- (e)(6) A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.

Date	Duration	Reason for Deviation
7/5/12	6 hours	Failed to document temperature reading
9/8/12	24 hours	Failed to document temperature reading
9/9/12	7 hours	Failed to document temperature reading
10/19/12	19 hours	Failed to document temperature reading
10/26/12	12 hours	Failed to document temperature reading
10/29/12	10 hours	Failed to document temperature reading
12/21/12	2 hours	Failed to document temperature reading
12/21/12	7 hours	Failed to document temperature reading
12/25/12	6 hours	Failed to document temperature reading

- (e)(7) A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percent of the total operating time of the stationary RICE at which the CMS downtime occurred during that reporting period.

	Duration	Hours Oper.	Percent
Total	N/A		

- (e)(8) CMS continuously monitors the inlet temperature of the catalyst.
- (e)(9) The stationary RICE is a Caterpillar G3516 TALE, equipped with an oxidation catalyst to reduce CO emissions by at least 93%.
- (e)(10) The CMS is thermocouples installed in the exhaust system on the engine and then wired to a PLC that collects temperature data to calculate the 4 hour rolling average.
- (e)(11) No certification or audit was conducted during this report period.
- (e)(12) Data recorder was installed on the CMS on July 16, 2012. The electronic data recorder is not saving all data. Operations is looking into this problem and also continues to manually record temperatures.

Keystone Plant Unit 27
40 CFR 63.6650 Semi-annual Compliance Report
July 1, 2012 - December 31, 2012

63.6650 (e). For each deviation from an emission or operating limitation occurring for a stationary RICE where you are using a CMS to comply with the emission and operating limitations in this subpart, you must include information in paragraphs (c)(1) through (4) and (e)(1) through (12) of this section.

(c)(4): N/A. Not required to have Startup, Shutdown and Malfunction Plan at this time.

(e)(1) The date and time that each malfunction occurred.

Date	Start	End
12/11/12	1:00	11:00

Date	Start	End
N/A		

(e)(2) The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks.

There were no periods that the CMS was inoperative.

Date	Time	Duration
N/A		

Date	Start	Duration
N/A		

(e)(3) N/A. CMS was not out of control during this report period.

(e)(4) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period.

Date	Start Time	Date	End Time	Deviation
7/5/12	8:00	7/5/12	13:00	Temp not recorded
9/6/12	1:00	9/7/12	0:00	Temp not recorded
9/9/12	1:00	9/9/12	7:00	Temp not recorded
10/19/12	1:00	10/19/12	19:00	Temp not recorded
10/26/12	8:00	10/26/12	19:00	Temp not recorded
10/19/12	10:00	10/29/12	18:00	Temp not recorded
12/11/12	1:00	12/11/12	11:00	Malfunction
12/12/12	8:00	12/12/12	11:00	Temp not recorded
12/21/12	5:00	12/21/12	6:00	Temp not recorded
12/31/12	13:00	12/21/12	18:00	Temp not recorded
12/25/12	1:00	12/25/12	6:00	Temp not recorded
12/25/12	18:00	12/25/12	18:00	Temp not recorded

(e)(5) A summary of the total duration of the deviations during the report period, and the total duration as a percent of the total source operating time during that reporting period.

Date	Duration	Hours Oper.	Percent
7/5/12	6 hours	4220 hours	0.14%
9/6/12	24 hours	4220 hours	0.57%
9/9/12	7 hours	4220 hours	0.16%
10/19/12	19 hours	4220 hours	0.45%
10/26/12	12 hours	4220 hours	0.28%

10/19/12	9 hours	4220 hours	0.21%
12/11/12	11 hours	4220 hours	0.26%
12/12/12	4 hours	4220 hours	0.09%
12/21/12	2 hours	4220 hours	0.05%
12/21/12	6 hours	4220 hours	0.14%
12/25/12	6 hours	4220 hours	0.14%
12/25/12	1 hours	4220 hours	0.02%
TOTAL	107 hours	4220 hours	2.53%

- (e)(6) A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.

Date	Duration	Reason for Deviation
7/5/12	6 hours	Failed to document temperature reading
9/6/12	24 hours	Failed to document temperature reading
9/9/12	7 hours	Failed to document temperature reading
10/19/12	19 hours	Failed to document temperature reading
10/26/12	12 hours	Failed to document temperature reading
10/19/12	9 hours	Failed to document temperature reading
12/11/12	11 hours	Thermocouple failed
12/12/12	4 hours	Failed to document temperature reading
12/21/12	2 hours	Failed to document temperature reading
12/21/12	6 hours	Failed to document temperature reading
12/25/12	6 hours	Failed to document temperature reading
12/25/12	1 hours	Failed to document temperature reading

- (e)(7) A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percent of the total operating time of the stationary RICE at which the CMS downtime occurred during that reporting period.

	Duration	Hours Oper.	Percent
Total	N/A		

- (e)(8) CMS continuously monitors the inlet temperature of the catalyst.
- (e)(9) The stationary RICE is a Caterpillar G3516 TALE, equipped with an oxidation catalyst to reduce CO emissions by at least 93%.
- (e)(10) The CMS is thermocouples installed in the exhaust system on the engine and then wired to a PLC that collects temperature data to calculate the 4 hour rolling average.
- (e)(11) No certification or audit was conducted during this report period.
- (e)(12) Data recorder was installed on the CMS on July 16, 2012. The electronic data recorder is not saving all data. Operations is looking into this problem and also continues to manually record temperatures.

Keystone Plant Unit 28
40 CFR 63.6650 Semi-annual Compliance Report
July 1, 2012 - December 31, 2012

63.6650 (e). For each deviation from an emission or operating limitation occurring for a stationary RICE where you are using a CMS to comply with the emission and operating limitations in this subpart, you must include information in paragraphs (c)(1) through (4) and (e)(1) through (12) of this section.

(c)(4): N/A. Not required to have Startup, Shutdown and Malfunction Plan at this time.

(e)(1) The date and time that each malfunction occurred.
There were no malfunctions during this report period.

Date	Start	End
N/A		

Date	Start	End
N/A		

(e)(2) The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks.
There were no periods that the CMS was inoperative.

Date	Time	Duration
N/A		

Date	Start	Duration
N/A		

(e)(3) N/A. CMS was not out of control during this report period.

(e)(4) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period.

Date	Start Time	Date	End Time	Deviation
7/5/12	8:00	7/5/12	13:00	Temp not recorded
9/6/12	1:00	9/7/12	0:00	Temp not recorded
9/9/12	1:00	9/9/12	7:00	Temp not recorded
10/19/12	1:00	10/19/12	19:00	Temp not recorded
10/26/12	8:00	10/26/12	19:00	Temp not recorded
10/29/12	10:00	10/29/12	18:00	Temp not recorded
12/12/12	8:00	12/12/12	11:00	Temp not recorded
12/21/12	5:00	12/21/12	6:00	Temp not recorded
12/21/12	13:00	12/21/12	18:00	Temp not recorded
12/25/12	1:00	12/25/12	6:00	Temp not recorded
12/25/12	18:00	12/25/12	18:00	Temp not recorded
12/29/12	13:00	12/29/12	18:00	Temp not recorded
12/30/12	17:00	12/30/12	17:00	Temp not recorded

(e)(5) A summary of the total duration of the deviations during the report period, and the total duration as a percent of the total source operating time during that reporting period.

Date	Duration	Hours Oper.	Percent
7/5/12	6 hours	4172 hours	0.14%
9/6/12	24 hours	4172 hours	0.57%
9/9/12	7 hours	4172 hours	0.17%
10/19/12	19 hours	4172 hours	0.45%
10/26/12	12 hours	4172 hours	0.29%
10/29/12	9 hours	4172 hours	0.21%

12/12/12	4 hours	4172 hours	0.09%
12/21/12	2 hours	4172 hours	0.05%
12/21/12	6 hours	4172 hours	0.14%
12/25/12	6 hours	4172 hours	0.14%
12/25/12	1 hours	4172 hours	0.02%
12/29/12	6 hours	4172 hours	0.14%
12/30/12	1 hours	4172 hours	0.02%
TOTAL	103 hours	4172 hours	2.47%

- (e)(6) A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.

Date	Duration	Reason for Deviation
7/5/12	6 hours	Failed to document temperature reading
9/6/12	24 hours	Failed to document temperature reading
9/9/12	7 hours	Failed to document temperature reading
10/19/12	19 hours	Failed to document temperature reading
10/26/12	12 hours	Failed to document temperature reading
10/29/12	9 hours	Failed to document temperature reading
12/12/12	4 hours	Failed to document temperature reading
12/21/12	2 hours	Failed to document temperature reading
12/21/12	6 hours	Failed to document temperature reading
12/25/12	6 hours	Failed to document temperature reading
12/25/12	1 hours	Failed to document temperature reading
12/29/12	6 hours	Failed to document temperature reading
12/30/12	1 hours	Failed to document temperature reading

- (e)(7) A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percent of the total operating time of the stationary RICE at which the CMS downtime occurred during that reporting period.

	Duration	Hours Oper.	Percent
Total	N/A		

- (e)(8) CMS continuously monitors the inlet temperature of the catalyst.
- (e)(9) The stationary RICE is a Caterpillar G3516 TALE, equipped with an oxidation catalyst to reduce CO emissions by at least 93%.
- (e)(10) The CMS is thermocouples installed in the exhaust system on the engine and then wired to a PLC that collects temperature data to calculate the 4 hour rolling average.
- (e)(11) No certification or audit was conducted during this report period.
- (e)(12) Data recorder was installed on the CMS on July 16, 2012. The electronic data recorder is not saving all data. Operations is looking into this problem and also continues to manually record temperatures.

Appendix 21

Title V Permit O-769 Semi-Annual Deviation Report
for 1/7/13 – 7/6/13 dated 8/5/13 – selected pages

KEY016



COPY

600 N. Marienfeld, Suite 700 Midland, Texas 79701 817-302-9780 (office)

August 5, 2013

Texas Commission on Environmental Quality (TCEQ)
Region 7 - Midland
Air Program
9900 W IH-20, Suite 100
Midland, Texas 79701

Subject: Semi-Annual Deviation Report
Permit NO. O-0769
Keystone Gas Plant
CN: 603263823: RN100238633: WM-0011-U

Regency Field Services LLC (RFS) owns and operates the Keystone Gas Plant located in Winkler County, Texas. Attached is the Semi-Annual Deviation Report for the reporting period of January 7, 2013 through July 6, 2013.

If you need additional information, please contact me at the above number or at marv.valencia@regencygas.com.

Sincerely,

Maria M. Valencia
Specialist - Air Environmental Permitting



Form OP-CRO1
Certification by Responsible Official
Federal Operating Permit Program

All initial permit application, revision, renewal, and reopening submittals requiring certification must be addressed using this form. Updates to site operating permit (SOP) and temporary operating permit (TOP) applications, other than public notice verification materials, must be certified prior to authorization of public notice or start of public announcement. Updates to general operating permit (GOP) applications must be certified prior to receiving an authorization to operate under a GOP.

I. IDENTIFYING INFORMATION					
RN:100238633		CN:603263283		Account No.:WM-0011-U	
Permit No.:O2940			Project No.:		
Area Name:Keystone Gas Plant			Company Name:Regency Field Services LLC		
II. CERTIFICATION TYPE (Please mark the appropriate box)					
☐ Responsible Official			☒ Duly Authorized Representative		
III. SUBMITTAL TYPE (Please mark the appropriate box) (Only one response can be accepted per form)					
☐ SOP/TOP Initial Permit Application		☐ Update to Permit Application			
☐ GOP Initial Permit Application		☐ Permit Revision, Renewal, or Reopening			
☒ Other: Semi-Annual Deviation Report 1/7/13 - 7/6/13					
IV. CERTIFICATION OF TRUTH					
This certification does not extend to information which is designated by the TCEQ as information for reference only.					
I, <u>Bart Collins</u> certify that I am the <u>DAR</u> (Certifier Name printed or typed) (RO or DAR)					
and that, based on information and belief formed after reasonable inquiry, the statements and information dated during the time period or on the specific date(s) below, are true, accurate, and complete:					
Note: Enter EITHER a Time Period OR Specific Date(s) for each certification. This section must be completed. The certification is not valid without documentation date(s).					
Time Period: From _____ to _____ State Date End Date					
Specific Dates: _____ Date 1 Date 2 Date 3 Date 4 Date 5 Date 6					
Signature: <u>[Signature]</u> Signature Date: <u>8/2/2013</u>					
Title: <u>Sr. Regional Operations Director</u>					



AIR CO/ RN100238633 /RP

Texas Commission on Environmental Quality
Federal Operating Permit Deviation Report Form
Form Dev Rep (Part 1)

Permit Holder Name		Regency Field Services LLC				Customer Number	CN603263823	
Area Name		Keystone Gas Plant				Account Number	WM-0011-U	
Report Period Start Date	1/7/2013	Report Period End Date	7/6/2013	Operating Permit Number	O-0769	Report Submittal Date	8/5/2013	
Operating Permit Requirement for Which Deviations are Being Reported								
ID Number		Term & Condition No.	Pollutant	Regulatory Requirement Citation	Type of Requirement	SOP or GOP Index Number	Monitoring Method	Monitoring Frequency
Unit ID	Group ID							
SRU (S-1)	n/a	GOP condition (b)(7); Permit 2724 Condition 1 and 3		116.115(b)(2)(G) and (c)	MAERT limits, Sulfur recovery efficiency	n/a	n/a	daily

Dev Item No.	STEERS Incident No.	Deviation Period				No. of Dev	Cause of Deviation	Corrective Action Taken to Remedy or Mitigate Deviation Situation
		Start		End				
		Date	Time	Date	Time			
142	n/a	2/15/13	7:00 AM	2/16/13	7:00 AM	1	Exceeded S-1 SO2 emission limits of 182.88 lbs/hr due to the SRU not meeting efficiency. It was 196.1 lbs/hr	Regency has been working on getting the SRU back in compliance. Have made numerous repairs to the SRU, most of which have been summarized in emission event reports and affirmative defenses submitted to TCEQ.
143	n/a	2/16/13	7:00 am	2/17/13	7:00 am	1	Exceeded S-1 SO2 emission limits of 182.88 lbs/hr due to the SRU not meeting efficiency. It was 191.5 lbs/hr	Regency has been working on getting the SRU back in compliance. Have made numerous repairs to the SRU, most of which have been summarized in emission event reports and affirmative defenses submitted to TCEQ.
144	n/a	4/8/13	7:00 am	4/9/13	7:00 am	1	Exceeded S-1 SO2 emission limits of 182.88 lbs/hr due to the SRU not meeting efficiency. It was 193.1 lbs/hr	Regency has been working on getting the SRU back in compliance. Have made numerous repairs to the SRU, most of which have been summarized in emission event reports and affirmative defenses submitted to TCEQ.

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Form DevRep. This form for use by Federal Operating Permit holders and may be revised periodically.

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145	n/a	4/16/13	7:00 am	4/17/13	7:00 am	1	Exceeded S-1 SO2 emission limits of 182.88 lbs/hr due to the SRU not meeting efficiency. It was 200.8 lbs/hr	Regency has been working on getting the SRU back in compliance. Have made numerous repairs to the SRU, most of which have been summarized in emission event reports and affirmative defenses submitted to TCEQ.
146	n/a	4/17/13	7:00 am	4/18/13	7:00 am	1	Exceeded S-1 SO2 emission limits of 182.88 lbs/hr due to the SRU not meeting efficiency. It was 191.3 lbs/hr	Regency has been working on getting the SRU back in compliance. Have made numerous repairs to the SRU, most of which have been summarized in emission event reports and affirmative defenses submitted to TCEQ.
147	n/a	4/21/13	7:00 am	4/22/13	7:00 am	1	Exceeded S-1 SO2 emission limits of 182.88 lbs/hr due to the SRU not meeting efficiency. It was 209.9 lbs/hr	Regency has been working on getting the SRU back in compliance. Have made numerous repairs to the SRU, most of which have been summarized in emission event reports and affirmative defenses submitted to TCEQ.
148	n/a	4/22/13	7:00 am	4/23/13	7:00 am	1	Exceeded S-1 SO2 emission limits of 182.88 lbs/hr due to the SRU not meeting efficiency. It was 184.4 lbs/hr	Regency has been working on getting the SRU back in compliance. Have made numerous repairs to the SRU, most of which have been summarized in emission event reports and affirmative defenses submitted to TCEQ.
149	n/a	6/20/13	7:00 am	6/21/13	7:00 am	1	Exceeded S-1 SO2 emission limits of 182.88 lbs/hr due to the SRU not meeting efficiency due to SRU coming back on after Lengthy Maintenance Event. It was 321.8 lbs/hr	Regency has been working on getting the SRU back in compliance. Have made numerous repairs to the SRU, most of which have been summarized in emission event reports and affirmative defenses submitted to TCEQ.
150	n/a	1/16/13	7:00 am	1/19/13	7:00 am	3	Failure to maintain 95% SRU efficiency. It was 94%, 93% and 91% respectively	Regency has been working on getting the SRU back in compliance. Have made numerous repairs to the SRU, most of which have been summarized in emission event reports and affirmative defenses submitted to TCEQ.
151	n/a	2/14/13	7:00 am	2/17/2013	7:00 am	3	Failure to maintain 95% SRU efficiency. It was 94%, 93%, and 93% respectively	Regency has been working on getting the SRU back in compliance. Have made numerous repairs to the SRU, most of which have been summarized in emission event reports and affirmative defenses submitted to TCEQ.
152	n/a	3/13/13	7:00 am	3/15/13	7:00 am	2	Failure to maintain 95% SRU efficiency. It was 93% and 94% respectively	Regency has been working on getting the SRU back in compliance. Have made numerous repairs to the SRU, most of which have been summarized in emission event reports and affirmative defenses submitted to TCEQ.
153	n/a	3/19/13	7:00 am	3/21/13	7:00 am	2	Failure to maintain 95% SRU efficiency. It was 94% and 94% respectively	Regency has been working on getting the SRU back in compliance. Have made numerous repairs to the SRU, most of which have been summarized in emission event reports and affirmative defenses

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Form DevRep: This form for use by Federal Operating Permit holders and may be revised periodically.

AIR CO/ RN100238633 /RP

								submitted to TCEQ.
154	n/a	3/24/13	7:00 am	3/27/13	7:00 am	3	Failure to maintain 95% SRU efficiency. It was 94%, 95% and 94% respectively	Regency has been working on getting the SRU back in compliance. Have made numerous repairs to the SRU, most of which have been summarized in emission event reports and affirmative defenses submitted to TCEQ.
Total Deviations:						21	Is there a Part 3 Miscellaneous Monitoring/Credible Evidence form supporting this deviation report? YES ☒ NO	

AIR CO/ RN100238633 /RJ

**Texas Commission on Environmental Quality
Federal Operating Permit Deviation Report Form
Form Dev Rep (Part 1)**

Permit Holder Name		Regency Field Services LLC				Customer Number	CN603263823	
Area Name		Keystone Gas Plant				Account Number	WM-0011-U	
Report Period Start Date	1/7/2013	Report Period End Date	7/6/2013	Operating Permit Number	O-0769	Report Submittal Date	8/5/2013	
Operating Permit Requirement for Which Deviations are Being Reported								
ID Number		Term & Condition No.	Pollutant	Regulatory Requirement Citation	Type of Requirement	SOP or GOP Index Number	Monitoring Method	Monitoring Frequency
Unit ID	Group ID							
C-26, C-27 & C-28	n/a	GOP Condition (b)(20)	n/a	40 CFR 63.6640(a)	Monitoring	n/a	CMS	Continuous

Dev Item No.	STEERS Incident No.	Deviation Period				No. of Dev	Cause of Deviation	Corrective Action Taken to Remedy or Mitigate Deviation Situation
		Start		End				
		Date	Time	Date	Time			
139	n/a					262	SEE COPY OF SEMI-ANNUAL ZZZZ COMPLIANCE REPORT SUBMITTED 8/2013 FOR UNIT #26	
140	n/a					270	SEE COPY OF SEMI-ANNUAL ZZZZ COMPLIANCE REPORT SUBMITTED 8/2013 FOR UNIT #27	
141	n/a					261	SEE COPY OF SEMI-ANNUAL ZZZZ COMPLIANCE REPORT SUBMITTED 8/2013 FOR UNIT #28	
Total Deviations:						793	Is there a Part 3 Miscellaneous Monitoring/Credible Evidence form supporting this deviation report? YES ☒ NO	

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Form DevRep: This form for use by Federal Operating Permit holders and may be revised periodically.

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REGENCY FIELD SERVICES LLC
 Keystone Plant Unit 26
 40 CFR 63.6650 Semi-annual Compliance Report
 January 1, 2013 - June 30, 2013

63.6650 (e). For each deviation from an emission or operating limitation occurring for a stationary RICE where you are using a CMS to comply with the emission and operating limitations in this subpart, you must include information in paragraphs (c)(1) through (4) and (e)(1) through (12) of this section.

(c)(4) N/A Not required to have Startup, Shutdown and Malfunction Plan at this time

(e)(4) The date and time that each malfunction occurred.
 There were no malfunctions during this report period

Date	Start	End
N/A		

Date	Start	End
N/A		

(e)(2) The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks.

There were no periods that the CMS was inoperative

Date	Time	Duration
N/A		

Date	Start	Duration
N/A		

(e)(3) N/A CMS was not out of control during this report period

(e)(4) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period.

Date	Start Time	Date	End Time	Deviation
1/4/13	1:00	1/5/13	1:00	Temp not recorded
2/16/13	1:00	2/17/13	7:00	Temp not recorded
2/26/13	1:00	2/26/13	7:00	Temp not recorded
3/8/13	18:00	3/8/13	19:00	Temp not recorded
3/9/13	20:00	3/10/13	8:00	Temp not recorded
3/14/13	1:00	3/15/13	8:00	Temp not recorded
3/16/13	20:00	3/17/13	8:00	Temp not recorded
3/19/13	20:00	3/19/13	8:00	Temp not recorded
3/23/13	13:00	3/23/13	20:00	Temp not recorded
3/26/13	14:00	3/26/13	20:00	Temp not recorded
3/30/13	8:00	3/30/13	19:00	Temp not recorded
3/31/13	4:00	3/31/13	20:00	Temp not recorded
4/1/13	10:00	4/1/13	20:00	Temp not recorded
4/3/13	0:00	4/3/13	1:00	Temp not recorded
4/4/13	18:00	4/4/13	20:00	Temp not recorded
4/5/13	18:00	4/5/13	20:00	Temp not recorded
6/4/13	1:00	6/5/13	1:00	Temp not recorded
6/20/13	12:00	6/20/13	18:00	Temp not recorded
6/21/13	7:00	6/21/13	18:00	Temp not recorded
6/23/13	7:00	6/23/13	18:00	Temp not recorded
6/24/13	4:00	6/24/13	18:00	Temp not recorded
6/28/13	14:00	6/28/13	18:00	Temp not recorded
6/29/13	11:00	6/29/13	18:00	Temp not recorded

(e)(5) A summary of the total duration of the deviations during the report period, and the total duration as a percent of the total source operating time during that reporting period.

Date	Duration	Hours Oper	Percent
1/4/13	24	4001	0.59%
2/16/13	30	4001	0.74%
2/26/13	6	4001	0.14%
3/8/13	1	4001	0.02%
3/9/13	12	4001	0.29%
3/14/13	31	4001	0.77%
3/16/13	12	4001	0.29%
3/19/13	12	4001	0.29%
3/23/13	7	4001	0.17%
3/26/13	6	4001	0.14%
3/30/13	11	4001	0.27%

3/31/13	16	4001	0.39%
4/1/13	10	4001	0.25%
4/3/13	1	4001	0.02%
4/4/13	2	4001	0.05%
4/5/13	4	4001	0.10%
6/4/13	24	4001	0.59%
6/20/13	6	4001	0.14%
6/21/13	11	4001	0.27%
6/23/13	11	4001	0.27%
6/24/13	14	4001	0.35%
6/28/13	4	4001	0.10%
6/29/13	7	4001	0.17%
TOTAL	252	4001	6.54%

- (e)(9) A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.

Date	Duration	Reason for Deviation
1/4/13	24	Failed to document or record temperature reading
2/16/13	30	Failed to document or record temperature reading
2/26/13	6	Failed to document or record temperature reading
3/8/13	1	Failed to document or record temperature reading
3/9/13	12	Failed to document or record temperature reading
3/14/13	31	Failed to document or record temperature reading
3/16/13	12	Failed to document or record temperature reading
3/18/13	12	Failed to document or record temperature reading
3/23/13	7	Failed to document or record temperature reading
3/26/13	8	Failed to document or record temperature reading
3/30/13	11	Failed to document or record temperature reading
3/31/13	16	Failed to document or record temperature reading
4/1/13	10	Failed to document or record temperature reading
4/3/13	1	Failed to document or record temperature reading
4/4/13	2	Failed to document or record temperature reading
4/5/13	4	Failed to document or record temperature reading
6/4/13	24	Failed to document or record temperature reading
6/20/13	6	Failed to document or record temperature reading
6/21/13	11	Failed to document or record temperature reading
6/23/13	11	Failed to document or record temperature reading
6/24/13	14	Failed to document or record temperature reading
6/28/13	4	Failed to document or record temperature reading
6/29/13	7	Failed to document or record temperature reading

- (e)(7) A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percent of the total operating time of the stationary RICE at which the CMS downtime occurred during that reporting period.

	Duration	Hours Oper	Percent
Total	N/A		

- (e)(8) CMS continuously monitors the inlet/outlet temperature of the catalyst.
- (e)(9) The stationary RICE is a Caterpillar G3516 TALE, equipped with an oxidation catalyst, to reduce CO emissions by at least 93%.
- (e)(10) The CMS is thermocouples installed in the exhaust system on the engine and then wired to a PLC that collects temperature data to calculate the 4 hour rolling average.
- (e)(11) No certification or audit was conducted during this report period.
- (e)(12) Regency Field Services is in the process of routing the data from the CMS to a historian to be able to retrieve any missing temperature data.

REGENCY FIELD SERVICES LLC
Keystone Plant Unit 27
40 CFR 63.6650 Semi-annual Compliance Report
January 1, 2013 - June 30, 2013

63.6650 (c). For each deviation from an emission or operating limitation occurring for a stationary EICE where you are using a CMS to comply with the emission and operating limitations in this subpart, you must include information in paragraphs (c)(1) through (4) and (e)(1) through (12) of this section.

(c)(4). N/A. Not required to have Startup, Shutdown and Malfunction Plan at this time.

(c)(1). The date and time that each malfunction occurred.
There were no malfunctions during this report period.

Date	Start	End
N/A		

Date	Start	End
N/A		

(c)(2). The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks.

There were no periods that the CMS was inoperative.

Date	Time	Duration
N/A		

Date	Start	Duration
N/A		

(c)(3). N/A. CMS was not out of control during this report period.

(c)(4). The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period.

Date	Start Time	Date	End Time	Deviation
1/2/13	1:00	1/2/13	8:00	Temp not recorded
1/4/13	1:00	1/5/13	1:00	Temp not recorded
2/16/13	1:00	2/17/13	7:00	Temp not recorded
2/22/13	1:00	2/23/13	8:00	Temp not recorded
3/3/13	18:00	3/8/13	15:00	Temp not recorded
3/9/13	20:00	3/12/13	8:00	Temp not recorded
3/14/13	1:00	3/15/13	8:00	Temp not recorded
3/19/13	20:00	3/17/13	8:00	Temp not recorded
3/19/13	20:00	3/19/13	8:00	Temp not recorded
3/21/13	13:00	3/23/13	20:00	Temp not recorded
3/25/13	14:00	3/25/13	20:00	Temp not recorded
3/30/13	8:00	3/30/13	15:00	Temp not recorded
3/31/13	4:00	3/31/13	20:00	Temp not recorded
4/1/13	10:00	4/1/13	20:00	Temp not recorded
4/3/13	0:00	4/3/13	1:00	Temp not recorded
4/4/13	18:00	4/4/13	20:00	Temp not recorded
4/5/13	16:00	4/5/13	20:00	Temp not recorded
6/4/13	1:00	6/5/13	1:00	Temp not recorded
6/20/13	12:00	6/20/13	18:00	Temp not recorded
6/21/13	7:00	6/21/13	18:00	Temp not recorded
6/23/13	7:00	6/23/13	18:00	Temp not recorded
6/24/13	4:00	6/24/13	18:00	Temp not recorded
6/28/13	14:00	6/28/13	18:00	Temp not recorded
6/29/13	11:00	6/29/13	18:00	Temp not recorded

(e)(5). A summary of the total duration of the deviations during the report period, and the total duration as a percent of the total source operating time during that reporting period.

Date	Duration	Hours Oper.	Percent
1/2/13	7	4089	0.17%
1/4/13	24	4089	0.59%
2/16/13	30	4089	0.73%
2/23/13	7	4089	0.17%
3/8/13	1	4089	0.02%
3/9/13	12	4089	0.29%
3/14/13	31	4089	0.76%
3/19/13	12	4089	0.29%
3/19/13	12	4089	0.29%
3/21/13	7	4089	0.17%
3/28/13	6	4089	0.15%

3/30/13	11	4089	0.27%
5/31/13	16	4089	0.33%
4/1/13	10	4089	0.24%
4/3/13	1	4089	0.02%
4/4/13	2	4089	0.05%
4/5/13	4	4089	0.10%
6/4/13	24	4089	0.59%
6/20/13	6	4089	0.15%
6/21/13	11	4089	0.27%
6/23/13	11	4089	0.27%
6/24/13	14	4089	0.34%
6/28/13	4	4089	0.10%
6/29/13	7	4089	0.17%
TOTAL	270	4089	6.60%

- (c)(6) A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.

Date	Duration	Reason for Deviation
1/2/13	7	Failed to document or record temperature reading
1/4/13	24	Failed to document or record temperature reading
2/16/13	30	Failed to document or record temperature reading
2/26/13	7	Failed to document or record temperature reading
3/8/13	1	Failed to document or record temperature reading
3/9/13	12	Failed to document or record temperature reading
3/14/13	31	Failed to document or record temperature reading
3/16/13	12	Failed to document or record temperature reading
3/18/13	12	Failed to document or record temperature reading
3/23/13	7	Failed to document or record temperature reading
3/25/13	6	Failed to document or record temperature reading
3/30/13	11	Failed to document or record temperature reading
3/31/13	10	Failed to document or record temperature reading
4/1/13	10	Failed to document or record temperature reading
4/3/13	1	Failed to document or record temperature reading
4/4/13	2	Failed to document or record temperature reading
4/5/13	4	Failed to document or record temperature reading
6/4/13	24	Failed to document or record temperature reading
6/20/13	6	Failed to document or record temperature reading
6/21/13	11	Failed to document or record temperature reading
6/23/13	11	Failed to document or record temperature reading
6/24/13	14	Failed to document or record temperature reading
6/28/13	4	Failed to document or record temperature reading
6/29/13	7	Failed to document or record temperature reading

- (c)(7) A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percent of the total operating time of the stationary RICE at which the CMS downtime occurred during that reporting period.

	Duration	Hours Oper.	Percent
Total	N/A		

- (c)(8) CMS continuously monitors the inlet/outlet temperature of the catalyst.
- (c)(9) The stationary RICE is a Caterpillar G3516 TALE equipped with an oxidation catalyst to reduce CO emissions by at least 93%.
- (c)(10) The CMS is thermocouples installed in the exhaust system on the engine and then wired to a PLC that collects temperature data to calculate the 6 hour rolling average.
- (c)(11) No certification or audit was conducted during this report period.
- (c)(12) Regency Field Services is in the process of routing the data from the CMS to a historian to be able to retrieve any missing temperature data.

REGENCY FIELD SERVICES LLC
 Keystone Plant Unit 28
 40 CFR 63.6650 Semi-annual Compliance Report
 January 1, 2013 - June 30, 2013

63.6650 (e). For each deviation from an emission or operating limitation occurring for a stationary RICE where you are using a CMS to comply with the emission and operating limitations in this subpart, you must include information in paragraphs (e)(1) through (4) and (e)(1) through (12) of this section

(e)(4) N/A. Not required to have Startup, Shutdowns and Malfunction Plan at this time.

(e)(1) The date and time that each malfunction occurred.
 There were no malfunctions during this report period.

Date	Start	End
N/A		

Date	Start	End
N/A		

(e)(2) The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks.

There were no periods that the CMS was inoperative.

Date	Time	Duration
N/A		

Date	Start	Duration
N/A		

(e)(3) N/A. CMS was not out of control during this report period.

(e)(4) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period.

Date	Start Time	Date	End Time	Deviation
1/2/13	1:00	1/2/13	8:00	Temp not recorded
1/4/13	1:00	1/5/13	1:00	Temp not recorded
2/10/13	1:00	2/17/13	7:00	Temp not recorded
2/26/13	1:00	2/26/13	8:00	Temp not recorded
3/9/13	20:00	3/10/13	0:00	Temp not recorded
3/14/13	1:00	3/15/13	8:00	Temp not recorded
3/18/13	20:00	3/17/13	8:00	Temp not recorded
3/19/13	20:00	3/19/13	8:00	Temp not recorded
3/23/13	13:00	3/23/13	20:00	Temp not recorded
3/26/13	14:00	3/26/13	20:00	Temp not recorded
3/30/13	8:00	3/30/13	19:00	Temp not recorded
3/31/13	4:00	3/31/13	20:00	Temp not recorded
4/1/13	10:00	4/1/13	20:00	Temp not recorded
4/3/13	0:00	4/3/13	1:00	Temp not recorded
4/4/13	18:00	4/4/13	20:00	Temp not recorded
4/5/13	16:00	4/5/13	20:00	Temp not recorded
6/4/13	1:00	6/5/13	1:00	Temp not recorded
6/20/13	12:00	6/20/13	18:00	Temp not recorded
6/21/13	7:00	6/21/13	18:00	Temp not recorded
6/23/13	7:00	6/23/13	18:00	Temp not recorded
6/24/13	4:00	6/24/13	18:00	Temp not recorded
6/25/13	14:00	6/28/13	18:00	Temp not recorded
6/29/13	11:00	6/29/13	18:00	Temp not recorded

(e)(5) A summary of the total duration of the deviations during the report period, and the total duration as a percent of the total source operating time during that reporting period.

Date	Duration	Hours Oper	Percent
1/2/13	7	3309	0.21%
1/4/13	24	3309	0.72%
2/10/13	30	3309	0.91%
2/26/13	7	3309	0.21%
3/9/13	4	3309	0.12%
3/14/13	31	3308	0.94%
3/18/13	12	3309	0.36%
3/18/13	12	3309	0.36%
3/23/13	7	3309	0.21%
3/25/13	6	3308	0.18%
3/30/13	11	3309	0.33%

3/21/13	16	3309	0.48%
4/1/13	10	3309	0.30%
4/3/13	1	3309	0.03%
4/4/13	2	3309	0.06%
4/5/13	4	3309	0.12%
4/4/13	24	3309	0.72%
5/20/13	6	3309	0.18%
6/21/13	11	3309	0.33%
6/23/13	11	3309	0.33%
6/24/13	14	3309	0.42%
6/28/13	4	3309	0.12%
6/29/13	7	3309	0.21%
TOTAL	251	3309	7.55%

- (v)(6) A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.

Date	Duration	Reason for Deviation
1/2/13	7	Failed to document or record temperature reading
1/4/13	24	Failed to document or record temperature reading
2/16/13	30	Failed to document or record temperature reading
2/26/13	7	Failed to document or record temperature reading
3/9/13	4	Failed to document or record temperature reading
3/14/13	31	Failed to document or record temperature reading
3/16/13	12	Failed to document or record temperature reading
3/18/13	12	Failed to document or record temperature reading
3/23/13	7	Failed to document or record temperature reading
3/28/13	6	Failed to document or record temperature reading
3/30/13	11	Failed to document or record temperature reading
3/31/13	16	Failed to document or record temperature reading
4/1/13	10	Failed to document or record temperature reading
4/2/13	1	Failed to document or record temperature reading
4/4/13	2	Failed to document or record temperature reading
4/5/13	4	Failed to document or record temperature reading
5/4/13	24	Failed to document or record temperature reading
6/20/13	6	Failed to document or record temperature reading
6/21/13	11	Failed to document or record temperature reading
6/23/13	11	Failed to document or record temperature reading
6/24/13	14	Failed to document or record temperature reading
6/28/13	4	Failed to document or record temperature reading
6/29/13	7	Failed to document or record temperature reading

- (v)(7) A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percent of the total operating time of the stationary RICE at which the CMS downtime occurred during that reporting period.

	Duration	Hours Oper.	Percent
Total	N/A		

- (e)(8) CMS continuously monitors the inlet/outlet temperature of the catalyst.
- (e)(9) The stationary RICE is a Caterpillar G3516 TALE, equipped with an oxidation catalyst to reduce CO emissions by at least 93%.
- (e)(10) The CMS is thermocouples installed in the exhaust system on the engine and then wired to a PLC that collects temperature data to calculate the 4 hour rolling average.
- (e)(11) No certification or audit was conducted during this report period.
- (e)(12) Regency Field Services is in the process of routing the data from the CMS to a historian to be able to retrieve any missing temperature data.

AIR CO/ RN100238633 /RP

**Texas Commission on Environmental Quality
Federal Operating Permit Deviation Report Form
Form Dev Rep (Part 1)**

Permit Holder Name		Regency Field Services LLC				Customer Number	CN603263823	
Area Name		Keystone Gas Plant				Account Number	WM-0011-U	
Report Period Start Date	1/7/2013	Report Period End Date	7/6/2013	Operating Permit Number	O-0769	Report Submittal Date	8/5/2013	
Operating Permit Requirement for Which Deviations are Being Reported								
ID Number		Term & Condition No.	Pollutant	Regulatory Requirement Citation	Type of Requirement	SOP or GOP Index Number	Monitoring Method	Monitoring Frequency
Unit ID	Group ID							
C-26, C-27 & C-28	n/a	GOP Condition (b)(20)	n/a	40 CFR 63.6650	Reporting	n/a		Semi-Annual Report

Dev Item No.	STEERS Incident No.	Deviation Period						No. of Dev	Cause of Deviation	Corrective Action Taken to Remedy or Mitigate Deviation Situation
		Start		End						
		Date	Time	Date	Time					
155	n/a	8/1/13	Midnight	8/12/13	Midnight		1	Failure to submit the semi-annual ZZZZ deviation report within 30 days from the end of the reporting period. Reporting period ended 6/30/13, report was due no later than 7/30/13	This was discovered during the Title V semi-annual deviation review for this site. The report will be signed and submitted on 8/12/13 when R.O./DAR return back from vacation	
Total Deviations:							1	Is there a Part 3 Miscellaneous Monitoring/Credible Evidence form supporting this deviation report? YES ☒ NO		

Appendix 22
Risk Management Plan
dated 8/16/11

**Southern Union
Gas Services**

KEYSTONE GAS PLANT

KERMIT, TX

RISK MANAGEMENT PLAN (RMP)

Five Year RMP Update

EPA FACILITY ID#: 100000162628

Submitted: 8-16-2011

Anniversary Date: 08-16-2016



EPA FACILITY ID: 100000162628 Keystone Plant

Resubmission

08/16/2011
10:02:21

Section 1. Registration Information

Reason for Resubmission	5-year update (40 CFR 68.190(b)(1))
1.1 Source Identification	
1.1.a. Facility Name	Keystone Plant
1.1.b. Parent Company #1 Name	Southern Union Gas Services Co.
1.1.c. Parent Company #2 Name	
1.2 EPA Facility Identifier	100000162628
1.3 Other EPA Systems Facility Identifier	TXD980352686
1.4 Dun and Bradstreet Numbers (DUNS)	
1.4.a. Facility DUNS	8016495
1.4.b. Parent Company #1 DUNS	8016495
1.4.c. Parent Company #2 DUNS	
1.5 Facility Location	
1.5.a. Street - Line 1	FM 874
1.5.b. Street - Line 2	
1.5.c. City	Kermit
1.5.d. State	TX
1.5.e. Zip Code - Zip +4 Code	79745
1.5.f. County	WINKLER
1.5.g. Facility Latitude (in decimal degrees)	31.945556
1.5.h. Facility Longitude (in decimal degrees)	-103.044167
1.5.i. Method for determining Lat/Long	GPS Code Measurements (Pseudo Range) Standard Positioning Service SA ON
1.5.j. Description of location identified by Lat/Long	Center of Facility
1.5.k. Horizontal Accuracy Measure (meters)	3
1.5.l. Horizontal Reference Datum Code	North American Datum of 1983
1.5.m. Source Map Scale Number	
1.6 Owner or Operator	
1.6.a. Name	Southern Union Gas Services Co.
1.6.b. Phone	(817) 302-9400
1.6.c. Street - Line 1	301 Commerce, Suite 700
1.6.d. Street - Line 2	
1.6.e. City	Fort Worth
1.6.f. State	TX
1.6.g. Zip Code - Zip +4 Code	76102
Foreign Country	
Foreign State/Province	
Foreign Zip/Postal Code	
1.7 Name, title and email address of person or position responsible for RMP (part 68) implementation	
1.7.a. Name of person	Bob Milam
1.7.b. Title of person or position	V.P. Operations & Eng.
1.7.c. Email address of person or position	bob.milam@sug.com



EPA FACILITY ID: 100000162628 Keystone Plant

Resubmission

08/16/2011
10:02:21**Section 1. Registration Information**

1.8 Emergency Contact	
1.8.a. Name	Dwight Bennett
1.8.b. Title of person or position	Plant Manager
1.8.c. Phone	(817) 302-9855
1.8.d. 24-Hour Phone	(432) 586-3431
1.8.e. 24-Hour Phone Extension/PIN #	
1.8.f. Email address for emergency contact	dwight.bennett@sug.com
1.9 Other Points of Contact	
1.9.a. Facility or Parent Company E-mail Address	
1.9.b. Facility Public Contact Phone Number	
1.9.c. Facility or Parent Company WWW Homepage Address	
1.10 Local Emergency Planning Committee (LEPC)	Winkler County LEPC
1.11 Number of fulltime equivalent (FTEs) employees on site	32
1.12 Covered by	
1.12.a. OSHA PSM	Y
1.12.b. EPCRA section 302	Y
1.12.c. CAA Title V Air Operating Permit Program	Y
1.12.d. Air Operating Permit ID #	O-00769
1.13 OSHA Star or Merit Ranking	
1.14 Last Safety Inspection (by an External Agency) Date	01/28/2011
1.15 Last Safety Inspection Performed by an External Agency	OSHA
1.16 Will this RMP involve Predictive Filing?	
1.18 RMP Preparer Information	
1.18.a. Name	Eco Science Resource Group, L.L.C.
1.18.b. Phone	(225) 755-8844
1.18.c. Street - Line 1	11827 Sunray Ave.
1.18.d. Street - Line 2	
1.18.e. City	Baton Rouge
1.18.f. State	LA
1.18.g. Zip	70816
Foreign Country	
Foreign State/Province	
Foreign Zip Code	



EPA FACILITY ID: 100000162628 Keystone Plant

Resubmission

08/16/2011
10:02:21**Section 1. Registration Information****Section 1.17 Process Specific Information****Process 1**

Process ID #	1000028524		
Process Description	Propylene (Refrigerant)		
1.17.a. Program Level	1		
1.17.b. NAICS Code(s)	211112 (Natural Gas Liquid Extraction)		
1.17.c. Chemical(s)			
	Chemical Name	CAS Number	Quantity
	Propylene [1-Propene]	115-07-1	43560



EPA FACILITY ID: 100000162628 Keystone Plant

Resubmission

08/16/2011
10:02:21**Section 1. Registration Information****Section 1.17 Process Specific Information****Process 2**

Process ID #	1000028525		
Process Description	Natural Gas Liquid		
1.17.a. Program Level	1		
1.17.b. NAICS Code(s)	211112 (Natural Gas Liquid Extraction)		
1.17.c. Chemical(s)			
	Chemical Name	CAS Number	Quantity
	Flammable Mixture	00-11-11	58560
	Chemicals in Flammable Mixture	CAS Number of Chemical in Mixture	
	Methane	74-82-8	
	Ethane	74-84-0	
	Propane	74-98-6	
	Isobutane [Propane, 2-methyl]	75-28-5	
	Pentane	109-66-0	
	Butane	106-97-8	
	Isopentane [Butane, 2-methyl-]	78-78-4	

7



EPA FACILITY ID: 100000162628 Keystone Plant

Resubmission

08/16/2011
10:02:21**Section 4. Flammables: Worst Case****Scenario 1**

Process Name	Natural Gas Liquid
Chemical	Flammable Mixture
4.1.a. Chemical Name	Flammable Mixture
4.2 Model Used	EPA's RMP*Comp(TM)
4.3 Scenario	Vapor Cloud Explosion
4.4 Quantity Released (lbs)	58560
4.5 Endpoint Used	1 PSI
4.6 Distance to endpoint (miles)	0.3
4.7 Estimated residential population within distance to endpoint (numbers)	0
4.8 Public receptors within distance to endpoint	
4.8.a. Schools	
4.8.b. Residences	
4.8.c. Hospitals	
4.8.d. Prison/Correctional Facilities	
4.8.e. Recreational Areas	
4.8.f. Major commercial, office or industrial areas	
4.8.g. Other	
4.9 Environmental receptors within distance to endpoint	
4.9.a. National or State Parks, Forests or Monuments	
4.9.b. Officially Designated Wildlife Sanctuaries, Preserves or Refuges	
4.9.c. Federal Wilderness Area	
4.9.d. Other	
4.10 Passive mitigation considered	
4.10.a. Blast Walls	
4.10.b. Other	
4.11 Graphic file	Graphic file exists



EPA FACILITY ID: 100000162628 Keystone Plant

Resubmission

08/16/2011
10:02:21**Section 4. Flammables: Worst Case****Scenario 2**

Process Name	Propylene (Refrigerant)
Chemical	Propylene [1-Propene]
4.1.a. Chemical Name	Propylene [1-Propene]
4.2 Model Used	EPA's RMP*Comp(TM)
4.3 Scenario	Vapor Cloud Explosion
4.4 Quantity Released (lbs)	43560
4.5 Endpoint Used	1 PSI
4.6 Distance to endpoint (miles)	0.3
4.7 Estimated residential population within distance to endpoint (numbers)	0
4.8 Public receptors within distance to endpoint	
4.8.a. Schools	
4.8.b. Residences	
4.8.c. Hospitals	
4.8.d. Prison/Correctional Facilities	
4.8.e. Recreational Areas	
4.8.f. Major commercial, office or industrial areas	
4.8.g. Other	
4.9 Environmental receptors within distance to endpoint	
4.9.a. National or State Parks, Forests or Monuments	
4.9.b. Officially Designated Wildlife Sanctuaries, Preserves or Refuges	
4.9.c. Federal Wilderness Area	
4.9.d. Other	
4.10 Passive mitigation considered	
4.10.a. Blast Walls	
4.10.b. Other	
4.11 Graphic file	



EPA FACILITY ID: 100000162628 Keystone Plant

Resubmission

08/16/2011
10:02:21

Section 9. Emergency Response

9.1 Written emergency response (ER) plan	
9.1.a. Is your facility included in the written community emergency response plan?	Y
9.1.b. Does your facility have its own written emergency response plan?	Y
9.2 Does your facility's ER plan include specific actions to be taken in response to accidental releases of regulated substances?	Y
9.3 Does your facility's ER plan include procedures for informing the public and local agencies responding to accidental releases?	Y
9.4 Does your facility's ER plan include information on emergency health care?	Y
9.5 Date of most recent review or update of your facility's ER plan	05/05/2011
9.6 Date of most recent ER training for your facility's employees	05/05/2011
9.7 Local agency with which your facility's ER plan or response activities are coordinated	
9.7.a. Name of agency	Kermit Fire Department
9.7.b. Phone number	(432) 586-2577
9.8 Subject to	
9.8.a. OSHA Regulations at 29 CFR 1910.38	Y
9.8.b. OSHA Regulations at 29 CFR 1910.120	Y
9.8.c. Clean Water Act Regulations at 40 CFR 112	Y
9.8.d. RCRA Regulations at 40 CFR 264, 265, 279.52	Y
9.8.e. OPA-90 Regulations at 40 CFR 112, 33 CFR 154, 49 CFR 194, 30 CFR 254	
9.8.f. State EPCRA Rules of Laws	
9.8.g. Other	Texas Railroad Commission / Texas Commission on Environmental Quality



EPA FACILITY ID: 100000162628 Keystone Plant

Resubmission

08/16/2011
10:02:21

Executive Summary

Southern Union Gas Services, Ltd.
Keystone Gas Plant
Executive Summary RMP

Southern Union Gas Services, Ltd. (SUGS) is a publicly held company that has been in the gas processing business for more than 50 years. SUGS operates natural gas processing plants in West Texas and Southeast New Mexico. The Keystone gas plant has a commitment to worker and public safety. This commitment is demonstrated by the resources invested in accident prevention, such as training personnel and considering safety in the design, installation, operation, and maintenance of our processes. Our policy is to implement reasonable controls to prevent foreseeable releases of regulated substances. However, if a release does occur, trained gas plant personnel will respond to control and contain the release.

The facility and system of pipelines is jurisdictional to the Environmental Protection Agency, Texas Natural Resources Conservation Commission, Texas Railroad Commission, the Occupational Safety and Health Administration, and the United States Department of Transportation. This facility is covered by OSHA PSM standard. These agencies conduct periodic facility inspections and report findings to SUGS management.

This facility receives gas from surrounding oil and gas fields and other sites. Gas is received in the Keystone facility with the hydrogen sulfide and water removed. The natural gas liquids as well as the compressed natural gas are then transported from the facility through pipelines to third party customers. The two compounds in the facility that contain substances regulated under the Risk Management Program (RMP) in the amounts greater than threshold quantity are demethanized natural gas liquids (NGL) and Propylene. These are both reported as flammable liquids. The NGL is made up of RMP regulated substances of ethane, propane, butane, methane, etc.

There are no public receptors within the distance of the endpoint of the worst case scenario. There have been no releases of regulated substances that have created emergency response activities with the surrounding public agencies. Emergency response activities are coordinated with local responders, the facility is classified as Program Level 1 under the regulation. The purpose of this Risk Management Plan (RMPlan) is to provide information about our operations at the facility, our programs to prevent accidental chemical releases, our emergency response plans in case an accidental release should occur, our 5 year accident history, and our planned changes to improve safety at the facility.

The Keystone gas plant is located northeast of Kermit, in Winkler County, Texas.

As specified by the U. S. Environmental Protection Agency (EPA) RMP Regulations, our worst case release would be the loss of all of the NGL in our largest vessel causing a vapor cloud explosion. Such a scenario is highly unlikely; however, using the EPA RMP Comp. the distance that the resulting vapor cloud explosion could cause an overpressure of 1 psi would be approximately 0.3 miles. An overpressure of 1 psi is EPA's threshold for measurable impacts.

Potential releases have been discussed with our employees and with local emergency response officials in Winkler County, thereby further reducing the possibility of any impact on the public.

The Keystone Gas Plant operates under the guidelines of the Occupational Safety and Health Administration (OSHA) Process Safety Management (PSM) Program. Our ongoing analysis of the potential hazards of our process, detailed training of our employees, and constant emphasis on safety has helped us avoid any serious accidents over the last 5 years. Part of this program has also involved identifying and taking steps to avoid potential accidental chemical releases. A few examples of the additional prevention features implemented at this facility include:

- Installation of a continuous lit natural gas flare.

- Fire water monitors that will spray water onto equipment.

- Emergency shutdown valves for removing the product from the system during emergency situations along with automatic pump shutdown.

These safeguards as well as the vigilance of our trained employees have helped plant to operate safely.

No incident having resulted in offsite or onsite impacts from a RMP regulated substance has occurred at the Keystone Gas Plant within the last five years. Daily emphasis on prevention and safety programs should ensure this record continues.



EPA FACILITY ID: 100000162628 Keystone Plant

Resubmission

08/16/2011
10:02:21

Executive Summary

An Emergency Response Plan (ERP) specific to the facility is in place and has been coordinated with the Kermit Volunteer Fire Department and the Winkler County Sheriff. The Plant Manager is responsible for coordinating all emergency actions. The ERP in place deals with evacuation procedures, training, etc. The ERP provides the essential planning and training for effectively protecting workers, the public, and the environment during emergency situations.

Diligent compliance with our RMP Prevention Program forms the framework on which we will continue to improve the level of safety at the Keystone Gas Plant. Some of the key components of the safety improvements we expect to achieve are as follows:

The Management of Change provisions ensure that we consider the potential safety and health impacts of any change we make to process chemicals, technology, equipment or procedures.

The Process Hazard Analysis (PHA) provisions serve as a tool to ensure continual evaluation of potential hazards, thereby leading to continual improvements in our safety standards.

The Mechanical Integrity provisions ensure that process equipment and instrumentation are designed, constructed, installed and maintained to minimize the risk of hazardous releases, thereby serving as an integral part of our safety program.

Internal and third party compliance audits will ensure we maintain and increase our level of safety protection.

An ongoing dialogue with the Winkler County Emergency Management Director or their designate will ensure a constant state of readiness to respond to any potential emergencies, as well as a means to implement improvements as the need develops. In this way, we shall bolster our strong commitment to the safety of our workers and the community.

We encourage all interested citizens or community organizations to contact the Winkler County Emergency Management Director for the latest information on emergency response for the county. We plan to diligently integrate our response capabilities and personnel with those of the county on an ongoing basis.

Results of Consequence Analysis

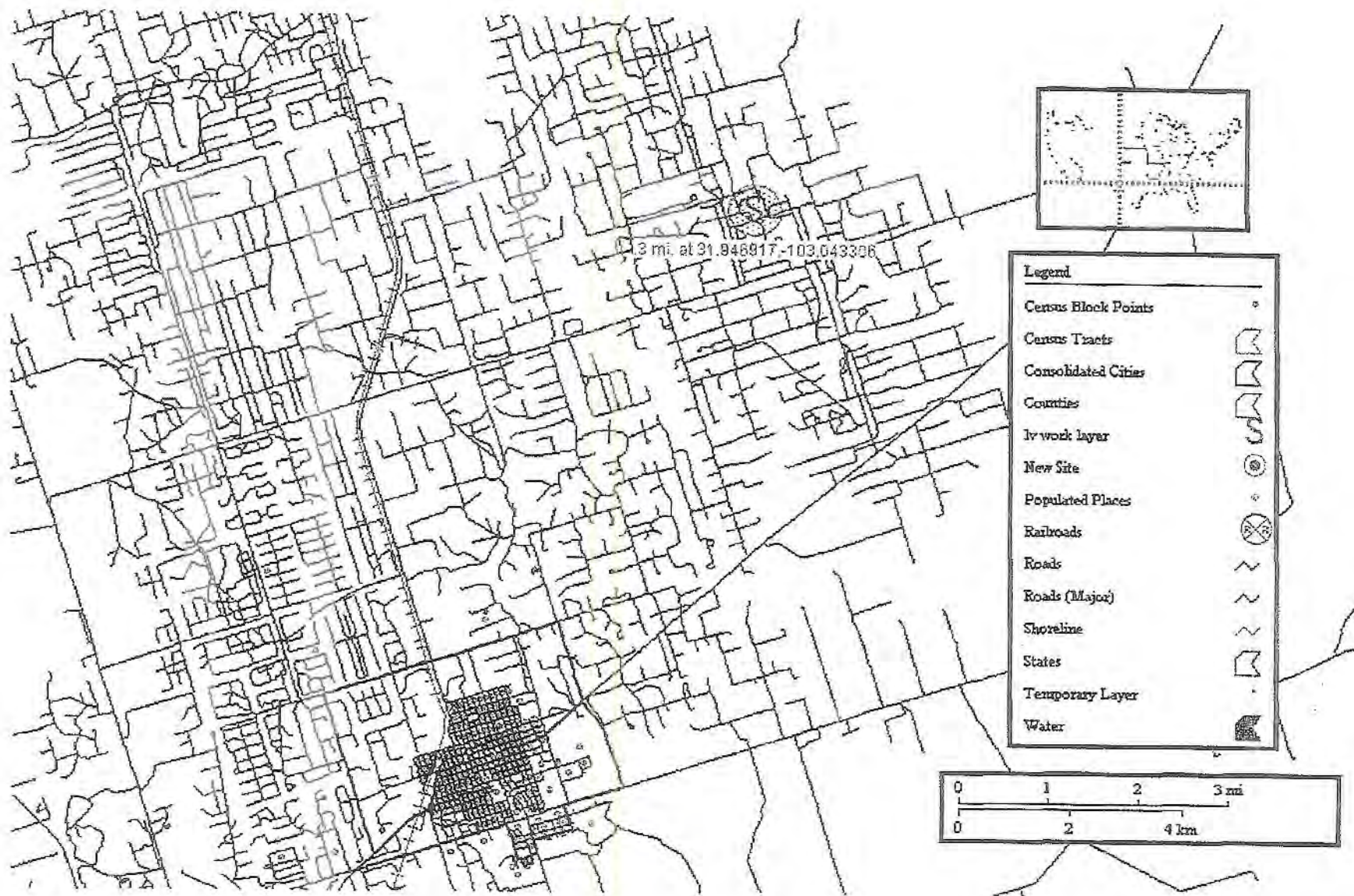
CHEMICAL NAME	CAS#	WEIGHT (lbs)
Butane	106-97-8	2928
Ethane	74-84-0	23424
Isobutane (Propane, 2-methyl)	75-28-5	2928
Isopentane (Butane, 2-methyl)	78-78-4	2928
Methane	74-82-8	2928
Pentane	109-66-0	2928
Propane	74-98-6	17568

Category: Flammable Gas

Scenerio: Worst-case

Release Type: Vapor Cloud Explosion

Estimated Distance to 1 psi overpressure: 0.3 miles(0.5 kiolmeters)



Results of Consequence Analysis

Chemical: Propylene [1-Propene]

CAS #:115-07-1

Category: Flammable Gas

Scenerio: Worst-case

Liquefied under pressure

Quantity Released: 43560 pounds

Release Type: Vapor Cloud Explosion

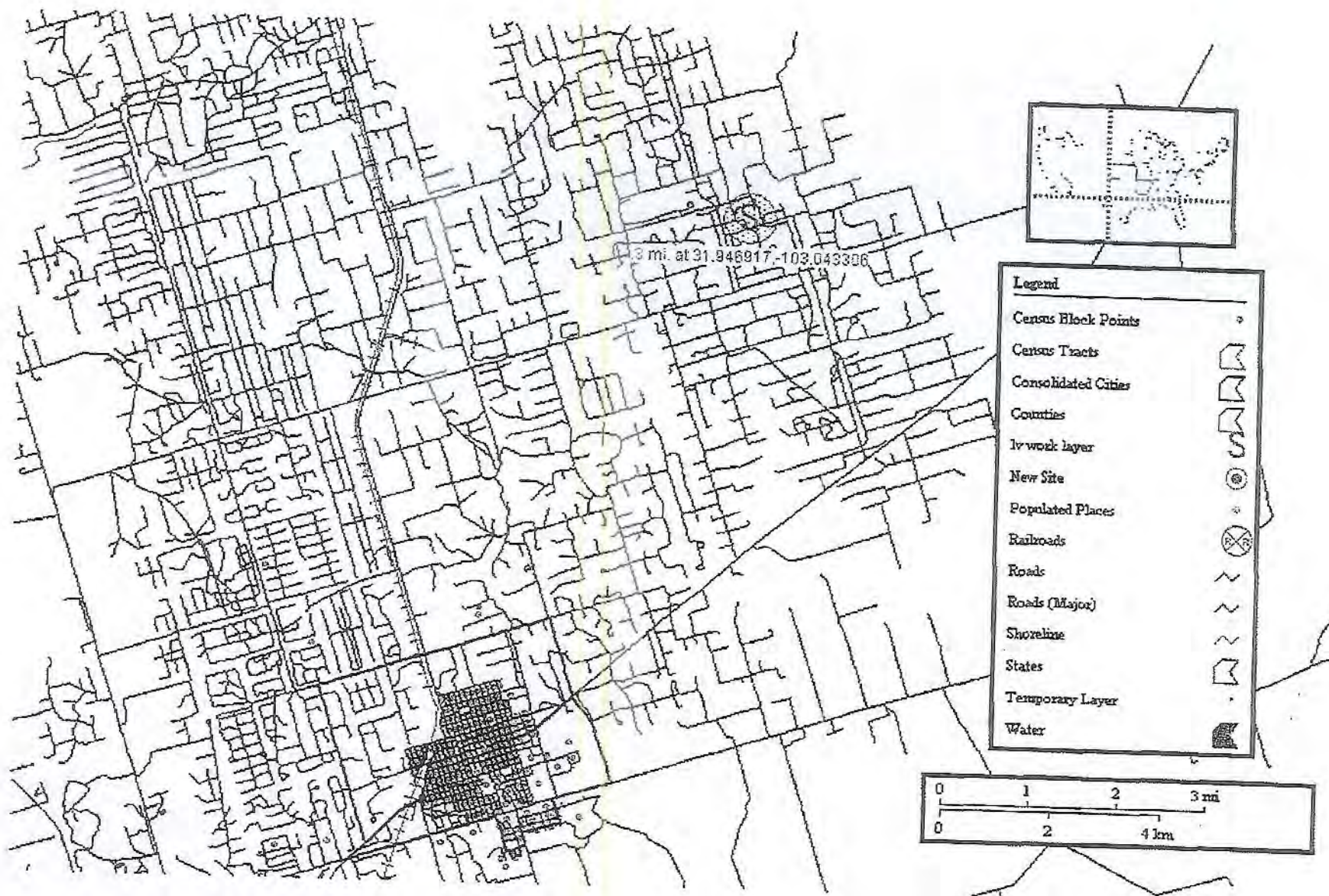
Estimated Distance to 1 psi overpressure: 0.3 miles(0.5 kiolmeters)

-----Assumptions About This Scenario-----

Wind Speed: 1.5 meters/second (3.4 miles/hour)

Stability Class: F

Air Temperature: 77 degrees F (25 degrees C)



CDX

Ingram, Karen K.

From: Milam, Robert
Sent: Wednesday, March 23, 2011 3:06 PM
To: Ingram, Karen K.
Subject: FW: Electronic Signature Agreement (ESA)

FYI

Bob Milam
Southern Union Gas Services
(817) 302-9408

-----Original Message-----

From: CDX Help Desk [mailto:helpdesk@epacdx.net]
Sent: Wednesday, March 23, 2011 2:58 PM
To: Milam, Robert
Subject: Electronic Signature Agreement (ESA)

Your Electronic Signature Agreement (ESA) has been received and APPROVED for the facility/facilities shown below. Following are the Authorization Codes assigned to each facility that you have requested access for.

Please provide the appropriate Authorization Code to the preparer that you assign for each facility/facilities. These Authorization Codes are unique and are associated to each Facility (EPA Facility ID). Preparers must use the correct Authorization Code for each facility to prepare a submission using RMP*eSubmit. For more information please follow the instructions in the RMP*eSubmit - user guidelines.

Authorization Code: 98afb021-f258-4f12-bc03-463027a488d8

EPA Facility ID: 1000 0016 2628

Facility: Keystone Plant
FM 874
Kermit TX, 79745

United States Environmental Protection Agency
Central Data Exchange



EPA FACILITY ID: 100000162628 Keystone Plant

Current

06/20/2013
11:01:00

Section 1. Registration Information

1.1 Source Identification	
1.1.a. Facility Name	Keystone Plant
1.1.b. Parent Company #1 Name	Southern Union Gas Services Co.
1.1.c. Parent Company #2 Name	
1.2 EPA Facility Identifier	100000162628
1.3 Other EPA Systems Facility Identifier	TXD980352686
1.4 Dun and Bradstreet Numbers (DUNS)	
1.4.a. Facility DUNS	008016495
1.4.b. Parent Company #1 DUNS	008016495
1.4.c. Parent Company #2 DUNS	
1.5 Facility Location	
1.5.a. Street - Line 1	FM 874
1.5.b. Street - Line 2	
1.5.c. City	Kermit
1.5.d. State	TX
1.5.e. Zip Code - Zip +4 Code	79745
1.5.f. County	WINKLER
1.5.g. Facility Latitude (in decimal degrees)	31.945556
1.5.h. Facility Longitude (in decimal degrees)	-103.044167
1.5.i. Method for determining Lat/Long	GPS Code Measurements (Psuedo Range) Standard Positioning Service SA ON
1.5.j. Description of location identified by Lat/Long	Center of Facility
1.5.k. Horizontal Accuracy Measure (meters)	3
1.5.l. Horizontal Reference Datum Code	North American Datum of 1983
1.5.m. Source Map Scale Number	
1.6 Owner or Operator	
1.6.a. Name	La Grange Acquisitions, LLC
1.6.b. Phone	(210) 403-7300
1.6.c. Street - Line 1	800 E. Sonterra Blvd
1.6.d. Street - Line 2	
1.6.e. City	San Antonio
1.6.f. State	TX
1.6.g. Zip Code - Zip +4 Code	78258-3941
Foreign Country	
Foreign State/Province	
Foreign Zip/Postal Code	
1.7 Name, title and email address of person or position responsible for RMP (part 68) implementation	
1.7.a. Name of person	David Rider
1.7.b. Title of person or position	PSM/RMP Manager
1.7.c. Email address of person or position	david.rider@energytransfer.com



EPA FACILITY ID: 100000162628 Keystone Plant

Current

06/20/2013
11:01:00**Section 1. Registration Information**

1.8 Emergency Contact	
1.8.a. Name	Dwight Bennett
1.8.b. Title of person or position	Plant Manager
1.8.c. Phone	(817) 302-9855
1.8.d. 24-Hour Phone	(432) 586-3431
1.8.e. 24-Hour Phone Extension/PIN #	
1.8.f. Email address for emergency contact	dwight.bennett@sug.com
1.9 Other Points of Contact	
1.9.a. Facility or Parent Company E-mail Address	
1.9.b. Facility Public Contact Phone Number	
1.9.c. Facility or Parent Company WWW Homepage Address	
1.10 Local Emergency Planning Committee (LEPC)	Winkler County LEPC
1.11 Number of fulltime equivalent (FTEs) employees on site	32
1.12 Covered by	
1.12.a. OSHA PSM	Y
1.12.b. EPCRA section 302	Y
1.12.c. CAA Title V Air Operating Permit Program	Y
1.12.d. Air Operating Permit ID #	O-00769
1.13 OSHA Star or Merit Ranking	
1.14 Last Safety Inspection (by an External Agency) Date	01/28/2011
1.15 Last Safety Inspection Performed by an External Agency	OSHA
1.16 Will this RMP involve Predictive Filing?	
1.18 RMP Preparer Information	
1.18.a. Name	Eco Science Resource Group, L.L.C.
1.18.b. Phone	(225) 755-8844
1.18.c. Street - Line 1	11827 Sunray Ave.
1.18.d. Street - Line 2	
1.18.e. City	Baton Rouge
1.18.f. State	LA
1.18.g. Zip	70816
Foreign Country	
Foreign State/Province	
Foreign Zip Code	



EPA FACILITY ID: 100000162628 Keystone Plant

Current

06/20/2013
11:01:00**Section 1. Registration Information****Section 1.17 Process Specific Information****Process 1**

Process ID #	1000028524		
Process Description	Propylene (Refrigerant)		
1.17.a. Program Level	1		
1.17.b. NAICS Code(s)	211112 (Natural Gas Liquid Extraction)		
1.17.c. Chemical(s)			
	Chemical Name	CAS Number	Quantity
	Propylene [1-Propene]	115-07-1	43560



EPA FACILITY ID: 100000162628 Keystone Plant

Current

06/20/2013
11:01:00**Section 1. Registration Information****Section 1.17 Process Specific Information****Process 2**

Process ID #	1000028525		
Process Description	Natural Gas Liquid		
1.17.a. Program Level	1		
1.17.b. NAICS Code(s)			
211112 (Natural Gas Liquid Extraction)			
1.17.c. Chemical(s)			
	Chemical Name	CAS Number	Quantity
	Flammable Mixture	00-11-11	58560
	Chemicals in Flammable Mixture		CAS Number of Chemical in Mixture
	Methane		74-82-8
	Ethane		74-84-0
	Propane		74-98-6
	Isobutane [Propane, 2-methyl]		75-28-5
	Pentane		109-66-0
	Butane		106-97-8
	Isopentane [Butane, 2-methyl-]		78-78-4



EPA FACILITY ID: 100000162628 Keystone Plant

Current

06/20/2013
11:01:00**Section 4. Flammables: Worst Case****Scenario 1**

Process Name	Propylene (Refrigerant)
Chemical	Propylene [1-Propene]
4.1.a. Chemical Name	Propylene [1-Propene]
4.2 Model Used	EPA's RMP*Comp(TM)
4.3 Scenario	Vapor Cloud Explosion
4.4 Quantity Released (lbs)	43560
4.5 Endpoint Used	1 PSI
4.6 Distance to endpoint (miles)	0.3
4.7 Estimated residential population within distance to endpoint (numbers)	0
4.8 Public receptors within distance to endpoint	
4.8.a. Schools	
4.8.b. Residences	
4.8.c. Hospitals	
4.8.d. Prison/Correctional Facilities	
4.8.e. Recreational Areas	
4.8.f. Major commercial, office or industrial areas	
4.8.g. Other	
4.9 Environmental receptors within distance to endpoint	
4.9.a. National or State Parks, Forests or Monuments	
4.9.b. Officially Designated Wildlife Sanctuaries, Preserves or Refuges	
4.9.c. Federal Wilderness Area	
4.9.d. Other	
4.10 Passive mitigation considered	
4.10.a. Blast Walls	
4.10.b. Other	
4.11 Graphic file	



EPA FACILITY ID: 100000162628 Keystone Plant

Current

06/20/2013
11:01:00**Section 4. Flammables: Worst Case****Scenario 2**

Process Name	Natural Gas Liquid
Chemical	Flammable Mixture
4.1.a. Chemical Name	Flammable Mixture
4.2 Model Used	EPA's RMP*Comp(TM)
4.3 Scenario	Vapor Cloud Explosion
4.4 Quantity Released (lbs)	58560
4.5 Endpoint Used	1 PSI
4.6 Distance to endpoint (miles)	0.3
4.7 Estimated residential population within distance to endpoint (numbers)	0
4.8 Public receptors within distance to endpoint	
4.8.a. Schools	
4.8.b. Residences	
4.8.c. Hospitals	
4.8.d. Prison/Correctional Facilities	
4.8.e. Recreational Areas	
4.8.f. Major commercial, office or industrial areas	
4.8.g. Other	
4.9 Environmental receptors within distance to endpoint	
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4.9.c. Federal Wilderness Area	
4.9.d. Other	
4.10 Passive mitigation considered	
4.10.a. Blast Walls	
4.10.b. Other	
4.11 Graphic file	Graphic file exists



EPA FACILITY ID: 100000162628 Keystone Plant

Current

06/20/2013
11:01:00

Section 9. Emergency Response

9.1 Written emergency response (ER) plan	
9.1.a. Is your facility included in the written community emergency response plan?	Y
9.1.b. Does your facility have its own written emergency response plan?	Y
9.2 Does your facility's ER plan include specific actions to be taken in response to accidental releases of regulated substances?	Y
9.3 Does your facility's ER plan include procedures for informing the public and local agencies responding to accidental releases?	Y
9.4 Does your facility's ER plan include information on emergency health care?	Y
9.5 Date of most recent review or update of your facility's ER plan	05/05/2011
9.6 Date of most recent ER training for your facility's employees	05/05/2011
9.7 Local agency with which your facility's ER plan or response activities are coordinated	
9.7.a. Name of agency	Kermit Fire Department
9.7.b. Phone number	(432) 586-2577
9.8 Subject to	
9.8.a. OSHA Regulations at 29 CFR 1910.38	Y
9.8.b. OSHA Regulations at 29 CFR 1910.120	Y
9.8.c. Clean Water Act Regulations at 40 CFR 112	Y
9.8.d. RCRA Regulations at 40 CFR 264, 265, 279.52	Y
9.8.e. OPA-90 Regulations at 40 CFR 112, 33 CFR 154, 49 CFR 194, 30 CFR 254	
9.8.f. State EPCRA Rules of Laws	
9.8.g. Other	Texas Railroad Commission / Texas Commission on Environmental Quality



Executive Summary

Southern Union Gas Services, Ltd.
Keystone Gas Plant
Executive Summary RMP

Southern Union Gas Services, Ltd. (SUGS) is a publicly held company that has been in the gas processing business for more than 50 years. SUGS operates natural gas processing plants in West Texas and Southeast New Mexico. The Keystone gas plant has a commitment to worker and public safety. This commitment is demonstrated by the resources invested in accident prevention, such as training personnel and considering safety in the design, installation, operation, and maintenance of our processes. Our policy is to implement reasonable controls to prevent foreseeable releases of regulated substances. However, if a release does occur, trained gas plant personnel will respond to control and contain the release.

The facility and system of pipelines is jurisdictional to the Environmental Protection Agency, Texas Natural Resources Conservation Commission, Texas Railroad Commission, the Occupational Safety and Health Administration, and the United States Department of Transportation. This facility is covered by OSHA PSM standard. These agencies conduct periodic facility inspections and report findings to SUGS management.

This facility receives gas from surrounding oil and gas fields and other sites. Gas is received in the Keystone facility with the hydrogen sulfide and water removed. The natural gas liquids as well as the compressed natural gas are then transported from the facility through pipelines to third party customers. The two compounds in the facility that contain substances regulated under the Risk Management Program (RMP) in the amounts greater than threshold quantity are demethanized natural gas liquids (NGL) and Propylene. These are both reported as flammable liquids. The NGL is made up of RMP regulated substances of ethane, propane, butane, methane, etc.

There are no public receptors within the distance of the endpoint of the worst case scenario. There have been no releases of regulated substances that have created emergency response activities with the surrounding public agencies. Emergency response activities are coordinated with local responders, the facility is classified as Program Level 1 under the regulation. The purpose of this Risk Management Plan (RMPlan) is to provide information about our operations at the facility, our programs to prevent accidental chemical releases, our emergency response plans in case an accidental release should occur, our 5 year accident history, and our planned changes to improve safety at the facility.

The Keystone gas plant is located northeast of Kermit, in Winkler County, Texas.

As specified by the U. S. Environmental Protection Agency (EPA) RMP Regulations, our worst case release would be the loss of all of the NGL in our largest vessel causing a vapor cloud explosion. Such a scenario is highly unlikely; however, using the EPA RMP Comp. the distance that the resulting vapor cloud explosion could cause an overpressure of 1 psi would be approximately 0.3 miles. An overpressure of 1 psi is EPA's threshold for measurable impacts.

Potential releases have been discussed with our employees and with local emergency response officials in Winkler County, thereby further reducing the possibility of any impact on the public.

The Keystone Gas Plant operates under the guidelines of the Occupational Safety and Health Administration (OSHA) Process Safety Management (PSM) Program. Our ongoing analysis of the potential hazards of our process, detailed training of our employees, and constant emphasis on safety has helped us avoid any serious accidents over the last 5 years. Part of this program has also involved identifying and taking steps to avoid potential accidental releases. A few examples of the additional prevention features implemented at this facility include:

- Installation of a continuous lit natural gas flare.

- Fire water monitors that will spray water onto equipment.

- Emergency shutdown valves for removing the product from the system during emergency situations along with automatic pump shutdown.

These safeguards as well as the vigilance of our trained employees have helped plant to operate safely.

No incident having resulted in offsite or onsite impacts from a RMP regulated substance has occurred at the Keystone Gas Plant within the last five years. Daily emphasis on prevention and safety programs should ensure this record continues.



EPA FACILITY ID: 100000162628 Keystone Plant

Current

06/20/2013
11:01:00

Executive Summary

An Emergency Response Plan (ERP) specific to the facility is in place and has been coordinated with the Kermit Volunteer Fire Department and the Winkler County Sheriff. The Plant Manager is responsible for coordinating all emergency actions. The ERP in place deals with evacuation procedures, training, etc. The ERP provides the essential planning and training for effectively protecting workers, the public, and the environment during emergency situations.

Diligent compliance with our RMP Prevention Program forms the framework on which we will continue to improve the level of safety at the Keystone Gas Plant. Some of the key components of the safety improvements we expect to achieve are as follows:

• The Management of Change provisions ensure that we consider the potential safety and health impacts of any change we make to process chemicals, technology, equipment or procedures.

• The Process Hazard Analysis (PHA) provisions serve as a tool to ensure continual evaluation of potential hazards, thereby leading to continual improvements in our safety standards.

• The Mechanical Integrity provisions ensure that process equipment and instrumentation are designed, constructed, installed and maintained to minimize the risk of hazardous releases, thereby serving as an integral part of our safety program.

• Internal and third party compliance audits will ensure we maintain and increase our level of safety protection.

• An ongoing dialogue with the Winkler County Emergency Management Director or their designate will ensure a constant state of readiness to respond to any potential emergencies, as well as a means to implement improvements as the need develops. In this way, we shall bolster our strong commitment to the safety of our workers and the community.

We encourage all interested citizens or community organizations to contact the Winkler County Emergency Management Director for the latest information on emergency response for the county. We plan to diligently integrate our response capabilities and personnel with those of the county on an ongoing basis.

Appendix 23

Material Safety Data Sheet - Propylene

Print Date 01/30/2013

Dear Sir or Madam,

Enclosed you will find material safety data sheets for the following products:

Trade name: **Propylene (Polymer Grade, Unodorized)**

The attached Material Safety Data Sheet (MSDS) contains as appropriate, but not limited to, health and safety information required by: Occupational Health and Safety Administration's (OSHA) Hazard Communication Standard (29 CFR 1910.1200); Canadian Workplace Hazardous Materials Identification System (WHMIS); European Chemicals Bureau; Classification and Labeling, Registration, Evaluation and Authorization of Chemicals (REACH) and The Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

In order to effectively meet recent regulatory changes, we have implemented a new MSDS authoring system. As a result, as we begin updating our MSDSs you may notice differences in formatting, phrase selections and additional hazard communication information.

Please replace previous editions of this document, which you may have on file, with the enclosed updated MSDS(s). If you are not the proper person to receive the MSDS(s), please forward it to the appropriate person(s).

If you resell this product, please pass this MSDS along to your customer(s).

Please note that MSDSs are available by e-mail delivery. If you would like them to be delivered via e-mail please contact your customer service representative. If you have any questions or comments about our company or this MSDS please contact us at:
msds@cpchem.com

Kind regards,
CPC-Olefins/Trading Branch

Chevron Phillips Chemical Company LP
Environment Health and Safety
Product Safety & Toxicology Department
msds@cpchem.com
800.852.5530

MATERIAL SAFETY DATA SHEET

**Propylene (Polymer Grade, Unodorized)**

Version 1.2

Revision Date 2011-03-24

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**Product information**

Trade name Propylene (Polymer Grade, Unodorized)
 Material 1103433, 1102933, 1021731, 1015413, 1026827, 1029232

Use Chemical intermediate

Company Chevron Phillips Chemical Company LP
 10001 Six Pines Drive
 The Woodlands, TX 77380

Emergency telephone:**Health:**

866 442 9628 (North America)
 1 832 813 4984 (International)

Transport

North America: CHEMTREC 800 424 9300 or 703 527 3887
 Asia: +800 CHEMCALL (+800 2436 2255) China: 0532 8388 9090
 EUROPE BIG +32 14 584545 (phone) or +32 14583516 (telefax)
 Chemcare Asia: Tel: +65 6848 9048 - Mob: +65 8382 9188 - Fax: +65 6848
 South America SOS-Cotec Inside Brazil: 0800 111 767 Outside Brazil: +55 19 3467 1600

Responsible Department Product Safety and Toxicology Group
 E-mail address MSDS@CPCChem.com
 Website www.CPCChem.com

2. HAZARDS IDENTIFICATION**Emergency Overview**

Physical state: Gaseous **Color:** Colorless **Odor:** Sweet

OSHA Hazards **Flammable Gas**

GHS Classification

Flammable gases, Category 1

GHS-Labeling

Symbol(s)



Signal Word

Danger

Hazard Statements

H220 **Extremely flammable gas**

Precautionary Statements

Prevention:
 P210 Keep away from heat/sparks/open flames/hot surfaces

Propylene (Polymer Grade, Unodorized)		MATERIAL SAFETY DATA SHEET																		
Version 1.2	Revision Date 2011-03-24																			
- No smoking. Response: P377 Leaking gas fire: Do not extinguish, unless leak can be stopped safely. P381 Eliminate all ignition sources if safe to do so Storage: P403 Store in a well-ventilated place Carcinogenicity: IARC NTP ACGIH No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.																				
3. COMPOSITION/INFORMATION ON INGREDIENTS																				
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 35%; border-bottom: 1px solid black;">Synonyms</td> <td colspan="2" style="border-bottom: 1px solid black;">Propylene</td> </tr> <tr> <td style="border-bottom: 1px solid black;">Molecular formula</td> <td colspan="2" style="border-bottom: 1px solid black;">C₃H₆</td> </tr> <tr> <td style="border-bottom: 1px solid black;">Index-No.</td> <td colspan="2" style="border-bottom: 1px solid black;">601-011-00-9</td> </tr> <tr> <td style="border-bottom: 1px solid black;">EINECS-No.</td> <td colspan="2" style="border-bottom: 1px solid black;">204-062-1</td> </tr> </table> <table style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 45%; border-bottom: 1px solid black;">Component</th> <th style="width: 25%; border-bottom: 1px solid black;">CAS-No.</th> <th style="width: 30%; border-bottom: 1px solid black;">Weight %</th> </tr> <tr> <td style="border-bottom: 1px solid black;">Propylene</td> <td style="border-bottom: 1px solid black;">115-07-1</td> <td style="border-bottom: 1px solid black;">99.00</td> </tr> </table>			Synonyms	Propylene		Molecular formula	C ₃ H ₆		Index-No.	601-011-00-9		EINECS-No.	204-062-1		Component	CAS-No.	Weight %	Propylene	115-07-1	99.00
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5. FIRE-FIGHTING MEASURES																				
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 35%; border-bottom: 1px solid black;">Flash point</td> <td style="border-bottom: 1px solid black;">-108 °C (-162 °F)</td> </tr> </table>			Flash point	-108 °C (-162 °F)																
Flash point	-108 °C (-162 °F)																			
MSDS Number: 100000010916		2/11																		

Propylene (Polymer Grade, Unodorized)

MATERIAL SAFETY DATA SHEET

Version 1.2

Revision Date 2011-03-24

Autoignition temperature	497.2 °C (927.0 °F)
Suitable extinguishing media	Alcohol-resistant foam Carbon dioxide (CO ₂) Dry chemical
Unsuitable extinguishing media	High volume water jet
Special protective equipment for fire-fighters	Wear self contained breathing apparatus for fire fighting if necessary.
Further information	For safety reasons in case of fire, cans should be stored separately in closed containments. Use a water spray to cool fully closed containers.
Fire and explosion protection	Do not spray on an open flame or any other incandescent material. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Use only explosion-proof equipment. Keep away from open flames, hot surfaces and sources of ignition.
Hazardous decomposition products	Carbon oxides

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.
Environmental precautions	Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.

7. HANDLING AND STORAGE**Handling**

Advice on safe handling	For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Take precautionary measures against static discharges. Provide sufficient air exchange and/or exhaust in work rooms. Open drum carefully as content may be under pressure. Dispose of rinse water in accordance with local and national regulations. NORMS based Radon, a radioactive gas, may be present as a trace component in natural gas, natural gas liquids and petrochemicals derived from natural gas. Special precautions should be taken when entering or dismantling equipment in this type of service. Equipment should be checked externally while in service for gamma radiation above background levels. This equipment may contain internal surface deposits of radioactive radon decay products. Minimize unnecessary exposures to these radioactive deposits. Exposures can be reduced by allowing a 4 hour idle (no flow) period before entering or dismantling equipment. During this time the short lived decay products will decay. Longer lived radio nuclides (Pb-210, Bi-
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MATERIAL SAFETY DATA SHEET

Propylene (Polymer Grade, Unodorized)

Version 1.2

Revision Date 2011-03-24

210 and Po-210) may be present. Avoid direct skin contact with deposits of radioactivity on surfaces. Avoid generation of dust, smoke or fumes in the work area or if they cannot be avoided, wear a tested and certified respirator for radioactive dusts. Smoking, eating and drinking should be prohibited when working with this equipment. Employees should wash thoroughly with soap and water and discard contaminated clothing after entering or handling equipment having radioactive deposits.

Advice on protection
against fire and explosion

Do not spray on an open flame or any other incandescent material. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Use only explosion-proof equipment. Keep away from open flames, hot surfaces and sources of ignition.

Storage

Requirements for storage
areas and containers

Prevent unauthorized access. No smoking. Keep in a well-ventilated place. Observe label precautions. Electrical installations / working materials must comply with the technological safety standards.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Ingredients with workplace control parameters**

US

Ingredients	Basis	Value	Control parameters	Note
Propylene	ACGIH	TWA	500 ppm	A4
Propane	ACGIH	TWA	1,000 ppm	
	OSHA Z'B	TWA	1,000 ppm, 1,800 mg/m ³	(b)
	OSHA Z'A	TWA	1,000 ppm, 1,800 mg/m ³	
	NIOSH REL	TWA	1,000 ppm, 1,800 mg/m ³	

(b) The value in mg/m³ is approximate.

A4: Not classifiable as a human carcinogen. Agents which cause concern that they could be carcinogenic for humans but which cannot be assessed conclusively because of a lack of data. In vitro or animal studies do not provide indications of carcinogenicity which are sufficient to classify the agent into one of the other categories.

Personal protective equipment

Hand protection

The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection

Eye wash bottle with pure water. Tightly fitting safety goggles.

Skin and body protection

Impervious clothing. Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures

Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES**Information on basic physical and chemical properties****Appearance**

Physical state

Gaseous

Color

Colorless

MSDS Number: 100000010916

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Propylene (Polymer Grade, Unodorized)

MATERIAL SAFETY DATA SHEET

Version 1.2

Revision Date 2011-03-24

Odor Sweet

Safety data

Flash point -108 °C (-162 °F)

Lower explosion limit 2 %(V)

Upper explosion limit 10 %(V)

Oxidizing properties No

Autoignition temperature 497.2 °C (927.0 °F)

Molecular formula C₃H₆

Molecular Weight 42.09 g/mol

pH No data available

Freezing point -185 °C (-301 °F)

Pour point No data available

Boiling point/boiling range -47.8 °C (-54.0 °F)

Vapor pressure 226.40 PSI
at 37.8 °C (100.0 °F)
Method: Reid

Relative density 0.52, 15.6 °C(60.1 °F)

Water solubility Soluble in hydrocarbon solvents; partially soluble in water

Partition coefficient: n-octanol/water No data available

Viscosity, kinematic No data available

Relative vapor density 1.5
(Air = 1.0)

Evaporation rate No data available

10. STABILITY AND REACTIVITY

Chemical stability This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure

Possibility of hazardous reactions

Conditions to avoid Heat, sparks, fire, and oxidizing agents.

Materials to avoid May react with oxygen and strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

MSDS Number: 100000010916

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Propylene (Polymer Grade, Unodorized)

MATERIAL SAFETY DATA SHEET

Version 1.2

Revision Date 2011-03-24

Other data

No decomposition if stored and applied as directed

11. TOXICOLOGICAL INFORMATION**Propylene (Polymer Grade, Unodorized)**

Acute oral toxicity LD50: No data available

Propylene (Polymer Grade, Unodorized)

Acute inhalation toxicity LC50: No data available

Propylene (Polymer Grade, Unodorized)

Acute dermal toxicity LD50: No data available

Propylene (Polymer Grade, Unodorized)

Skin irritation No skin irritation

Propylene (Polymer Grade, Unodorized)

Eye irritation No eye irritation

Repeated dose toxicity

Propylene

Species: rat, Male and female

Sex: Male and female

Application Route: Inhalation

Dose: 625, 1250, 2500, 5000, 10000 ppm

Exposure time: 14 wk

Number of exposures: 6 Hr/d, 5 d/wk

NOEL: 10000 ppm

No adverse effect has been observed in chronic toxicity tests.

Propylene (Polymer Grade, Unodorized)

MATERIAL SAFETY DATA SHEET

Version 1.2

Revision Date 2011-03-24

Species: mouse, Male and female
 Sex: Male and female
 Application Route: Inhalation
 Dose: 625, 1250, 2500, 5000, 10000 ppm
 Exposure time: 14 wk
 Number of exposures: 6 Hr/d, 5 d/wk
 NOEL: 10000 ppm
 No adverse effect has been observed in chronic toxicity tests.

Species: rat, Male and female
 Sex: Male and female
 Application Route: Inhalation
 Dose: 0, 5000, 10000 ppm
 Exposure time: 103 wk
 Number of exposures: 6 Hr/d, 5 d/wk
 Lowest observable effect level: 5000 ppm

Species: mouse, Male and female
 Sex: Male and female
 Application Route: Inhalation
 Dose: 0, 5000, 10000 ppm
 Exposure time: 103 wk
 Number of exposures: 6 Hr/d, 5 d/wk
 Lowest observable effect level: 5000 ppm

Carcinogenicity

Propylene

Species: rat
 Dose: 0, 5000, 10000 ppm
 Exposure time: 103 wks
 Number of exposures: 6 h/d, 5 d/wk
 Remarks: No evidence of carcinogenicity

Species: mouse
 Dose: 0, 5000, 10000 ppm
 Exposure time: 103 wks
 Number of exposures: 6 h/d, 5 d/wk
 Remarks: No evidence of carcinogenicity

Reproductive toxicity

Propylene

Species: rat
 Application Route: Inhalation
 Dose: 0, 5000, 10000 ppm
 Number of exposures: 6 hrs/d, 5 d/wk
 Test period: 103 wks
 NOAEL Parent: 10000 ppm

Species: mouse
 Application Route: Inhalation
 Dose: 0, 5000, 10000 ppm
 Number of exposures: 6 hrs/d, 5 d/wk
 Test period: 103 wks
 NOAEL Parent: 10000 ppm

Teratogenicity

Propylene

Species: rat

Propylene (Polymer Grade, Unodorized)

MATERIAL SAFETY DATA SHEET

Version 1.2

Revision Date 2011-03-24

Application Route: Inhalation
 Dose: 0, 200, 1000, 10000 ppm
 Number of exposures: 6 hrs/d
 Test period: 14 d
 Method: OECD Guideline 414
 NOAEL Teratogenicity: 10000 ppm
 NOAEL Maternal: 10000 ppm

Propylene (Polymer Grade, Unodorized)

Aspiration toxicity

No aspiration toxicity classification

CMR effects

Propylene

Carcinogenicity: Animal testing did not show any carcinogenic effects
 Mutagenicity: Tests on bacterial or mammalian cell cultures did not show mutagenic effects
 Teratogenicity: Animal testing did not show any effects on fetal development
 Reproductive toxicity: Animal testing did not show any effects on fertility

Propylene (Polymer Grade, Unodorized)

Further information

This product contains NORMS based RADON.
 Carcinogenicity: IARC classification / Group 1 carcinogen
 Other: The amount of radon in the gas itself is not hazardous, but since radon rapidly decays ($t_{1/2}=3.82$ days) to form other radioactive elements including lead 210, polonium 210, and bismuth 210, equipments may contain radioactivity. The radon decay products are solids and therefore may attach to dust particles or form films in equipment. Inhalation, ingestions, or skin contact with radon decay products can lead to the deposit of radioactive material in the respiratory tract, bone, or blood forming organs, intestinal tract, and kidney, which may lead to certain cancers. Risks can be minimized by following good industrial and personal hygiene practices noted in section 7

12. ECOLOGICAL INFORMATION**Elimination information (persistence and degradability)**

Bioaccumulation

This material is not expected to bioaccumulate.

Biodegradability

This material is volatile and is expected to partition to air

Further information on ecology

Additional ecological information

No data available

13. DISPOSAL CONSIDERATIONS

The information in this MSDS pertains only to the product as shipped

MATERIAL SAFETY DATA SHEET

Propylene (Polymer Grade, Unodorized)

Version 1.2

Revision Date 2011-03-24

Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by US EPA under RCRA (40 CFR 261) or other State and local regulations. Measurement of certain physical properties and analysis for regulated components may be necessary to make a correct determination. If this material is classified as a hazardous waste, federal law requires disposal at a licensed hazardous waste disposal facility.

Product

Do not dispose of waste into sewer. Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company.

Contaminated packaging

Empty remaining contents. Dispose of as unused product. Do not re-use empty containers. Do not burn, or use a cutting torch on, the empty drum.

14. TRANSPORT INFORMATION

The shipping descriptions shown here are for bulk shipments only, and may not apply to shipments in non-bulk packages (see regulatory definition).

Consult the appropriate domestic or international mode-specific and quantity-specific Dangerous Goods Regulations for additional shipping description requirements (e.g., technical name or names, etc.) Therefore, the information shown here, may not always agree with the bill of lading shipping description for the material. Flashpoints for the material may vary slightly between the MSDS and the bill of lading.

USDOT

UN1075, PETROLEUM GASES, LIQUEFIED, 2.1

IMO / IMDG

UN1075, PETROLEUM GASES, LIQUEFIED, 2.1, (-108 °C)

IATA

UN1075, PETROLEUM GASES, LIQUEFIED, 2.1

ADR

UN1075, PETROLEUM GASES, LIQUEFIED, 2.1

RID

UN1075, PETROLEUM GASES, LIQUEFIED, 2.1 (13)

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

15. REGULATORY INFORMATION**National legislation****Canadian PBT Chemicals**

No data available

SARA 311/312 Hazards

Fire Hazard

SARA 302 Reportable Quantity

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Ingredients

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

MSDS Number:100000010916

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MATERIAL SAFETY DATA SHEET

Propylene (Polymer Grade, Unodorized)

Version 1.2

Revision Date 2011-03-24

Clean Air Act**Ozone-Depletion Potential**

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App. A + B)

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).

The following chemical(s) are listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F):

Propylene 99

Propane 1

The following chemical(s) are listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F):

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCM Intermediate or Final VOC's (40 CFR 60.489):

Propylene 99

US State Regulations**Pennsylvania Right To Know Ingredients**

Propylene 115-07-1
Propane 74-98-6

New Jersey Right To Know Ingredients

Propylene 115-07-1
Propane 74-98-6

California Prop. 65 Ingredients

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects

16. OTHER INFORMATION**NFPA Classification**

Health Hazard 1
Fire Hazard: 4
Reactivity Hazard 1

**Further information**

Legacy MSDS Number 5349

Significant changes since the last version are highlighted in the margin. This version replaces all previous versions.

MATERIAL SAFETY DATA SHEET

Propylene (Polymer Grade, Unodorized)

Version 1.2

Revision Date 2011-03-24

The information in this MSDS pertains only to the product as shipped.

The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

Key or legend to abbreviations and acronyms used in the safety data sheet			
ACGIH	American Conference of Government Industrial Hygienists	LOAEL	Lowest Observed Adverse Effect Level
AICS	Australia, Inventory of Chemical Substances	NFPA	National Fire Protection Agency
DSL	Canada, Domestic Substances List	NIOSH	National Institute for Occupational Safety & Health
NDSL	Canada, Non-Domestic Substances List	NTP	National Toxicology Program
CNS	Central Nervous System	NZIoC	New Zealand Inventory of Chemicals
CAS	Chemical Abstract Service	NOAEL	No Observable Adverse Effect Level
EC50	Effective Concentration	NOEC	No Observed Effect Concentration
EC50	Effective Concentration 50%	OSHA	Occupational Safety & Health Administration
EINECS	European Inventory of Existing Chemical Substances	PEL	Permissible Exposure Limit
MAK	Germany Maximum Concentration Values	PICCS	Philippines Inventory of Commercial Chemical Substances
GHS	Globally Harmonized System	PRNT	Presumed Not Toxic
>=	Greater Than or Equal To	RCRA	Resource Conservation Recovery Act
IC50	Inhibition Concentration 50%	STEL	Short-term Exposure Limit
IARC	International Agency for Research on Cancer	SARA	Superfund Amendments and Reauthorization Act
IECSC	Inventory of Existing Chemical Substances in China	TLV	Threshold Limit Value
ENCS	Japan, Inventory of Existing and New Chemical Substances	TWA	Time Weighted Average
KECI	Korea, Existing Chemical Inventory	TSCA	Toxic Substance Control Act
<=	Less Than or Equal To	UVCB	Unknown or Variable Composition, Complex Reaction Products, and Biological Materials
LC50	Lethal Concentration 50%	WHMIS	Workplace Hazardous Materials Information System
LD50	Lethal Dose 50%		

Appendix 24

Material Safety Data Sheet – Natural Gas Liquids

MATERIAL SAFETY DATA SHEET

NATURAL GAS LIQUIDS

1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Revised June 2011

Southern Union Gas Services, Ltd.

301 Commerce Street, Suite 700

Fort Worth, Texas 76102

Company Phone Number: (817) 302-9400**CHEMICAL FAMILY:** Natural Gas**SYNONYMS:** Y-Grade, Raw Product, NGL's, Demethanized Raw Feed Mix**CAS Number:** 64741-48-6

2. COMPOSITION AND INFORMATION ON INGREDIENTS

Revised June 2011

Specific Chemical Identity (Varies by contribution from producing fields, gas plant design, etc.)

Mixture Component	CAS Number	% of Total Volume	BTU/cu. ft. gas
Methane (CH ₄)	74-82-8	0-5	10.0
Ethane (C ₂ H ₆)	74-84-0	1-50	834.4
Propane (C ₃ H ₈)	74-98-6	1-40	769.7
Iso-Butane (C ₄ H ₁₀)	75-28-5	1-5	126.7
Normal Butane (C ₄ H ₁₀)	106-97-8	1-15	306.3
Iso-Pentane (C ₅ H ₁₂)	78-78-4	0-5	92.5
Normal Pentane (C ₅ H ₁₂)	109-66-0	0-5	102.2
Hexane +	110-54-3 et. al.	0-10	161.8
Carbon Dioxide	124-38-9	0-3	0
Nitrogen	7727-37-9	0-3	0

NOTE: These analytical data are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specifications for the product.

3. HAZARDOUS IDENTIFICATION

Revised June 2011

DANGER! EMERGENCY NOTICE

Colorless liquid under pressure, with a hydrocarbon odor

Extremely flammable, can be ignited by heat, spark or flame. May release explosive vapors that can travel, be ignited at remote locations, and flash back.

This material is classified as hazardous under OSHA regulations.

MATERIAL SAFETY DATA SHEET

NATURAL GAS LIQUIDS

PRIMARY ROUTES OF EXPOSURE: Dermal contact, eye contact, and inhalation.

MEDICAL CONDITIONS WHICH MIGHT BE AGGRAVATED: Skin, respiratory and blood disorders. This Substance may sensitize the heart to catecholamine induced arrhythmia. Pulmonary complications may be exaggerated.

ACUTE EXPOSURE EFFECTS:

SKIN: Vaporizing liquid may cause frostbite

EYES: May cause minimal irritation, and cold burns

INHALATION: Asphyxiant gas. May cause irritation of the nose and throat, dizziness, drowsiness, euphoria, loss of coordination, disorientation, headache, or nausea. In poorly ventilated areas or confined spaces, unconsciousness and asphyxiation may result. This material can enter lungs during swallowing or vomiting and cause lung inflammation and damage.

INGESTION: Aspiration hazard. This material can enter lungs during swallowing or vomiting and cause lung inflammation and damage.

4. FIRST AID MEASURES

Revised June 2011

EYES: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if eye irritation persists.

SKIN: Wash skin with plenty of soap and water for several minutes. In case of cold burn, immediately place affected area in warm water (105°F) and keep at this temperature until circulation returns. Get medical attention. If clothing becomes wet, drench individual with water and remove contaminated clothing if possible. Slowly warm affected area of skin.

INHALATION: If irritation, headache nausea, or drowsiness occurs, remove to fresh air. Get medical attention if breathing becomes difficult or respiratory irritation persists.

INGESTION: Do not induce vomiting! Do not give liquids! Obtain immediate medical assistance.

5. FIRE FIGHTING MEASURES

Revised June 2011

FLASH POINT: -105°F to -211°F (-76°C to -135°C)

Method: Unknown

AUTO IGNITION TEMPERATURE: 800°F (427°C)

Method: Unknown

COMBUSTIBILITY: N/A

Method: Unknown

FLAMMABLE LIMITS IN AIR, % BY VOLUMN: LEL:1.4% UEL: 13%

EXTINGUISHING MEDIA: Fight fire from protected location or maximum possible distance. Stop flow of gas before attempting to extinguish flames. Use water spray to cool fire-exposed containers and to protect persons attempting to stop the flow of gas. Use flooding quantities of water as fog or spray. Use dry chemical or foam to extinguish flames.

SPECIAL FIRE FIGHTING PROCEDURES: Firefighters should wear proper protective equipment and self-contained breathing apparatus. Products of combustion may contain carbon monoxide, carbon dioxide, or other toxic vapors. Do not enter enclosed area or confined space without proper protective equipment including respiratory protection

MATERIAL SAFETY DATA SHEET

NATURAL GAS LIQUIDS

UNUSUAL FIRE AND EXPLOSIVE HAZARDS: Extremely flammable, can be ignited by heat, spark, or flame. Do not expose to heat, spark, flame, static, or other sources of ignition. When handling, use non-sparking tools, ground and bond all containers. Readily forms explosive air-vapor mixtures. May release explosive vapors that can travel, be ignited at remote locations, and flash back. Containers may explode in fire.

6. ACCIDENTAL RELEASE MEASURES

Revised June 2011

ACTIVATE THE FACILITY SPILL CONTINGENCY PLAN: Evacuate all nonessential personnel and secure all ignition sources in the immediate area of the leak and also downwind of the leak. Evaluate the wind direction, product travel, the need for diking, and confirm and contain the spill or leak area. Protect bodies of water by use of dikes, soak booms, absorbents if possible and safe. Do not allow flammable liquid into sewers or closed drainage systems. Product may release substantial amounts of vapors and gases. Dispose of or remediate the contaminated soil and debris in accordance with local, state and federal requirements. Response teams and cleanup crews must be properly trained and utilize the proper personal protection equipment.

7. HANDLING AND STORAGE

Revised June 2011

Use spark-proof tools. Material may be at elevated temperatures and/or pressures. Exercise care when opening bleeders and sampling ports. Eye wash and safety shower should be available nearby when this product is handled or used. Ground and bond shipping containers, transfer line, and receiving container. Keep away from heat, sparks, flame, and other sources of ignition. Outside storage is recommended.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Revised June 2011

<u>CHEMICAL NAME</u>	<u>OSHA PEL (ppm)</u>	<u>ACGIH TLV (ppm)</u>	<u>OTHER (ppm)</u>
Ethane	None	None	None
Propane	1000	1000	2100 IDLH
Butanes	None	800	None
Pentanes	1000	120	Ceiling 610, 1500 IDLH
Hexanes	500	50	1100 IDLH

ENGINEERING CONTROLS: Use adequate ventilation to keep vapor concentrations below occupational exposure and flammability limits.

EYE/FACE PROTECTIN: Safety glasses with side shields and face shield or goggles are recommended when there is a possibility of contact.

SKIN PROTECTION: Insulated impervious gloves are recommended. Chemical protective clothing recommended based on the level of exposure.

RESPIRATORY PROTECTION: In areas where concentrations are above the permissible exposure limit, self-contained breathing apparatus (SCBA) or supplied air work units with egress bottle should be used.

MATERIAL SAFETY DATA SHEET

NATURAL GAS LIQUIDS

9. PHYSICAL AND CHEMICAL PROPERTIES

Revised June 2011

APPEARANCE: Colorless liquid under pressure
ODOR: Hydrocarbon odor
BOILING POINT: Not Determined
VAPOR DENSITY: 1.04 to 4 (Air = 1)
VISCOSITY: Not Determined
SPECIFIC GRAVITY: 0.37 – 0.7 (Water = 1)
FLASH POINT: -105°F to -211°F (-76°C to -135°C)
AUTO IGNITION Temperature: 800°F (427°C)
FLAMMABLE LIMITS IN AIR, % BY VOLUME: LEL: 1.4% UEL: 13%
SOLUBILITY IN WATER (wt. %) Not Determined
SOLUBILITY IN OTHER SOLVENTS: Not Determined

NOTE: These physical data are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specifications for the product.

10. STABILITY AND REACTIVITY

Revised June 2011

STABILITY: Stable under normal conditions.
INCOMPATIBILITY: May react with oxidizers.
HAZARDOUS DECOMPOSITION PRODUCTS: Combustion may produce carbon monoxide and sulfur monoxide.
HAZARDOUS POLYMERIZATION: Polymerization will not occur.

11. TOXICOLOGICAL PROPERTIES

Revised June 2011

CHRONIC EFFECTS AND CARCINOGENICITY:
OSHA (Occupational Safety and Health Administration) - **NO**
IARC (International Agency for Research on Cancer) - **NO**
ACGIH (American Congress of Governmental Industrial Hygienist) - **NO**
NTP (National Toxicology Program) - **NO**

12. ECOLOGICAL INFORMATION

Revised June 2011

Ecotoxicity: The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment. The product contains volatile organic compounds which have a photochemical ozone creation potential.

Mobility in Environmental Media: The product is a volatile substance, which may spread in the atmosphere.

MATERIAL SAFETY DATA SHEET

NATURAL GAS LIQUIDS

13. DISPOSAL CONSIDERATIONS

Revised June 2011

Regulations covering the disposal or treatment of hydrocarbon containing wastes vary by the agency having the jurisdiction over the site or type of operation and possibly from state to state. The responsibility for proper handling of waste materials is that of the owner. Consult federal, state, and local waste regulations to determine appropriate waste characterization of material and allowable disposal method(s).

14. TRANSPORTATION INFORMATION

Revised June 2011

DOT

PROPER SHIPPING NAME: Petroleum Gas, Liquefied
HAZARD CLASS/I.D. NO/PACKING GROUP: 2.1, UN 1075
LABEL: Flammable Gas

I.M.O.

PROPER SHIPPING NAME: Petroleum Gas, Liquefied
HAZARD CLASS/I.D. NO/PACKING GROUP: 2.1, UN 1075
LABEL: Flammable Gas

I.C.A.O./I.A.T.A

PROPER SHIPPING NAME: Petroleum Gas, Liquefied
HAZARD CLASS/I.D. NO/PACKING GROUP: 2.1, UN 1075
LABEL: Flammable Gas, Cargo Aircraft Only

MATERIAL SAFETY DATA SHEET

NATURAL GAS LIQUIDS

15. REGULATORY INFORMATION

Revised June 2011

U.S. FEDERAL REGULATORY INFORMATION: Any releases of this product, including any substantial threat of a release, may be subject to federal reporting requirements.

CERCLA SECTION 103 AND SARA SECTION 304 (RELEASE TO THE ENVIRONMENT): The CERCLA definition of hazardous substances contains a "petroleum exclusion" clause, which exempts natural gas usable for fuel, and any indigenous components of such. However, other federal reporting requirements under the Toxic Substances Control Act (TSCA) and the Emergency Planning and Community Right-To-Know Act of 1986 EPCRA; also known as SARA Title III), Section 304 may still apply.

SARA SECTION 311/312 HAZARD CLASSES

ACUTE HEALTH: **YES** FIRE: **YES** SUDDEN RELEASE OF PRESSURE: **YES**

SARA SECTION 313 SUPPLIER NOTIFICATION: This product does not contain any toxic chemicals subject to the Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986 and of 40 CFR 372:

STATE REGULATORY INFORMATION: Any release of this product may be subject to state and/or local reporting requirements. This product and/or its constituents may also be subject to other regulations at the state and/or local level. Consult those regulations that are applicable to your facility and/or operation.

16. OTHER INFORMATION

Revised June 2011

Hazard Rating:

NFPA

Health--1

Fire-- 4

Reactivity--1

Specific Hazard N/A

HMIS

Health --2

Flammability--4

Reactivity--0

PPE--N/A

ABBREVIATIONS: AP = approximate < = less than > = greater than
ppm = part per million N/A = not applicable N/D = not determined

MATERIAL SAFETY DATA SHEET

NATURAL GAS LIQUIDS

ACRONYMS:

ACGIH	American Conference of Governmental Industrial Hygienists
AIHA	American Industrial Hygiene Association
ANSI	American National Standards Institute
API	American Petroleum Institute
CERCLA	Comprehensive Emergency Response, Compensation and Liability Act
DOT	U.S. Department of Transportation
EPA	U.S. Environmental Protection Agency
HMIS	Hazardous Materials Information System
IARC	International Agency for Research on Cancer
MSHA	Mine Safety and Health Administration
NFPA	National Fire Protection Association
NIOSH	National Institute of Occupational Safety and Health
NOIC	Notice of Intended Change
NTP	National Toxicology Program
OPA	Oil Pollution Act of 1990
OSHA	U.S. Occupational Safety and Health Administration
PEL	Permissible Exposure Limit (OSHA)
RCRA	Resource Conservation and Recovery Act
REL	Recommended Exposure Limit (NIOSH)
SARA	Superfund Amendments and Reauthorization Act of 1986 Title III
SCBA	Self Contained Breathing Apparatus
SPCC	Spill Prevention, Control and Countermeasures
STEL	Short-Term Exposure Limit
TLV	Threshold Exposure Value (ACGIH)
TSCA	Toxic Substance Control Act
TWA	Time Weighted Average
WEEL	Workplace Environmental Exposure Level

DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES

Information that is presented is compiled from sources considered to be reliable and is accurate and reliable to the best of Southern Union Gas Services, LTD. knowledge and belief, but is not guaranteed. Since conditions of use are beyond Southern Union Gas Services, LTD. control, no warranties expressed or implied are made, except those that may be written in contract of sale or acknowledgement.

Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet and even when reasonable safety procedures are followed. Furthermore, vendee assumes all risks in their use of the material.

Inquiries regarding this MSDS should be directed to:
Jake Krautsch
Director, Environmental Health and Safety
(817) 332-9426



EL PASO PRODUCTS COMPANY
POST OFFICE BOX 3966 • ODESSA, TEXAS 79760 • PHONE 915-333-7200

MATERIAL SAFETY DATA SHEET

ACUTE HEALTH +	FIRE 4	REACTIVITY 1	HAZARD RATING: LEAST - 0 SLIGHT - 1 MODERATE - 2 HIGH - 3 EXTREME - 4
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PRODUCT: Propylene MSDS No: 137101 Rev: 0 PAGE 1
EMERGENCY ASSISTANCE: 915-333-7200

SECTION I - IDENTITY

Common Name: Propylene
Chemical Name: Propene
Chemical Family: Unsaturated Hydrocarbon
CAS#: 115-07-1
Synonyms: Methylethene, Methylethylene

SECTION II - HAZARDOUS COMPONENTS

Principle Components	CAS#	Appr Conc	TLV
Propylene	115-07-1	92%	*
Propane	74-98-6	8%	*

* - Listed by ACGIH as a simple asphyxiant.

SECTION III - ROUTES OF ENTRY AND FIRST AID PROCEDURES

Inhalation:

Remove victim to fresh air and administer oxygen if breathing is difficult. Give artificial respiration if not breathing. Get medical attention

Eyes:

Flush with water for 15 minutes while holding eyelids open. Get medical attention.

Skin:

Wash with soap and water. Remove contaminated clothing. If persistent irritation occurs, get medical attention.

Ingestion:

Not believed to be a relevant route of exposure.

Supplemental Information:

If direct liquid contact has occurred, treat for burns and frostbite.

Toxicity Data:

Classified as a simple asphyxiant.

MSDS No: 137101 Rev: 0
Product Name: Propylene

PAGE 2

SECTION IV - HEALTH HAZARDS

Threshold Limit Value:

Simple Asphyxiant

Signs and Symptoms of Exposure:

1) Acute Overexposure:

Inhalation of high concentrations of vapor may cause headache, dizziness, nausea, loss of coordination, and loss of consciousness.

2) Chronic Overexposure:

No applicable information found.

Medical Conditions Aggravated by Exposure:

No applicable information found.

Carcinogen or Potential Carcinogen:

National	() YES	IARC	() YES	OSHA-	() YES
Toxicology Program-	(X) NO	Monographs-	(X) NO		(X) NO

OSHA Permissible

ACGIH Threshold

Other Exposure

Exposure Limit: *

Limit Value: *

Limit Used: none

* - No Exposure Limits established.

SECTION V - FIRE AND EXPLOSION DATA

Flash Point (CC): -108 C (-162 F)

Flammability Limits: Lower 2.0 Upper 11.1

Auto Ignition Temperature: 497.2 C (927 F)

Extinguishing Media:

Gas should be allowed to burn if flow cannot be shut off.

Small fires can be extinguished with foam, CO2, steam and water fog

Special Fire Fighting Procedures:

Cool fire exposed containers and surrounding equipment with water spray from a safe distance. Clear fire area of unprotected personnel and isolate. Do not enter confined fire space without full bunker gear including positive pressure NIOSH approved SCBA.

Unusual Fire and Explosion Hazards:

May ignite spontaneously from static charge if vented rapidly at high pressure. Containers exposed to intense heat from flames or direct contact should be cooled with large quantities of water to prevent vapor buildup and possible rupture.

SECTION VI - SPECIAL PRECAUTIONS AND SPILL/LEAK PROCEDURES

Storage and handling precautions:

Store in cool well-ventilated areas. Keep liquid and vapor away from heat, sparks, and open flames.

Other Precautions:

Store away from strong oxidizing agents. Ground equipment to prevent accumulation of static charge.

Spill or Leak Procedures:

Extremely flammable gas. Avoid sources of ignition. Disperse vapor cloud with sustained water spray until leak has been stopped.

Waste Disposal:

This material when disposed of is a characteristic RCRA hazardous waste. Dispose of in accordance with local, state and federal regulations.

MSDS No: 137101 Rev: 0
Product Name: Propylene

PAGE 3

SECTION VII - PHYSICAL HAZARDS

Stability:

Stable

Conditions and Materials to avoid:

Avoid open flames and strong oxidizing agents.

Hazardous Polymerization: (X) May occur.

() Will not occur.

Hazardous Decomposition Products:

Carbon monoxide, carbon dioxide and unidentified organic compounds may be formed during combustion.

SECTION VIII - PHYSICAL AND CHEMICAL CHARACTERISTICS

Boiling Point:-----> -47.7 C (-53.9 F)
Specific Gravity (H₂O=1):-----> 0.51
Vapor Pressure (MM HG):-----> 749 mm @ -54.4 F
Melting Point:-----> -185 C (-301.5 F)
Percent Volatile by Volume(%):-----> 100%
Vapor Density (Air=1):-----> 1.48
Evaporation Rate (Butyl Acetate=1):--> >1
Solubility in water:-----> slight
Reactivity in water:-----> unreactive
Appearance and Odor:
Colorless invisible gas, slightly sweet odor.

SECTION IX - SPECIAL PROTECTION INFORMATION

Respiratory Protection:

NIOSH approved air line supplied respirator or SCBA equipped with full face piece must be worn where an oxygen deficiency may be encountered.

Ventilation:

Use adequate explosion proof ventilation as required to control vapor concentrations.

Protective Clothing/Gloves:

If handled in the liquid state, wear rubber or neoprene coated gloves to prevent skin contact.

Eye Protection:

Chemical safety goggles should be worn when handling liquid propylene.

Face shields (full length, eight inch minimum) may be worn in addition to goggles for complete face/eye protection.

Other Protective Measures:

Use non-sparking tools when working on or near possible leaks.

Product Name: Propylene

PAGE 4

SECTION X - TRANSPORTATION REQUIREMENTS

DOT Proper Shipping Name: Propylene or Liquid Petroleum Gas

DOT ID#: UN1075

DOT Classification: Flammable Gas

Transportation Incident Information:

Keep unnecessary people away. Isolate hazard area and stay upwind, out of low areas. Wear self-contained breathing apparatus and full protective clothing. Isolate for 1/2 mile in all directions if tank car or truck is involved in fire.

FOR EMERGENCY ASSISTANCE CALL CHEMTREC (800)424-9300
-----SECTION XI - ADDITIONAL INFORMATION

Additional Health Information:

When compressed to liquid form, can cause skin burns from refrigerating effect on tissue of rapid evaporation. Inhalation of high concentrations of vapor may cause headache, dizziness, nausea, loss of coordination and loss of consciousness.

To the best of El Paso Products Company's knowledge and belief the information and recommendations contained herein are accurate and reliable as of the date issued. El Paso Products Company furnishes this data in good faith, without liability or legal responsibility for same whatsoever and no warranty or guarantee, expressed or implied, is made with respect to such data, nor does El Paso Products Company grant permission, recommendation, or inducement to infringe on any patent whether owned by El Paso Products Company or others. Since conditions of use are beyond El Paso Products Company's control, the user assumes all responsibility and risk.

Date Prepared: 10/25/85

For Additional Information
On Health Hazards:

Director of Safety and Security
El Paso Products Company
PO Box 3986
Odessa, Texas 79760
(915) 333-8331

For Other Information:

Director of Marketing
El Paso Products Company
PO Box 3986
Odessa, Texas 79760
(915) 333-7200

Appendix 25

Offsite Consequence Analysis – map



Appendix 26
Incident Report dated 3/1/09

Southern Union
Gas Services

SUPERVISORS FIRST REPORT OF ACCIDENT

POSTED
3-17-09

THINK SAFETY

Ken 303
Case Number

Keystone plant

PLANT OR FACILITY	3/1/2009	Jeff Komar
NAME OF INJURED	DATE	REPORT SUBMITTED BY
Mitchell Sims	03/01/09	03/01/09
DATE ACCIDENT REPORTED	03/01/09	TIME OF ACCIDENT
		7:00 AM
DID EMPLOYEE GO TO DOCTOR?	Yes ☒ No ☐	RELEASED TO RETURN TO WORK? Yes ☐ No ☒
DATE RETURNED TO WORK	N/A	(SEND COPY OF THE DOCTORS RELEASE)
YEARS IN PRESENT JOB	1 year 4 months	DATE OF EMPLOYMENT
SUGS Co.		07/31/06
EMPLOYEE Yes ☒ No ☐	CONTRACT EMP. Yes ☐ No ☐	CONTRACTOR NAME
CONTRACT COMPANY	Was Contractor under direct SUGS supervision?	Yes ☐ No ☐
OO - Was this incident a direct result of the performance of a covered task?	Yes ☐ No ☒	

ACCIDENT. (DESCRIBE WHAT INJURED WAS DOING. WHAT HAPPENED. WHO WAS INVOLVED. WHAT INJURIES RESULTED?)
 Morning Op's (D.Forest, P.Halbrooks, D.Murray) Op's Supvr (S. Garcia) mechanic (M.Sims). Product line by-pass to accumulator has a manu block valve that leaked around the stem, unable to repack valve successfully. Covered leak on stem with metal bucket while installing blind upstream. After completion of job bucket was removed and flash fire erupted. Mitchell Sims received burns to the face, neck and right leg. Fire equipment utilized to extinguish fire. Mitchell transported to Kermit hospital by Santos Garcia.

UNSAFE CONDITION. (WHAT UNSAFE MACHINERY, EQUIPMENT, BUILDING OR PREMISES WAS INVOLVED?)
 Natural Gas Liquid was present, and being shielded by metal bucket.

UNSAFE ACT. (WHAT DID THE EMPLOYEE DO INCORRECTLY?)

REMEDY. (WHAT WILL BE DONE TO PREVENT OTHER ACCIDENTS LIKE THIS?)
 Shield with non-conductive material

CORRECTIVE ACTION TAKEN. (WHAT HAS BEEN DONE TO CORRECT THE ACTIONS OR THE CONDITIONS WHICH CAUSED THIS ACCIDENT?)
 Discuss with employees actions needed in these conditions, during the Take Two meeting scheduld for 3/18/2009. Upon release back to work will discuss with Mitchell Sims these conditions

DATE CORRECTIVE ACTION TAKEN	03/18/09
REPORT HAS BEEN REVIEWED WITH THE INJURED EMPLOYEE:	Yes ☐ No ☒
Employee Signature	Date 03/02/09
Supervisor Signature	Date 03/02/09
Plant Manager Signature	Date 03/02/09

Hard copy to: Employee file and OSHA Accident File
 Supervisor Report of Accident Form AGM Jal-DLB Lea-RLD MVB/ik 16-HLB Mon-RDC - JS - LF Grey R-JLS Tippet-JM Coy-LEB

UNSAFE ACTS

- ☐ Operating without authority
☐ Failure to warn or secure (Lockout/Tagout)
☐ Operating at an unsafe speed
☐ Making safety devices inoperative
☐ Using defective equipment, materials, tools, or vehicles
☐ Using equipment, materials, tools, and vehicles unsafely
☐ Failure to use personnel protective equipment
☐ Failure to use equipment provided
☐ Unsafe lifting and carrying
☐ Taking an unsafe position
☐ Adjusting, clearing jams and cleaning machinery while in motion
☐ Horseplay
☐ Poor Housekeeping
☒ Others
☐ No unsafe acts

UNSAFE CONDITIONS

- ☐ Improperly or inadequately guarded
☐ Unguarded
☐ Defective tools, equipment and materials
☐ Unsafe design or construction
☐ Improper illumination
☐ Improper ventilation
☐ Improper dress
☐ Poor Housekeeping
☐ Congested area
☒ Others
☐ No unsafe condition

CATEGORY DESCRIPTION

- | | |
|---|--|
| 1 | ☐ First Aid or Less |
| 2 | ☐ OSHA Recordable
Non-Fatal / No Lost time |
| 3 | ☒ Lost time |
| 4 | ☐ Fatal |

(Insert an "X" in the box beside the correct category number.)

Use the space provided below for any additional information necessary for the description of the noted accident.

Investigating ignition source for fire.

If this accident is recordable it must be entered on the OSHA 300 Log no later than seven calendar days after the accident or if assistance is required, do not hesitate to contact the EH&S Department by phone or email.

Assign a code number for every Supervisor First Report of Injury completed. Code numbers should reference the facility name, year and accident number, i.e.

Keystone	Key 0601
Monahans	Mon 0601
Coyanosa	Coy 0601
Block 16	Blk 16 0601

The code number assigned to the first report will also be the same number used for the OSHA 300 log entry if that accident is a recordable.

The following is a summary of the Keystone Plant incident (fire) that took place on the morning of 3/1/2009.

Incident Summary

On the morning of 3/1/2009, operations was in the process of setting up valve configurations in order to bring a third pipeline pump online. While opening up a 2" manual valve, the operator noticed that product was leaking from around the stem and packing of the valve. The packing was tightened up but the valve continued to leak around the stem. The on call supervisor was notified by phone, making the statement that he would be right out. Once the supervisor arrived, he and the operators opened the valve all the way so that the valve would seat and new packing could be installed. When the packing was installed, operations began to close the valve but noticed that it was still leaking a slight amount (vapor only). The plant supervisor contacted the plant manager to discuss the issue. The decision was made to monitor the valve until morning and then re-evaluate the situation. During the nightly rounds, operations noticed that the leak on the valve had worsened. The supervisor was called again and the employees tried to repack the valve once more. After the supervisor arrived and the packing installation was attempted a couple more times, it was decided to place a blind (skillet) in the line to isolate the leaking valve. The accumulator level was lowered, product pumps were shut down, pipeline pumps and filter cases were blocked in and employees began to install the blind. Product was still spraying from the leaking valve, so a bucket was placed over the valve to control the direction of the spray. Once the blind had been installed and the bolts were tightened up, an employee reached to remove the bucket that had been placed over the leaking valve. When the employee began to lift the bucket off of the valve, a fire or glow was seen under the bucket and then the area caught fire. The employees evacuated the area and began to assist each other. Once each employee had been accounted for they began to gather fire extinguishers to put the fire out. After the fire had been extinguished, one employee was taken to the hospital for observations and a burn to the lower part of his right leg. Plant management was again called and made aware of the incident.

Employee: Guy Mitchell Sims

Mitchell Sims
Employee Signature

4-01-09
Date

Phil Hallbrooks
Employee Signature

4-24-09
Date

Dan
Employee Signature

4-24-09
Date

Dale Murray
Employee Signature

4-24-09
Date

Samuel
Employee Signature

4-24-09
Date

Appendix 27
Incident Report dated 1/24/11

SOUTHERN UNION GAS SERVICES

INCIDENT INVESTIGATION

EVENT INVESTIGATION REPORT

Report completion/distribution date	6/3/11	Event#	Keys012411
Date of Event	01/24/2011	Time of Event	3:00 P. M.
Date Investigation started	01/24/2011	Time investigation started	6:00 P.M.
Facility	Keystone	Department	Operations
Location/area involved	Caterpillar Building		
Specific process components involved	#24 Caterpillar 2 nd Stage Discharge		
Hazardous chemicals of involved Process:	Natural Gas / Hydrogen Sulfide Gas		

PERSONNEL INVOLVED IN EVENT

NAME	TITLE/ORGANIZATION
Randy Rossell	I and E Technician (Electrician) / SUGS
Tony Stark	Utility Man / SUGS
Sammy Castaneda	Repairman "C"
Jerry Hunt	Repairman "B"
John Drinkard	Engine Operator "A"
Sonny Orona	Utility Man / SUGS

DESCRIPTION OF EVENT (what occurred)

Unit #24's 2nd stage discharge piping experienced an internal explosion causing a gas release into the Caterpillar (Cat) compressor building. The accumulated gas flashed injuring a SUGS employee and causing damage to the building.

Severity of Event (check all that apply)

Facility		Injury/lost workday	X	Injury/first aid	X
Explosion		Large release of HHC	X	Small release of HHC	
Fire	X	Near miss (no release or harm)			
Injured person (s) if applicable:	Randy Rossell				

Likelihood: EConsequence: 5

- 1. Insignificant.** No injuries, low financial implications
- 2. Minor.** Possible injury not more than first aid treatment, medium financial loss
- 3. Moderate.** Possible injuries would require medical treatment, high financial loss
- 4. Major.** Extensive injuries possible, major financial loss
- 5. Catastrophic.** Death is clearly possible, huge financial implications

LIKELIHOOD	CONSEQUENCE				
	Insignificant 1	Minor 2	Moderate 3	Major 4	Catastrophic 5
Almost certain A	H	H	E	E	E
Likely B	M	H	H	E	E
Moderate C	L	M	H	E	E
Unlikely D	L	L	M	H	E
Rare E	L	L	M	H	H

Legend:

E – extreme risk (immediate action required, eg. Do not proceed with activity until the level of risk is reduced)

H – high risk (senior management attention required)

M – moderate risk

L – low risk (manage by routine procedures)

CAUSAL FACTORS CONTRIBUTING TO EVENT (how & why)

On January 23, 2011, Unit #24 (Cat Compressor) was shut down for repairs. Employees opened and/or closed valves and blow downs to isolate the unit. SUGS lock out/tag out procedure was not utilized during this process. Following repairs to the compressor, valves and blow downs were reopened and/or closed in preparation to restart the compressor. SUGS purging and lock out/tag out procedures were not utilized during this process. Vent lines on the suction piping remained in an open position allowing natural gas and compressed air to be comingled in the suction line during the attempt to re-start the compressor. An internal piping explosion occurred followed by natural gas migrating into the Caterpillar building and igniting when it reached an ignition source, resulting in the fire.

CORRECTIVE ACTIONS SUGGESTED BY INVESTIGATION TEAM

Suggested Action

- Retrain all applicable plant personnel on following procedures:
 - o Lock Out/Tag Out (LOTO)
 - o Start Up and Shut down procedures
- Review plant specific procedures (Startup and Shutdown, Purging, etc.) so they are current and provide sufficient details and site-specific information to safely perform the required task.

Resolution

- A new LOTO procedure has been implemented at all facilities that include initiating the LOTO procedure with the work order.
- Operating procedures are being rewritten in a new format.
- SUGS has implemented a mandatory fire retardant clothing (FRC) requirement throughout the company. The program was initiated prior to the event however the vendor selection for the FRC had not been completed. SUGS has completed the distribution of FRC throughout the company.

Report Circulation & Posting (i.e., with whom & how to share)

Lou Soldano, Bob Milam, Herb Harless, Jacob Krautsch, John Crossman, Michael Magee, David Maness, and Dwight Bennett.

After approval from the above stated, the report will be posted so that all employees will have access to this report and its findings. This incident will also be reviewed during a monthly safety meeting.

Investigation Team and Approvals

Team Member	Title/Organization	Date
Bob Milam	V.P Operations/Engineering	6/3/11
Jake Krautsch	Director of EHS	6/2/11
Michael Magee	PSM Compliance Specialist	6/2/11
David Maness	Director of Plant Operations	6/2/11
Dwight Bennett	Plant Manager	6/2/11
John Crossman	Supervisor, Safety and Health	6/2/11
Jim Payne	EHS Associate	6/2/11
Hector Sanchez	EHS Associate	6/2/11
Donnie Forest	EHS Plant Representative	6/2/11
Cody Baker	Mechanical Integrity Inspector	6/2/11
Jack Birden	EHS Plant Representative	6/2/11
Ross Boyd	Engineering Manager	6/2/11
Approved By	Title/Organization	Date
Lou Soldano	V.P & Chief counsel for EHS	6/3/11
Rich Rehm	V. P. Supply and Marketing	6/3/11
Bob Milam	V.P Operations/Engineering	6/3/11
Jake Krautsch	Director of EHS	6/3/11
Michael Magee	PSM Compliance Specialist	6/2/11
David Maness	Director of Plant Operations	6/2/11
Dwight Bennett	Plant Manager	6/2/11
Herb Harless	Corporate Director EHS	6/2/11
John Crossman	Supervisor, Safety and Health	6/2/11

Appendix 28
Emergency Response Plan Manual
dated 11/6/13

Emergency Response Procedure Manual

Regency Energy Partners West TX Processing Plants

Keystone Plant

E-book

November 6, 2013

Personnel List

Table of Contents

Section 1

Emergency #'s

Section 2

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Facilities - Cryogenic Plant

Section 5

Revision Log

Section 6

Personnel Lists

Keystone Plant

Published : 11/06/2013

Personnel Lists

Personnel List

<u>Name</u>	<u>Office #</u>	<u>Cell #</u>
Thomas Johnson - Manager	817-302-9854	432-631-2344
Brent Garymartin - Hourly Field A/Lead		
Richard S Rehm - EVP	817-302-9430	817-247-6488
Michael B Collins - Sr Director	817-302-9789	432-634-7861
Jacob S Krautsch - Sr Director	817-302-9426	817-964-2169
Kelly D Jamerson - Director	817-302-9782	432-488-9186
Johnny Crossman - Supervisor	817-302-9715	432-940-5074
Maria Valencia - Sr Specialist	817-302-9780	432-940-1939
Jimmy Payne - Tech Specialist - Field	817-302-9721	432-940-5123
Hector J Sanchez - Tech Specialist - Field	817-302-9719	432-238-6465
Orville Birden - Tech Specialist - Field	817-302-9723	432-208-0947

EMERGENCY PHONE #s

Keystone Plant

Published : 11/06/2013

EMERGENCY RESPONSE PHONEBOOK

Control Room

Keystone Plant Control Room	(817) 302-9876
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Regency Energy Partners West TX Processing Plants Control Room Personnel

EMERGENCY RESPONSE PHONEBOOK

Emergency Phonebook by County

Winkler, TX *911 WILL CONTACT ANY EMERGENCY SERVICE IF DIALED*

National Response Center	1-800-424-8802
TCEQ (Midland Region 7)	432 570-1359
Texas Railroad Commission (District 8-Midland Texas)	432-684-5581
State Emergency Response Committee (Austin)	(512) 239-2507 or (512) 463-7727
LEPC - Bonnie Leck	(432) 586-3461
Winkler Co. Police Dept.	(432) 586-2577
Winkler Co. Sheriff Dept.	(432) 586-3462
Winkler Co. Fire Dept.	(432) 586-2577
Winkler Co. Ambulance	(432) 586-2577
Winkler Co. Memorial Hospital	(432) 586-8299
Keystone Plant Control Room	(817) 302-9876

Tools & Equipment

Keystone Plant

Published : 11/06/2013

Tools & Equipment

Emergency Tools & Equipment

<u>Qty</u>		<u>Description</u>
1	--	Breathing Air Trailer
9	--	Scott Air Packs
1	--	Breathing Air Work Carts (4 masks w/egress
3	--	Bendix Pumps
2	--	Four Gas Pump Monitor
34	--	Personal Four Gas Monitors
2	--	Plant Pick-Up Truck
2	--	UTV Vehicles
1	--	Flatbed Truck with Gin Pole

Comment

In addition to this equipment, the plant maintains a continuous inventory of personal protective equipment, such as rubber boots, gloves, safety glasses, dust masks, gas detectors, hard hats, and various other types of personal protective equipment and safety equipment including ropes, safety belts, harnesses, and supplied air hose line respirators.

Emergency/Inventory Pipe

No emergency or inventory pipe entered.

Contractors

Keystone Plant

Published : 11/06/2013

Contractors

<u>Description</u>	<u>Phone Number/Email</u>	<u>Address</u>
Holloman ConstructionCo. 96 5005 010	(432) 381-2000	190 South East Loop 338 Odessa, Texas 79766
Merryman Construction	(575) 395-3110	HWY 18 & Merryman Dr. Jal, New Mexico 88252
Rapid Transport, Inc.	432-586-2027	South Hwy. 18 Kermit, Texas 79745

Facilities

Cryogenic Plant

Keystone Plant

Published : 11/06/2013

Facilities

Driving Directions - *Keystone Plant*



Facilities

Driving Directions - *Keystone Plant*

9 miles NE of Kermit on CR 301

Latitude 31.94575

Longitude -103.04425

Facilities

Facility Details - *Keystone Plant*

Facility Name: Keystone Plant

Facility Type: Cryogenic Plant

GPS: N 31.94575 W -103.04425

Address: 6297 Co. Rd 301 , Kermit , Winkler , Texas , 79745

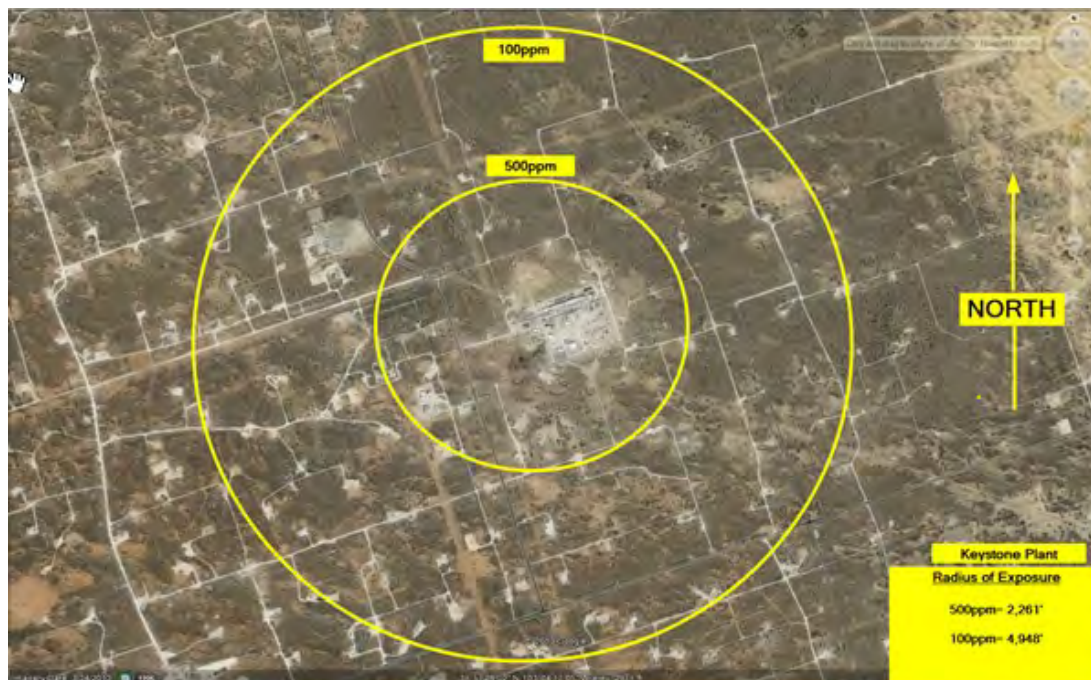
Mile Post:

EMERGENCY NUMBERS: ***911 will contact any emergency service if dialed!**

- **LEPC - Bonnie Leck** - (432) 586-3461
- **National Response Center** - 1-800-424-8802
- **State Emergency Response Committee (Austin)** - (512) 239-2507 or (512) 463-7727
- **TCEQ (Midland Region 7)** - 432 570-1359
- **Texas Railroad Commission (District 8-Midland Texas)** - 432-684-5581
- **Winkler Co. Ambulance** - (432) 586-2577
- **Winkler Co. Fire Dept.** - (432) 586-2577
- **Winkler Co. Memorial Hospital** - (432) 586-8299
- **Winkler Co. Police Dept.** - (432) 586-2577
- **Winkler Co. Sheriff Dept.** - (432) 586-3462

No contact numbers entered.

Facilities



A. PROCEDURE FOR NOTIFICATION OF AN EMERGENCY SITUATION

In the event of an emergency situation, affected employees are to be notified by an alarm signal, telephone, radio, or by mouth. The Plant Manager, Lead Operator or the "A" Operator in charge of the plant at the time will oversee actions taken during the emergency.

B. EMERGENCY RESPONSE AND EVACUATION PROCEDURES

Refer to the site map on Sec. 5 Pg 8 for designated evacuation routes, evacuation (safe) areas and potential danger areas.

Incidents Controllable by Plant Personnel – No Evacuation Required

Incidental or minor spills, releases or fires that can be safely neutralized or controlled by plant employees, with no need for evacuation, are not considered to be emergencies governed by this Emergency Response Plan.

Uncontrolled Incidents That Require Evacuation

In the event of a major spill, release, fire, or other hazardous situation that warrants a full plant evacuation or danger area evacuation, plant personnel are required to evacuate in accordance with evacuation procedures.

Employees are not permitted to remain in or re-enter evacuated areas to assist in handling UNCONTROLLED chemical spills. If evacuation is ordered and an uncontrolled chemical spill is involved, only outside emergency responders, e.g. firemen, emergency medical or rescue teams, or clean-up contractors are allowed to enter the evacuation area until the chemical is controlled and/or neutralized, or determined to be non-hazardous.

One exception to this restriction would be if control of an emergency situation could be safely undertaken outside the emergency evacuation area by danger-reducing actions, such as the opening or closing of valves, switches, breakers, vents, pipes, etc. Another exception would be voluntary first-aid treatment or rescue operations performed by an employee, provided the employee has taken proper precautions to avoid falling victim to the emergency himself; i.e., a respirator and other appropriate protective equipment should be used as needed.

Facilities

Critical Operations Personnel

The Plant Manager, Lead Operator and the "A" Operator as applicable are the designated Critical Operations personnel. Only those employees designated as Critical Operations personnel are authorized to make decisions on actions to be taken during full plant evacuation. Critical Operations personnel duties include:

1. Providing back-up notification to employees to evacuate in case audible evacuation alarms malfunction or cannot be heard.
2. Remaining in the control room and plant office, as long as it is safe to monitor the emergency.
3. Notifying outside emergency response agencies as necessary.
4. Implementing operational control processes to correct or lessen the emergency situation.

The decision to declare an evacuation will be made after the Lead Operator or the "A" Operator, with concurrence from the Plant Manager whenever possible, has determined that a clear and immediate danger exists that could jeopardize the life or health of affected plant personnel and/or contract personnel.

Full Plant Evacuation

In the unlikely event that the need to completely evacuate the plant becomes necessary, employees will be alerted by a continuous series of very short, manually operated blasts on the control room air horn or the engine room air whistle. All non-critical employees will then immediately proceed to safe areas by utilizing the appropriate designated evacuation route as shown on the plant site map on Sec. 5 Pg 8. Critical employees will evacuate, if necessary, after performance of the duties listed above.

Evacuation from Danger Areas

Danger area evacuations, as opposed to evacuation of the entire plant, are usually triggered by an automatic alarm (such as one of the Klaxons for H₂S releases), manual alarm or through employee recognition of a potentially dangerous circumstance and subsequent notification to other employees in the danger area to evacuate the area. No authorization from Critical Operations personnel is needed to initiate a danger area evacuation, although these personnel must be promptly notified after evacuation begins.

Some plant-specific danger areas are discussed below:

1. Hydrogen Sulfide (H₂S) Release

H₂S is a very deadly gas that can kill within minutes. The greatest concentrations of H₂S (and therefore the greatest potential for catastrophic release) are located in the general vicinity of the sulfur plant and amine recovery units. The subject of H₂S, its characteristics and hazards are discussed in detail in the facilities H₂S Contingency Plan and the Texas Railroad Commission's Statewide Rule 36 Safety Publication. (See publication in back of facility H₂S Contingency Plan).

If H₂S concentrations reach 10 ppm, an automatic Local Klaxon alarm will be triggered, thus signaling employees in the release area monitored by the H₂S sensor to evacuate, moving crosswind to a designated safe area. The H₂S alarm consists of a Hi-lo sound from the local alarm. An amber-colored strobe light is located at each sensor and is activated in any alarm condition. Employees are not allowed back into the area unless they have donned an approved air pack or the Klaxon H₂S alarm has shut off, thus signifying that the H₂S level has been controlled by Operations or dispersed naturally and dropped below 10 ppm.

NOTE: The Klaxon alarm cannot be manually reset and will remain sounding until the H₂S level is below 10 ppm.

Also when H₂S concentrations reach 10 ppm or more in any given plant location, the main plant alarm horn at the control room will be triggered. This alarm is recognizable as a very loud series of long, intermittent blasts. Upon hearing this alarm, the Operations Supervisor or supervisor in charge is alerted to immediately proceed to or contact the control room via two-way radio to further assess the level of H₂S danger and take necessary corrective action to control the release or make the decision to evacuate the plant if the release appears to be uncontrollable. This alarm horn can be reset (silenced) at the control room.

Facilities

2. Flammables

The potential for fire in a gas processing plant is probably the most inherent danger that exists. There are numerous areas of the plant where highly volatile hydrocarbons are stored or utilized in processing operations. The “Engine Rooms” or “Compressor Buildings” are of particular concern due to the ignitability potential posed by engine backfires and high temperatures. Other areas where flammables are stored or utilized are the tank farm, the process area, the gas pump west of the maintenance shop, the gas tank outside the firehouse, the product pipeline and the gas cooling tower.

Should a fire break out in any area of the plant, personnel in the affected area must immediately notify the control room or engine room. Employees will be alerted that there is a fire by a series of three intermittent blasts on either the control room air horn or the engine rooms whistle. See Sec. 5 Pg 9 of this plan for a discussion to determine in-plant –vs.- outside-agency firefighting. Should a fire escalate to a point where full plant evacuation is ordered by the Plant Manager or his designee; the horn or whistle will change to the continuous short blast as described on Sec 5 Pg 6. All non-critical employees must evacuate the plant per the procedures described below.

Controllable Releases – H₂S and Flammables

Relatively small releases of flammables and hydrogen sulfide that are controllable probably will not require evacuation and can thus be dealt with by on-site employees using appropriate personal protective equipment and other appropriate safeguards, including a full facepiece supplied-air respirator and impervious clothing.

However, any controllable leak of flammable or toxic substances must be carefully assessed, before control attempts are started, since improper handling of leaking valves or piping can lead to larger and uncontrollable releases that could threaten health or life and would thus require evacuation.

Uncontrollable Releases, Real or Threatened

If there is a real or threatened occurrence of an uncontrollable leak or spill, a need may occur to classify that section of the plant downwind of the spill area as a danger zone to prevent exposure of workers to concentrations of hazardous substances that could cause injury or death. Should it be determined that an uncontrollable leak or spill has occurred or is likely, an evacuation of some or all of the plant becomes necessary. Company employees are not allowed to remain in an evacuation zone for any reason. The single exception to this rule is when the acid gas flare goes out, in which case necessary Operations personnel will remain to re-ignite the flare. If the acid gas flare goes out, evacuation of non-essential personnel will be to a location outside the circle marked 100 on the map on page 5. Once evacuation of any area(s) takes place, no employee can re-enter until the Plant Manager or his designated alternate determines that the concentration of hazardous substances in the area(s) is at a safe level and gives an “all clear” indication to the workers.

In summary, employees are not allowed to work in or around an uncontrollable release of hazardous substances in a manner that might cause them to become exposed to that chemical. Any attempts to control such a release must be done from a remote, unexposed location or by outside emergency response companies and/or agencies, including fire departments, police, emergency medical responders, and private spill control contractors.

Evacuation Procedure for Flammables and Hydrogen Sulfide

1. Immediately alert and evacuate personnel downwind from the release site.
2. Personnel are to proceed crosswind from the site to safe areas utilizing the appropriate designated evacuation route.
3. Provide or obtain first aid for any employees who are in distress from exposure to hydrogen sulfide, or who otherwise need medical assistance. Follow emergency notification procedures on Sec 5 Pg 5 of this plan.
4. The personnel listed in this plan's Procedure of Notification Sec 1 Pg 2 will be responsible for notifying all emergency and environmental agencies.

Facilities

Accounting for Personnel

When an evacuation takes place for any reason, the Plant Manager or his designated alternate will be responsible for ensuring that each person in the plant is accounted for. Emergency search and rescue procedures will be initiated for any persons who have not been accounted for, with help from outside emergency responders as needed. Entry into hydrogen sulfide-contaminated areas requires use of protection for the skin, eyes, and respiratory tract, including a full facepiece supplied-air respirator.

All Clear

Personnel will be notified that it is safe to re-enter the evacuated area by only those employees designated as "Critical Operations Personnel" (see page 6) who will get the all-clear notification from the Plant Manager or his designee. Under no circumstance will employees rely on second-hand notification by other than Critical Operations personnel.

Muster/Rally Point - Keystone Plant



The Keystone Plant has (3) Emergency Assembly Areas. Primary Meeting Area is at the parking lot South of the Main Office. The South Secondary Meeting Area is at the intersection of FM 1218 & FM 874, North Secondary Meeting Area is .5 miles Northwest of plant on FM 1218

C. TRAINING REQUIREMENTS

Critical Operations personnel have been trained to assist in the safe and orderly emergency evacuation of employees.

Critical Operations personnel are responsible for ensuring that the contents of this Emergency Action Plan be discussed with and understood by all plant employees at each of the following times:

1. Initially when the plan is developed.
2. Whenever the plan is changed.

Facilities

3. Whenever the employee's responsibilities or designated actions under the plan change.
4. During new employee orientation.
5. Annually

PART II – PLANT SPECIFIC EMERGENCY RESPONSE ELEMENTS

A. TYPES OF EMERGENCIES

Fire, explosions or chemical release may present a degree of hazard that requires protection of the perimeter and evacuation of those who may become exposed to the danger. These dangers may exist without the presence of smoke, flames, or fumes.

Chemical Spill or Release

Hazard Communication Standard chemical lists and material safety data sheets on each chemical in the plant are kept in SDS binders. The SDS binders are located at the maintenance shop and the office library. SDS chemical sheets are also located electronically on the Company web site.

Most chemical spills or releases that might occur can be quickly controlled and handled by plant personnel and will not require notification of emergency response agencies, except for possible instances of having to notify federal or state agencies as a requirement of law, although the need for emergency action would probably remain unnecessary.

1) Hydrogen Sulfide Information

Hydrogen sulfide is a colorless and transparent gas, is flammable, heavier than air and may accumulate in low places. At low concentrations (<10 ppm) it has an unpleasant "rotten egg" odor but is considered safe to work in over an eight-hour period. Higher concentrations (>100 ppm) can actually kill the sense of smell in three to fifteen minutes, thus preventing further sensory warnings should concentrations increase. Dizziness followed by breathing failure can occur at levels between 200 and 500 ppm.

If necessary, alert and/or evacuate people downwind from the actual or potential release site. Depending on the actual or potential release rate involved, it may be necessary to alert or evacuate people residing off site. In such cases the sheriff, police and fire agencies should be called.

Remove exposed persons to clean air, provide first aid if needed and transport exposed persons to a hospital quickly if symptoms do not clear up promptly. Refer to the SDS for H₂S for additional information.

If rescue is necessary, a self-contained breathing apparatus with a full face-piece must be worn in the release area.

2) Fire

In many cases, plant personnel can handle small fires. In the event a fire becomes too large or dangerous for plant personnel to maintain safe control, the Kermit Fire Department should be contacted and the notification process should be implemented. Most fires in the plant can be controlled by cutting off the fuel supply. Likewise, most fires at this plant can be extinguished with in-plant fire lines, process water lines or plant fire extinguishers. Fires that cause release of toxic chemicals, vapors or smoke could create the need to stage full or partial evacuation of the plant, as could possible exposure of employees to flames of the fire.

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Facilities

3) Tornado

The remoteness of the Keystone Plant precludes being part of the Kermit municipal emergency warning system. The threat of a tornado will be monitored by radio and by eye as observable weather conditions deteriorate. The Plant Manager or his designee will make the decision as to what course of action to take; e.g. operation control safeguards, plant evacuation, etc., should a tornado be imminent.

MISCELLANEOUS EMERGENCY INFORMATION

First Aid

Anytime that plant volunteers cannot provide adequate first aid for injured persons, the Kermit Emergency Medical Service should be contacted immediately.

- Kermit Emergency Medical Service (EMS) 911

Public Relations

All news releases, statements to the press, briefings, and information dealing with any aspect of the emergency at hand are to be issued by the Plant Manager or his designated alternate --- **NO EXCEPTIONS.**

Traffic

Should the necessity for roadblocks arise, the Winkler County Sheriff's Department and the Department of Public Safety will be responsible for the roadblocks. Regency Energy Partners will provide personnel for the roadblocks only if an immediate danger is presented to passersby, in which case Regency Energy Partners employees will detour traffic until the Department of Public Safety or Sheriff's Department arrives.

C. EMERGENCY ARLARM SYSTEM

Low H₂S Alarm

This alarm consists of a series of **Hi-Lo, repeated tones on the local alarms.** These alarms are local to each zone only. This audible alarm is accompanied by the amber-colored strobe light at the sensor location. If you hear this alarm, go to the nearest plant exit that is **upwind** and wait for instruction. (10 ppm)

Also when H₂S concentrations reach 10 ppm or more in any given plant location, the main plant alarm horn at the control room will be triggered. This alarm is recognizable as a very loud series of long, intermittent blasts.

Fire

This alarm consists of a series of **three interrupted blasts on either the control room air horn or the engine room whistle.** If you hear this alarm, exit the plant immediately, **crosswind and upwind** from the area involved in the fire. As quickly as you can, go to the gathering places and wait for instruction. If wind conditions prohibit gathering at one of the gathering places, go to one of the other designated gathering places, contractors are never expected to fight fire.

Evacuation

This alarm consists of a **continuous series of very short, manually operated blast on the control room air horn or the engine room air whistle.** If you hear this alarm, **EXIT THE PLANT IMMEDIATELY, crosswind and upwind.** Proceed to safe areas by utilizing the appropriate designated evacuation route Report any missing personnel to the immediate supervisor!

Facilities

MEDIA CONTACT

Primary

Vicki Granado

Office: 214-599-8785

Cell: 214-498-9272

Home: 214-827-0771

email: vicki@granadopr.com

Secondary

Lyndsay Hannah

Office: 214-599-8785

Cell: 214-409-2328

email: lyndsay.hannah@Regencygas.com

Revision Log

Keystone Plant

Published : 11/06/2013

Revision Log

Revision Date	Details	Revised By	Approved On	Approved By
4/3/2012	Subject: Edit Contact : Hospital Comments: Better name description	Hector Sanchez	8/26/2013	John Crossman
3/29/2012	Subject: Edit Contact : Sheriff Comments: Brief Description	Hector Sanchez	8/26/2013	John Crossman
10/7/2013	Subject: Contact deleted from master list. Comments: Delete Duplicate Keystone Control Room Contact	Jessica Sanders		

Appendix 29
e-Mail from John Rider
dated 12/13/13 with attachments

From: [Rider, John \(David\)](#)
To: [Duplechain, Dominique](#)
Subject: Keystone RMP
Date: Friday, December 13, 2013 6:40:24 AM
Attachments: [image002.png](#)
[10383 Keystone Gas Plant WCS_ARS topo.pdf](#)
[10383 Keystone Gas Plant WCS_ARS aerial.pdf](#)
[RMP and ARS Calculations 12092013.pdf](#)

Dominique,

Good Morning! I apologize for the slow response. I have been out sick for most of the week. I have however tried to contact you by phone to discuss some items that we are still unsure of and have had no luck and no call back.

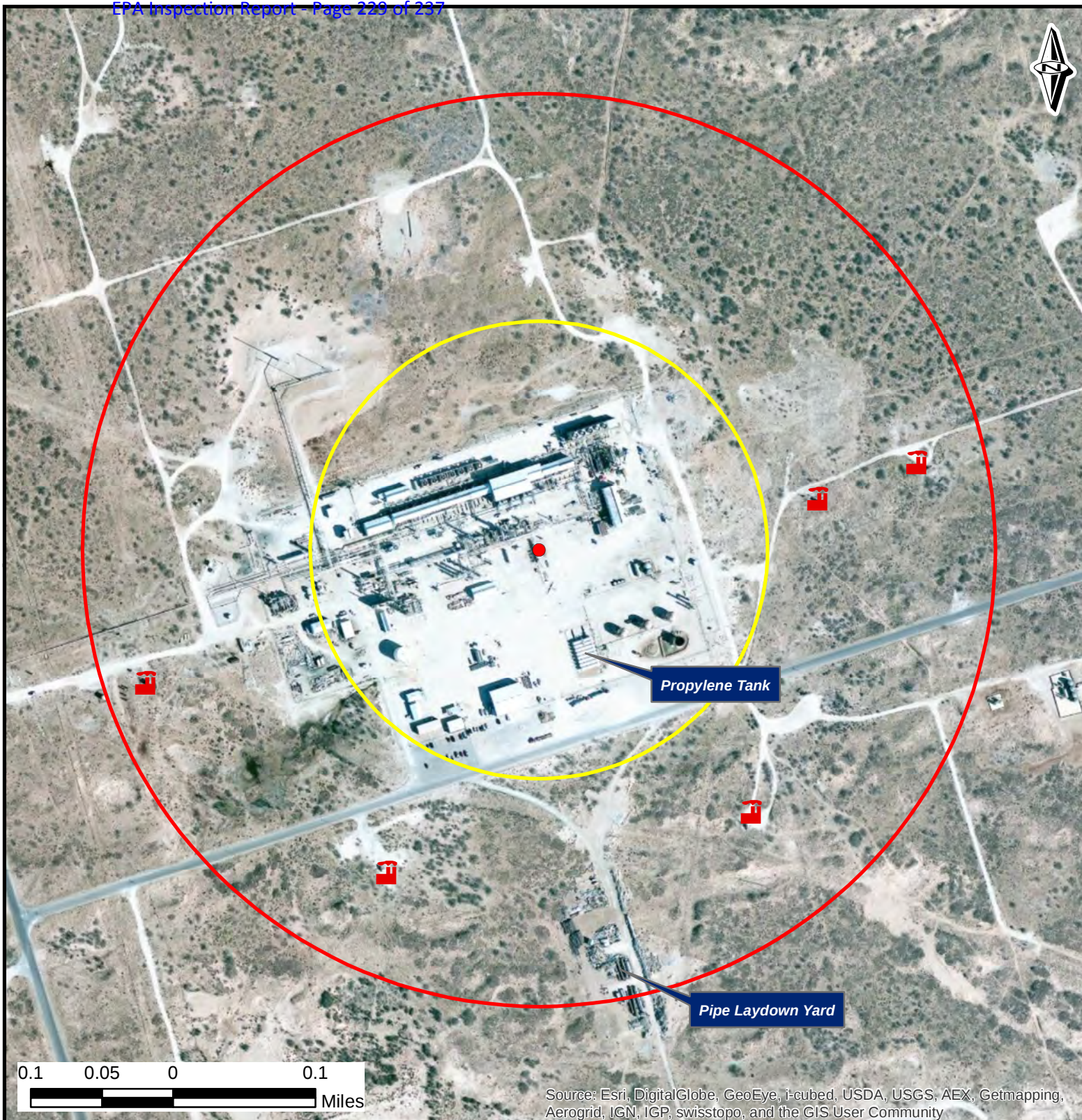
I have attached the updated Maps and calculations as requested. After our review of the 3/01/2009 Incident, quantities and new maps, we have made the decision to gather all the required information and re-submit the RMP for the Keystone Plant as a level 3. We appreciate your guidance and patience with us as we move to insure we are in compliance. Please contact me at your convenience and we can discuss this in more detail and/or let me know if this covers everything.

Thanks for your time,

David Rider
PSM/RMP Manager
301 Commerce Street, Suite 700
Fort Worth, Texas 76102
Cell – 817-487-9148
Office – 817-302-9457
Fax – 817-302-9350



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Legend

-  Industrial
-  NGL Tank

Alternate Release Scenario

 0.16 mile Radius

Worst Case Scenario

 0.32 mile Radius

REGENCY FIELD SERVICES, LLC

DALLAS, TEXAS

KEYSTONE GAS PLANT

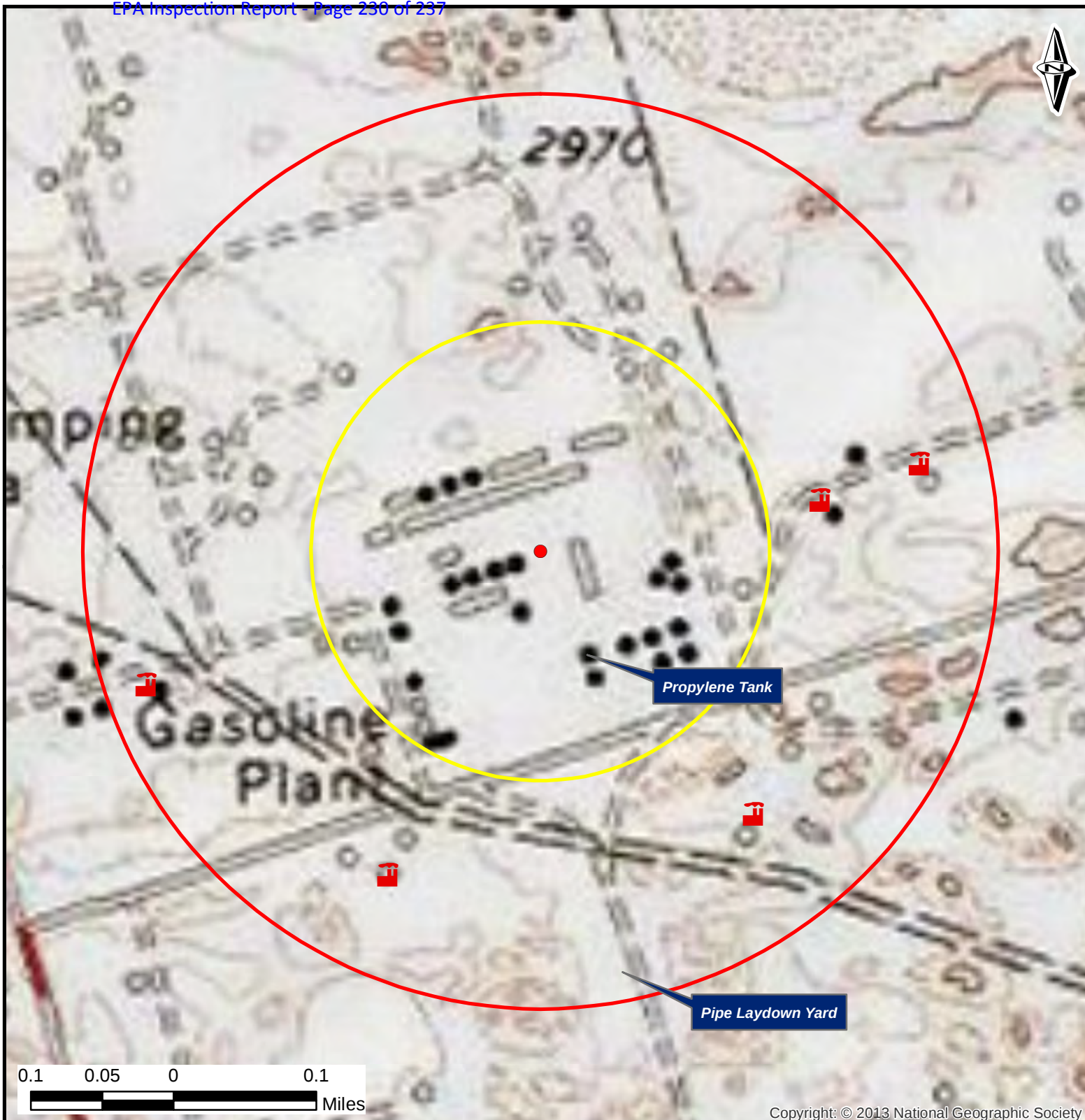
WORST CASE SCENARIO & ALTERNATIVE RELEASE SCENARIO (AERIAL PHOTOGRAPH)

WINKLER COUNTY, TEXAS



DRAWN BY:	ADB
CHECKED BY:	KLR
APPROVED BY:	GRM
Date:	12/12/2013
PROJECT NO.	10383

FIGURE 1



Copyright: © 2013 National Geographic Society

Legend

-  Industrial
-  NGL Tank

Alternate Release Scenario

-  0.16 mile Radius

Worst Case Scenario

-  0.32 mile Radius

NGS USA Topographic Maps

REGENCY FIELD SERVICES, LLC

DALLAS, TEXAS

KEYSTONE GAS PLANT

WORST CASE SCENARIO & ALTERNATIVE RELEASE SCENARIO (TOPOGRAPHIC MAP)

WINKLER COUNTY, TEXAS



DRAWN BY:	ADB
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Date:	12/12/2013
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FIGURE 1

Weighted Average Heat of Combustion

Component	Heat of Combustion¹ (kjoule/kg)	NGL (Vol%)
Methane	50029	0.9729
Ethane	47509	43.1942
Propane	46333	31.6224
i-Butane	45719	4.2627
n-Butane	45719	11.0844
i-Pentane	44697	2.5522
n-Pentane	44697	3.2136
Hexane Plus	44736	3.0839
Weighted Average Heat of Combustion		46632.8

Note:

1. Heat of Combustion for Methane, Ethane, Propane, i-Butane, n-Butane, i-Pentane and n-Pentane are from the Offsite Consequence Analysis Guidance Document, Appendix C, Exhibit C-1. Hexane Plus Heat of Combustion is from the Engineering Data Book, Volume II, Sections 17-26, Gas Processors Association, 1994.

Regency Field Services LLC
Keystone Gas Plant
C-K Project No. 10378

Worst-Case Scenario - NGL Storage, 11,099 Gallons
 Distance to Endpoint Calculation

Given:

Tank Capacity = 11,099 gallons (based on capacity provided by client)
 Weight = 64,652 lbs

Basis/Equation:

$$D = \{17 * [0.1 * W * (HC_m / HC_{TNT})]^{1/3} * 0.00062\}^{(2)}$$

Where:

Distance to endpoint (D)

Weight of Flammable Mixture (W)

Heat of Combustion of Flammable Mixture (HC_m)

Heat of Combustion of Trinitrotoluene (4,680 kJoules/kg) (HC_{TNT})

Component	$W_{(lbs/2.2)}$	$HC_{m(kjoules/kg)}^{(3)}$	$D_{(miles)}$
Flammable Liquid Mixture (NGL)	29,387	46,633	0.32

⁽¹⁾ Weight of NGL is based on site specific provided information. Specific gravity of NGL (0.6984) was provided by D. Rider with Regency Field Services LLC (Manley Gas Testing, Inc. Test # 10937).
 Tank capacity provided by D. Rider with Regency Field Services LLC.

⁽²⁾ Offsite Consequence Analysis Guidance Document (EPA 550-B-99-009, Equation C-1).

⁽³⁾ A weighted average HC_m was used - see Weighted Average HC Table (Offsite Consequence Analysis Guidance Document, Appendix C, Exhibit C-1).

Regency Field Services LLC
Keystone Gas Plant
C-K Project No. 10378

Worst-Case Scenario - Propylene Refrigerant Tank, 9,000 Gallons
 Distance to Endpoint Calculation

Given:

Tank Capacity = 9,000 gallons (based on capacity provided by client)
 Weight = 38,133 lbs

Basis/Equation:

$$D = \{17 * [0.1 * W * (HC_m / HC_{TNT})]^{1/3} * 0.00062\}^{(2)}$$

Where:

Distance to endpoint (D)

Weight of Flammable Mixture (W)

Heat of Combustion of Flammable Mixture (HC_m)

Heat of Combustion of Trinitrotoluene (4,680 kJoules/kg) (HC_{TNT})

Component	$W_{(lbs/2.2)}$	$HC_m(kjoules/kg)^{(3)}$	$D_{(miles)}$
Propylene Refrigerant	17,333	45,762	0.27

⁽¹⁾ Weight of propylene is based on site specific provided information. Specific gravity of propylene (0.508) was provided by D. Rider with Regency Field Services LLC.

Tank capacity provided by D. Rider with Regency Field Services LLC.

⁽²⁾ Offsite Consequence Analysis Guidance Document (EPA 550-B-99-009, Equation C-1).

⁽³⁾ Propylene HC_m was used (Offsite Consequence Analysis Guidance Document, Appendix C, Exhibit C-1).

MANLEY GAS TESTING, INC.
120 DOCK ROAD - ODESSA, TEXAS-432-367-3024

CHARGE.....	124 - 0	REC.NO. 1	DATE SAMPLED.....	12-01-13
TEST NUMBER..	10937		DATE RUN	12-04-13
			DATE EFFECTIVE....	11-01-13
METER I.D.	KP-96		SAMPLE TYPE	COMPOSITE
A SAMPLE OF	KEYSTONE NGL CHECK METER			
RECEIVED FROM	SOUTHERN UNION GAS SERVICES			

COMPOSITE DATES = 11-01-13 TO 12-01-13

PRESSURE 761 PSIG TEMPERATURE 46 F

FRACTIONAL ANALYSIS
CALCULATED @ 14.696 PSIA AND 60F

	MOLE%	LIQUID%	WEIGHT%	
NITROGEN.....	0.0000	0.0000	0.0000	*TOT REAL GAS SP.GR... 1.4512
CARBON DIOXIDE.	0.0227	0.0137	0.0241	TOTAL LIQUID SP.GR... 0.4638
METHANE.....	1.6220	0.9729	0.6290	TOTAL VAPOR PRESS. 516.4789
ETHANE.....	45.6499	43.1942	33.1799	TOTAL MOLECULAR WT. 41.3698
PROPANE.....	32.4416	31.6224	34.5792	TOTAL CF/GALLON..... 35.4811
ISO-BUTANE.....	3.6819	4.2627	5.1728	TOTAL LB/GALLON..... 3.8669
NOR-BUTANE.....	9.9377	11.0844	13.9614	*TOTAL REAL BTU/CF... 2406.6
ISO-PENTANE....	1.9723	2.5522	3.4399	
NOR-PENTANE....	2.5057	3.2136	4.3700	
HEXANES.....	1.6581	2.2831	3.3890	
HEPTANES.....	0.4124	0.6300	0.9862	
OCTANES.....	0.0817	0.1431	0.2242	
NONANES.....	0.0099	0.0191	0.0304	
DECANES+.....	0.0041	0.0086	0.0139	
	100.0000	100.0000	100.0000	* DRY BASIS

... CAPILLARY EXTENDED PENTANES+ CHARACTERIZATION ...

SP. GRAVITY C5+ ..	0.6526	VAPOR PRESS C5+..	13.516	CF/GAL C5+ ..	26.736
MOLECULAR WT C5+.	77.539	REAL BTU/CF C5+..	4576.7	LB/GAL C5+ ..	5.441

... CAPILLARY EXTENDED HEXANES+ CHARACTERIZATION ...

TOT. MOLE% C6+..	2.1662	TOT. LIQ% C6+...	3.0839	TOT. WT% C6+.	4.6437
SP. GRAVITY C6+ ..	0.6984	VAPOR PRESS C6+..	4.816	CF/GAL C6+ ..	25.225
MOLECULAR WT C6+.	88.678	REAL BTU/CF C6+..	5336.6	LB/GAL C6+ ..	5.823

ANALYSIS BASED ON GPA STANDARDS 2177-03 & 2186-02
DISTRIBUTION / REMARKS :

FAX: KERMIT OFF. / KEYSTONE PLT / FORT WORTH

LIQUID VOL% C1/C2 RATIO = 2.25

RUN BY K.CASWELL
* R *

APPROVED

Kc

MANLEY GAS TESTING INC.
120 DOCK ROAD - ODESSA, TEXAS-432-367-3024

A SAMPLE OF KP-96 KEYSTONE NGL CHECK METER

TEST NO. 10937

CAPILLARY EXTENDED
C-6+ ANALYSIS
(NORMALIZED TO 100%)

PAGE NO. 1

COMPONENT	MOL%	LIQ%	WT%
NEOHEXANE	0.845	0.875	0.821
2,3DMC4+CYC5	6.856	5.798	5.798
2MPENTANE	16.910	17.388	16.433
3MPENTANE	9.801	9.930	9.524
N-HEXANE	26.514	27.017	25.767
2,2 DMPENTANE	0.182	0.212	0.206
MCYCLOPENTANE	7.635	6.696	7.246
2,4 DMPENTANE	0.302	0.350	0.341
2,2,3 TMBUTANE	0.038	0.043	0.043
BENZENE	2.695	1.868	2.374
3,3 DMPENTANE	0.070	0.079	0.079
CYCLOHEXANE	5.288	4.462	5.019
2MHEXANE	1.948	2.244	2.201
2,3 DMPENTANE	1.144	1.285	1.292
3MHEXANE	2.330	2.650	2.633
DIMCYCPENTANES(GROUPED)	3.105	3.159	3.440
N-HEPTANE	5.256	6.008	5.939
MCYCLOHEXANE	3.168	3.156	3.508
2,2DMHEXANE	0.561	0.718	0.723
2,3,3TMPENTANE	0.011	0.013	0.014
TOLUENE	1.497	1.242	1.555
2,3DMHEXANE	0.096	0.121	0.124
2M3EPENTANE	0.054	0.067	0.070
2MHEPTANE	0.772	0.985	0.995
4MHEPTANE	0.179	0.227	0.231
3,4DMHEXANE	0.056	0.069	0.072
3MHEPTANE	0.478	0.604	0.616
TRIMCYCPENTANES(GROUPED)	0.075	0.085	0.093
DIMCYCHEXANES(GROUPED)	0.550	0.628	0.695
N-OCTANE	0.643	0.816	0.829
2,3,5TRIMHEXANE	0.019	0.026	0.027
2,2,4TRIMHEXANE	0.036	0.050	0.052
2,2DIMHEPTANE	0.009	0.013	0.014
2,2,3TRIMHEXANE	0.013	0.019	0.019
2,5DIMHEPTANE	0.016	0.022	0.023
I-NONANE	0.000	0.000	0.000
2,4DIMHEPTANE	0.017	0.024	0.025
E-CYCHEXANE	0.105	0.117	0.133
3,3DIMHEPTANE	0.045	0.062	0.065
2,6DIMHEPTANE	0.014	0.019	0.020
E-BENZENE	0.014	0.014	0.017
2,3DIMHEPTANE	0.008	0.011	0.012
M-XYLENE	0.114	0.109	0.136
P-XYLENE	0.039	0.038	0.047
3,4DIMHEPTANE	0.029	0.040	0.042
3EHEPTANE	0.009	0.012	0.013

MANLEY GAS TESTING INC.
120 DOCK ROAD - ODESSA, TEXAS-432-367-3024

A SAMPLE OF KP-96 KEYSTONE NGL CHECK METER

TEST NO. 10937

CAPILLARY EXTENDED
 C-6+ ANALYSIS
 (NORMALIZED TO 100%)

PAGE NO. 2

4MOCTANE	0.018	0.026	0.026
3MOCTANE	0.022	0.030	0.031
O-XYLENE	0.013	0.012	0.016
IC4CYCPENTANE	0.006	0.008	0.009
N-NONANE	0.083	0.115	0.120
I-DECANE	0.009	0.014	0.014
1E1MCYC6	0.007	0.009	0.010
IC3BENZENE	0.015	0.016	0.020
2,3DMOCTANE	0.052	0.079	0.084
3EOCTANE	0.067	0.100	0.107
NC4CYCC6	0.000	0.000	0.000
NC3BENZENE	0.005	0.006	0.007
M+P E-TOLUENE	0.006	0.006	0.008
O-E-TOLUENE	0.008	0.009	0.011
2,2DMOCTANE	0.019	0.029	0.030
TERTBUTYLBENZENE	0.007	0.008	0.010
1,3,5TMBENZENE	0.007	0.007	0.009
3,6DMOCTANE	0.019	0.029	0.031
IC4BENZENE	0.006	0.007	0.009
N-DECANE	0.009	0.014	0.014
UNKNOWN C-6'S	0.000	0.000	0.000
UNKNOWN C-7'S	0.000	0.000	0.000
UNKNOWN C-8'S	0.013	0.016	0.016
UNKNOWN C-9'S	0.063	0.089	0.092
UNK C10'S THRU C14'S	0.000	0.000	0.000
UNK C15'S THRU C16'S	0.000	0.000	0.000
UNK C17'S THRU C20'S	0.000	0.000	0.000

TOTAL	100.000	100.000	100.000
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COMPONENT GROUPINGS (PARAFFINS-NAPTHENES-AROMATICS)

=====

	MOL%	LIQ%	WT%	MOL% 6+ AROMATICS=	4.426
TOTAL C-6'S	76.544	74.034	72.982	SP. GRAV. C6+ =	0.6984
TOTAL C-7'S	19.040	20.428	21.237	MOL. WT. C6+ =	88.678
TOTAL C-8'S	3.773	4.639	4.827	GAL/LB. C6+ =	15.278
TOTAL C-9'S	0.455	0.619	0.655	CF/GAL. C6+ =	25.225
TOTAL C-10'S	0.188	0.280	0.299	LB/GAL. C6+ =	5.823
TOTAL C-11 THRU C-14	0.000	0.000	0.000		
TOTAL C-15 THRU C-16	0.000	0.000	0.000	*IDEAL BTU/CF C6+ =	4800.8
TOTAL C-17 THRU C-20	0.000	0.000	0.000		
TOTAL	100.000	100.000	100.000	*REAL BTU/CF C6+ =	5336.6
				*DRY BASIS [Z C6+ =	0.8996]

=====

Regency Field Services LLC Keystone Gas Plant

C-K Associates' Project No. 10378

Release Rate for ARS Calculation

Basis/Equation:

$$QR = HA * P^{1/2} / \sqrt{T} * GF$$

Where:

QR = Release Rate (lbs/min)

HA = Hole or Puncture Area (in²)

P = Pressure (psia)

T = Temperature (K)

GF = Gas Factor

Weight of flammable substance after 10-minute release (W)

$$W = QR * 10 \text{ minutes}$$

Component	HA (in ²)	P (psia)	T (K)	GF ⁽¹⁾	QR (lbs/min)	W (lbs)
NGL	3.14	214.7	311	22	841.44	8,414

⁽¹⁾ Gas Factor for propane was used.

Distance to Endpoint Calculation

Given:

$$W = 8,414 \text{ lbs}$$

Basis/Equation:

$$D = \{17 * [0.1 * W * (HC_m / HC_{TNT})]^{1/3}\} * 0.00062^{(1)}$$

Where:

Distance to endpoint (D)

Weight of Flammable Mixture (W)

Heat of Combustion of Flammable Mixture (HC_m)

Heat of Combustion of Trinitrotoluene (4,680 kJoules/kg) (HC_{TNT})

Component	W _(lbs/2.2)	HC _m (kJoules/kg) ⁽²⁾	D _(miles)
NGL	3,825	46,633	0.16

⁽¹⁾ Offsite Consequence Analysis Guidance Document (EPA 550-B-99-009, Equation C-1)

⁽²⁾ A weighted average HC_m was used - see Weighted Average HC Table (Offsite Consequence Analysis Guidance Document, Appendix C, Exhibit C-1).