



# Texas Brine Company, LLC

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Belle Rose, LA 70341  
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December 16, 2013

Commissioner James H. Welsh  
P.O. Box 94275  
Baton Rouge, LA 70804

**RE: In response to State of Louisiana Department of Natural Resources Office of Conservation's Second Amendment to Declaration of Emergency and Directive**

Commissioner Welsh,

In response to the Second Amendment and Declaration of Emergency and Directive order issued by the Louisiana Department of Natural Resources (LDNR), Office of Conservation on September 25, 2012, Texas Brine Company, LLC (TPC) understands the seven items listed in the document.

In the above mentioned, TBC was specifically directed and ordered to perform certain tasks outlined in the above mentioned document. Below are the required responses, as directed.

1. TBC's counsel provided LDNR legal counsel with a response to Directives 1-3 on September 28, 2012.
2. TBC understands Directive 4, which is to provide all daily logs and field notes from all contractors conducting investigation into subsidence and natural gas bubbling. The Daily Action Summary and results for current information can be found in the Attachment section of this report.
3. TBC understands Directive 5, which directs TBC to immediately allow for split or share any sample taken on site related to Well 3A (Serial Number 974265), the cavern, other wells facilities or other site locations. The Daily Action Summary of today's collection can be found in Attachment section of this report.
4. TBC understands Directive 6, which directs TBC to immediately report the results (final and preliminary) of any tests, logs samples or data collection performed on Well 3A, the cavern, other wells, facilities or site locations that indicate a change in any previously known conditions related to the investigation of the subsidence or natural gas bubbling

events, and continue to report any such results. The Daily Action Summary and the Results related to this Directive can be found in Attachment section of this report.

5. TBC understands the Directive 7, which states that TBC will provide a daily summary of all tests, or logs performed or samples taken from Well 3A and the cavern as well as any results of those tests or logs, including preliminary as of September 25, 2012 and going forward. The Daily Summary and Results related to this Directive can be found in Attachment section of this report.

Please note that the drilling rig used for the Observation Well 3A has been removed and the site is being rigged down and returned to pre-drilling condition. As such, daily drilling reports for this well have ceased. Plans are being made for longer term potential gas venting/flaring requirements and possible hydrocarbon material recover from Well 3A.

In addition, previous daily summary reports issued to LDNR have included significant duplicate information as there is a fair amount of overlap in the information requested in each of the Directives included in the September 25, 2012 order. All requested information associated with the Directives issued in the September 25, 2012 order are included in the Attachment section of this report.

TBC believes that the submittal of this report satisfies the requirements of the Declaration of Emergency and Directive issued on September 25, 2012. As directed this report is submitted by email to [conservationorder@la.gov](mailto:conservationorder@la.gov), ref. "Emergency Declaration-Texas Brine Company LLC-9/25/2012.



Bruce E. Martin

Vice President, Operations

Texas Brine Company, LLC

## **Summary Table for Daily Events**

TBC Oxy Grand Bayou Data Management-Environmental										
Contractor	Responsibilities	Collected By	Date Collected		Delivered to Lab	Results from Lab	Laboratory	Method	Date to Agencies	
Sage	Stationary Air Monitoring	Bijet Mukherjee - 08:00 - 09:30, Britt Barnett (Code Red) - 00:00 - 06:00, 18:00 - 24:00, Roxana Dubose (Code Red) - 06:00 - 18:00; Bijet Mukherjee - 08:00 - 09:30, Britt Barnett (Code Red) - 00:00 - 06:00, 18:00 - 24:00, Roxana Dubose (Code Red) - 06:00 - 18:00; Bijet Mukherjee - 07:35 - 08:50, Britt Barnett (Code Red) - 00:00 - 06:00, 18:00 - 24:00, Roxana Dubose (Code Red) - 06:00 - 18:00	12/13 - 12/15/2013		NA	NA	NA	AreaRAE Monitors	12/14- 12/16/2013	
	Residential Air Monitoring	Sage has been requested to suspend bimonthly residential air monitoring. Therefore, Sage will discontinue these activities.	NA		NA	NA	NA	NA	NA	
	Gas Seep Sampling	No work performed	12/13 - 12/15/2013		NA	NA	NA	NA	NA	
	Well Gas Sampling	Steve Shaughnessy GP-56 - 09:30	12/13/2013		Yes	No	SPL Isotech	Sulfur Isotopic	Upon receipt of results from lab	
	Under Slab Gas Sampling	No work performed	12/13 - 12/15/2013		NA	NA	NA	NA	NA	
	Indoor Air Monitoring	No work performed	12/13 - 12/15/2013		NA	NA	NA	NA	NA	
Respec	Inclinometers/Tilt Meters/Transducers	12/13 - 12/15/2213	No work Conducted	NA	NA	NA	NA	NA	NA	
	InSAR Reflector Installations	12/13 - 12/15/2213	No work Conducted	NA	NA	NA	NA	NA	NA	
	Subsidence Survey-Fenstermaker	12/13 - 12/15/2213	No work Conducted	NA	NA	NA	NA	NA	NA	
	Shallow Geophone Installation	12/13 - 12/15/2213	No work Conducted	NA	NA	NA	NA	NA	NA	
	Deep Geophone Installation	12/13 - 12/15/2213	No work Conducted	NA	NA	NA	NA	NA	NA	
	Amendment #3, Directive #2	12/13 - 12/15/2213	No work Conducted	NA	NA	NA	NA	NA	NA	
	Expansion of geoprobe gas sampling locations	12/13 - 12/15/2213	No work Conducted	NA	NA	NA	NA	NA	NA	
	DPVE	12/13 - 12/15/2213	No work Conducted	NA	NA	NA	NA	NA	NA	
	Abandon Casing Survey	12/13 - 12/15/2213	No work Conducted	NA	NA	NA	NA	NA	NA	
	Passive Vent Well at NSDBS56	12/13 - 12/15/2213	No work Conducted	NA	NA					
	MIHPT	12/13 - 12/15/2213	No work Conducted	NA	NA	NA	NA	NA	NA	
	Miller	Weekly Stability Survey	No work performed	12/12 - 12/14/2013		NA	NA	NA	NA	NA
Misc. Survey Work		J. Miller / M. Fore	12/12 - 12/14/2013		NA	NA	NA	NA	NA	
Sinkhole Hydro/Perimeter Survey		M. Fore	12/12 - 12/14/2013		NA	NA	NA	NA	NA	
Pisani	Surface Water	NA	12/13 - 12/15/2013		NA	NA	NA	NA	NA	
	Sinkhole	NA	12/13 - 12/15/2013		NA	NA	NA	NA	NA	
	Industrial Well Water	NA	12/13 - 12/15/2013		NA	NA	NA	NA	NA	
	MRAA Well Water	NA	12/13 - 12/15/2013		NA	NA	NA	NA	NA	
	GP/ORW Water	NA	12/13 - 12/15/2013		NA	NA	NA	NA	NA	
	Cavern Water	NA	12/13 - 12/15/2013		NA	NA	NA	NA	NA	
	Discharge/Outfall Water	NA	12/13 - 12/15/2013		NA	NA	NA	NA	NA	
	Geoprobe Wells	NA	12/13 - 12/15/2013		NA	NA	NA	NA	NA	
	Grand Bayou Well 3A									
Daily Operations at 3A		Summary of Today's events								
12/14 - 12/16/2013		Over 3A								
	7am	932.81	12/14/2013							
	7am	930.94	12/15/2013							
	7am	935.39	12/16/2013							
12/14 - 12/16/2013		Relief Well #1								
		See ORW-01 Flare Spreadsheet								

## **Attachments**

## Daily Action Summary

December 13, 2013

### Sinkhole Perimeter Air Monitoring and Neighborhood ORWs Air Monitoring

- Bijet Mukherjee onsite from 08:00 – 09:30. Conducted monitor change out at 08:34. Collected data from the monitoring database and forwarded to Eric Rucinski in the Baton Rouge office for processing.
- Code Red (monitor sub-contractor) onsite for continuous 24/7 monitoring:
  - Britt Barnett onsite from 0:00 to 06:00; 18:00 to 24:00
  - Roxana Dubose onsite from 06:00 to 18:00

Technicians also assisted in battery change outs and maintenance of the monitoring equipment as necessary.

NOTE: The sinkhole monitors are now housed in solar-powered weather boxes; thus, daily monitor change-out not necessary for Pad 9, TR-1a, ORW-11a, ORW-9a, and ORW-5. Neighborhood monitoring locations ORW-49-WH and ORW-50-WH are now equipped with electrical power; thus, daily monitor change-out is additionally not necessary for these locations. All monitors will continue to be calibrated and serviced as necessary.

### Residential Air Monitoring

- Sage has been requested to suspend bimonthly residential air monitoring. Therefore, Sage will discontinue these activities. The last event was conducted on March 26, 2013.

### Gas Seep Sampling

- Not Scheduled

### Well Gas Sampling

- Well gas samples were collected from GP-56 by Steve Shaughnessy. The scheduled sampling occurred at 09:30. Samples were delivered to the Accutest service center where the samples were transported to the SPL Louisiana laboratory. Samples collected for isotopic analysis will be shipped to Isotech Laboratories in Illinois. Samples collected for sulfur analysis will be analyzed by the SPL Louisianan laboratory.

### Under Slab Gas Sampling

- Not Scheduled

### Air Indoor Monitoring

- Not Scheduled

**Texas Brine - Belle Rose, Louisiana**  
**Hourly Air Monitoring Data**  
**Neighborhood Monitoring**

\*Time indicates start of time period (ex. 12:00:00 AM gives the time period 12:00:00 AM to 12:59:59 AM)

Date-Time *	Observation Relief Well -49 at the Well Head			Observation Relief Well - 50 at the Well Head			Passive Vent Well -56		
	ORW-49-WH			ORW-50-WH			PVW-BS-56		
	H2S (ppm)	LEL (%)	O2 (%)	H2S (ppm)	LEL (%)	O2 (%)	H2S (ppm)	LEL (%)	O2 (%)
12/13/2013 01:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/13/2013 02:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/13/2013 03:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/13/2013 04:00:00 AM	0.0	<1.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/13/2013 05:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/13/2013 06:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/13/2013 07:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/13/2013 08:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/13/2013 09:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/13/2013 10:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/13/2013 11:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/13/2013 12:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/13/2013 01:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/13/2013 02:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/13/2013 03:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/13/2013 04:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/13/2013 05:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/13/2013 06:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/13/2013 07:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/13/2013 08:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/13/2013 09:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/13/2013 10:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/13/2013 11:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/14/2013 12:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9

Notes:

**Texas Brine - Belle Rose, Louisiana**  
**Hourly Air Monitoring Data**  
**Sinkhole Perimeter Monitoring**

\*Time indicates start of time period (ex. 12:00:00 AM gives the time period 12:00:00 AM to 12:59:59 AM)

Date-Time *	Observation Relief Well -5					Observation Relief Well - 9					Observation Relief Well -11					South of OG3A-1					Onsite Trailers				
	ORW-5					ORW-9a					ORW-11a					Pad #9					TR-1a				
	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	SO2 (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)
12/13/2013 01:00:00 AM	0.0	0.0	0.0	0.0	20.9	<1.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.6	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/13/2013 02:00:00 AM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.8	<1.0	0.0	0.0	0.0	20.6	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/13/2013 03:00:00 AM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.6	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/13/2013 04:00:00 AM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.5	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/13/2013 05:00:00 AM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.6	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/13/2013 06:00:00 AM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.6	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/13/2013 07:00:00 AM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.7	<1.0	0.0	0.0	0.0	20.5	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/13/2013 08:00:00 AM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.6	<1.0	0.0	0.0	0.0	20.6	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/13/2013 09:00:00 AM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.7	<1.0	0.0	0.0	0.0	20.6	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/13/2013 10:00:00 AM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/13/2013 11:00:00 AM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/13/2013 12:00:00 PM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/13/2013 01:00:00 PM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/13/2013 02:00:00 PM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.0	0.0	0.0	0.0	0.0	20.9
12/13/2013 03:00:00 PM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.2	0.0	0.0	0.0	0.0	20.9
12/13/2013 04:00:00 PM	0.0	0.0	0.0	0.0	21.1	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.2	0.0	0.0	0.0	0.0	21.1
12/13/2013 05:00:00 PM	0.0	0.0	0.0	0.0	21.2	<1.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.2	0.0	0.0	0.0	0.0	21.2
12/13/2013 06:00:00 PM	0.0	0.0	0.0	0.0	21.2	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.2	0.0	0.0	0.0	0.0	21.1
12/13/2013 07:00:00 PM	0.0	0.0	0.0	0.0	21.1	<1.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.0	0.0	0.0	0.0	0.0	21.1
12/13/2013 08:00:00 PM	0.0	0.0	0.0	0.0	21.1	<1.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/13/2013 09:00:00 PM	0.0	0.0	0.0	0.0	21.1	<1.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/13/2013 10:00:00 PM	0.0	0.0	0.0	0.0	21.1	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/13/2013 11:00:00 PM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	<1.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/14/2013 12:00:00 AM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9

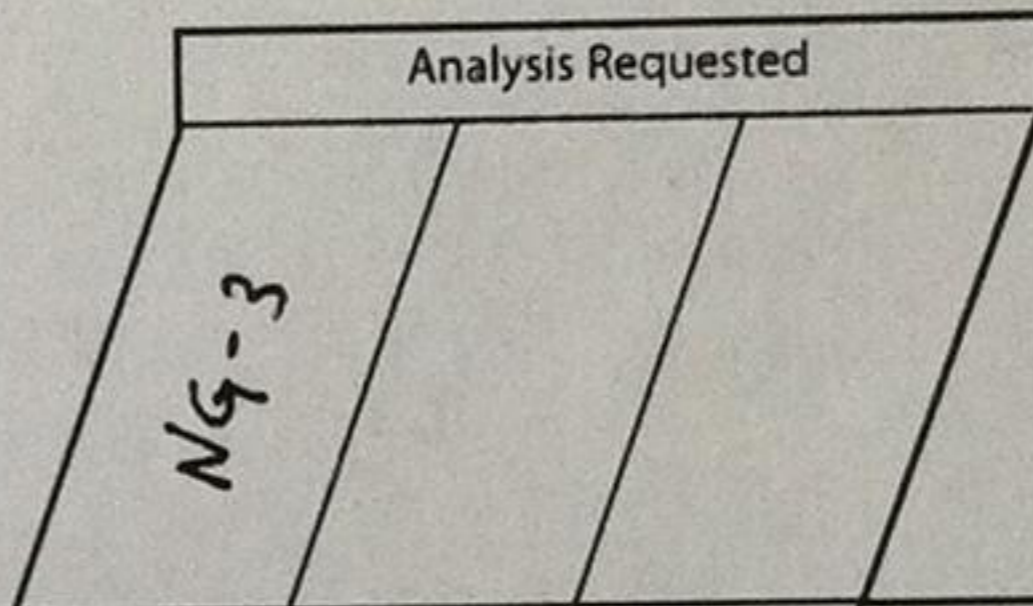
Notes:



**Send Data and Invoice to**

 Name: Karl Duckworth  
 Company: Sage Environmental Consulting  
 Address: 8440 Jefferson Hwy, Suite 400  
Baton Rouge, LA 70809  
 Phone: 225-927-2258  
 Fax: 225-927-2256  
 Email: Karl.Duckworth@sageenvironmental.com

 Project: Texas Brine  
 Purchase Order #: \_\_\_\_\_  
 Location: Bayou Corne, Belle Rose, LA  
 Sampled By: S. Shaughnessy  
 Circle one:    Standard  
                   Priority  
                   Rush

**Sample Description**


Container Number	Sample Identification	Date Sampled	Time				Comments
	GP-56	12/13/13	09:30	X			Calis

**Chain-of-Custody Record**

Signature	Company	Date	Time
Relinquished by <u>[Signature]</u>	<u>Sage</u>	<u>12/13/13</u>	<u>12:00</u>
Received by <u>[Signature]</u>	<u>Accutest</u>	<u>12/13/13</u>	
Relinquished by			
Received by			
Relinquished by			
Received by			







SPL, Inc.

Air Testing Services

Analysis Request & Chain of Custody Record

SPL Workorder No.

Page 1 of 1

Company Name: Sage Environmental Consulting  
 Address: 8440 Jefferson Hwy, Suite 400  
 City: Baton Rouge State: LA Zip: 70809  
 Phone: 225-927-2258 Fax: 225-927-2256  
 Client Contact: karl.duckworth@sageenvironmental.com  
 Project Name/No.: Texas Brine  
 Site Name: Bayou Corne  
 Site Location: Belle Rose, LA  
 Collected by: (Sig.) S. Shaughnessy  
 P.O.#:

Sample Container Type  
 C=Canister/T=Tedlar Bag  
 Sample Container Size (Insert the size of sample container, ie. 1L = 1 Liter)

Requested TAT  
 24hr  48hr  72hr  5 Day  
 Standard  Contract  Other

QC Requirements  
 stand. qc  level III  level IV  
 TX TRRP  LA RECAP

Report Results  
 Fax  Email  pdf

Canister	Serial #'s Flow Reg.	Client Sample Id:	Date	Time	Sample Container Type C=Canister/T=Tedlar Bag	Sample Container Size (Insert the size of sample container, ie. 1L = 1 Liter)	Analyses Requested	Canister Pressure / Vacuum		
								Initial	Final	Lab
		GP-56	12/13/13	09:30	T	Sulfur				

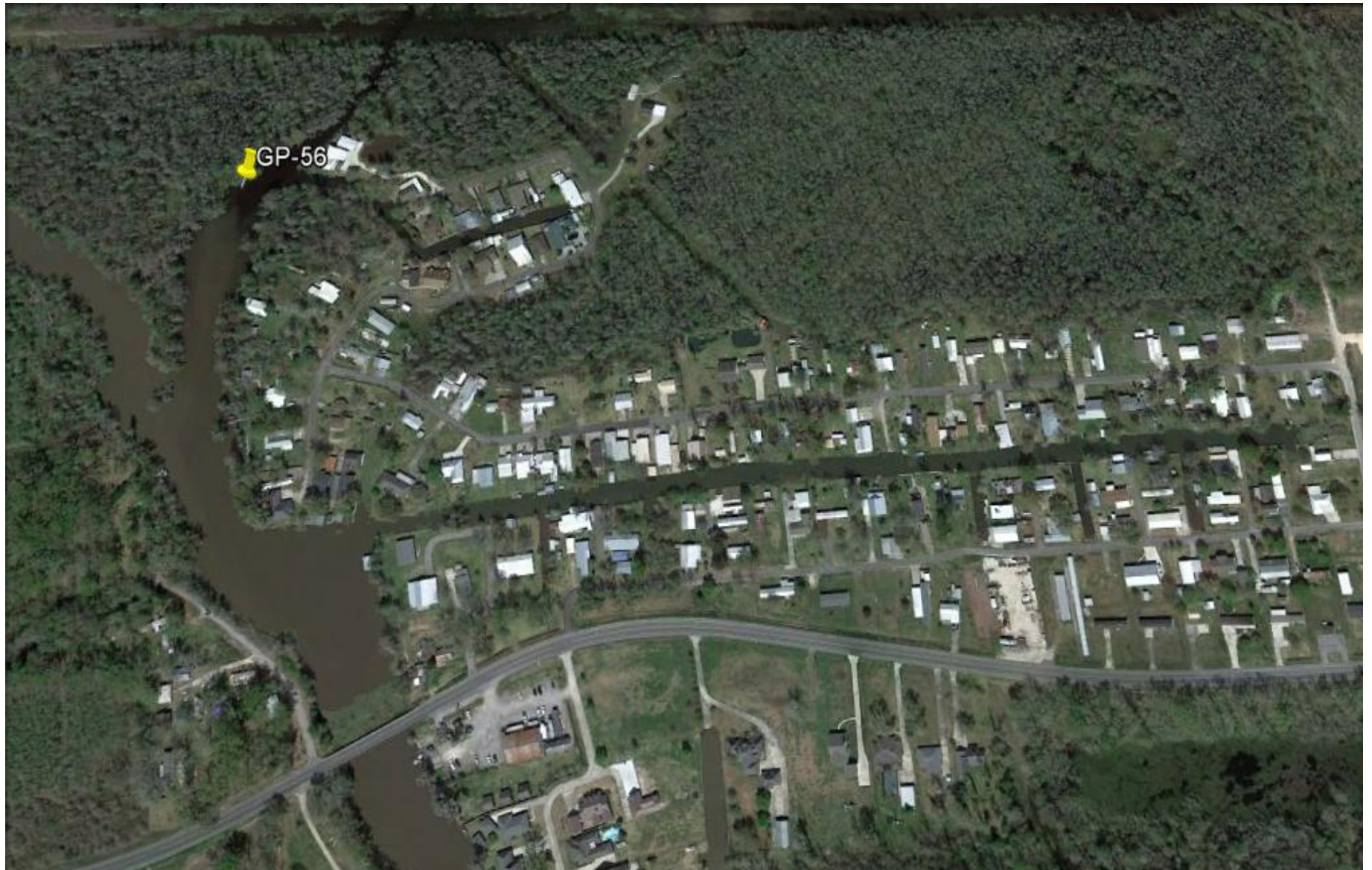
Client Comments:

1. Relinquished by: <i>[Signature]</i>	date: 12/13/13	time: 12:00	2. Received by: <i>[Signature]</i>
3. Relinquished by:	date:	time:	4. Received by:
5. Relinquished by:	date:	time:	6. Received by Laboratory:

LAB USE ONLY

Shipper Name	Arrival #	Opened By	Temp (°F)	Condition	Custody seals Intact?	PM Review (Initials)
					<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> None Present	
Lab Comments:						





**Well Gas Sampling Event**

**December 13, 2013**



**Texas Brine - Belle Rose, Louisiana**  
**Hourly Air Monitoring Data**  
**Neighborhood Monitoring**

\*Time indicates start of time period (ex. 12:00:00 AM gives the time period 12:00:00 AM to 12:59:59 AM)

Date-Time *	Observation Relief Well -49 at the Well Head			Observation Relief Well - 50 at the Well Head			Passive Vent Well -56		
	ORW-49-WH			ORW-50-WH			PVW-BS-56		
	H2S (ppm)	LEL (%)	O2 (%)	H2S (ppm)	LEL (%)	O2 (%)	H2S (ppm)	LEL (%)	O2 (%)
12/13/2013 05:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/13/2013 06:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/13/2013 07:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/13/2013 08:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/13/2013 09:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/13/2013 10:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/13/2013 11:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/13/2013 12:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/13/2013 01:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/13/2013 02:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/13/2013 03:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/13/2013 04:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/13/2013 05:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/13/2013 06:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/13/2013 07:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/13/2013 08:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/13/2013 09:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/13/2013 10:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/13/2013 11:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/14/2013 12:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/14/2013 01:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/14/2013 02:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/14/2013 03:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/14/2013 04:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/14/2013 05:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9

Notes:

**Texas Brine - Belle Rose, Louisiana**  
**Hourly Air Monitoring Data**  
**Sinkhole Perimeter Monitoring**

\*Time indicates start of time period (ex. 12:00:00 AM gives the time period 12:00:00 AM to 12:59:59 AM)

Date-Time *	Observation Relief Well -5					Observation Relief Well - 9					Observation Relief Well -11					South of OG3A-1					Onsite Trailers				
	ORW-5					ORW-9a					ORW-11a					Pad #9					TR-1a				
	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	SO2 (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)
12/13/2013 05:00:00 AM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.6	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/13/2013 06:00:00 AM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.6	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/13/2013 07:00:00 AM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.7	<1.0	0.0	0.0	0.0	20.5	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/13/2013 08:00:00 AM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.6	<1.0	0.0	0.0	0.0	20.6	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/13/2013 09:00:00 AM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.7	<1.0	0.0	0.0	0.0	20.6	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/13/2013 10:00:00 AM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/13/2013 11:00:00 AM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/13/2013 12:00:00 PM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/13/2013 01:00:00 PM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/13/2013 02:00:00 PM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.0	0.0	0.0	0.0	0.0	20.9
12/13/2013 03:00:00 PM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.2	0.0	0.0	0.0	0.0	20.9
12/13/2013 04:00:00 PM	0.0	0.0	0.0	0.0	21.1	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.2	0.0	0.0	0.0	0.0	21.1
12/13/2013 05:00:00 PM	0.0	0.0	0.0	0.0	21.2	<1.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.2	0.0	0.0	0.0	0.0	21.2
12/13/2013 06:00:00 PM	0.0	0.0	0.0	0.0	21.2	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.2	0.0	0.0	0.0	0.0	21.1
12/13/2013 07:00:00 PM	0.0	0.0	0.0	0.0	21.1	<1.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.0	0.0	0.0	0.0	0.0	21.1
12/13/2013 08:00:00 PM	0.0	0.0	0.0	0.0	21.1	<1.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/13/2013 09:00:00 PM	0.0	0.0	0.0	0.0	21.1	<1.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/13/2013 10:00:00 PM	0.0	0.0	0.0	0.0	21.1	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/13/2013 11:00:00 PM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/14/2013 12:00:00 AM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/14/2013 01:00:00 AM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/14/2013 02:00:00 AM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/14/2013 03:00:00 AM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/14/2013 04:00:00 AM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/14/2013 05:00:00 AM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9

Notes:

## **Daily Action Summary**

**December 14, 2013**

### **Sinkhole Perimeter Air Monitoring and Neighborhood ORWs Air Monitoring**

- Bijet Mukherjee onsite from 08:00 – 09:30. Conducted monitor change out at 08:23. Collected data from the monitoring database and forwarded to Eric Rucinski in the Baton Rouge office for processing.
- Code Red (monitor sub-contractor) onsite for continuous 24/7 monitoring:
  - Britt Barnett onsite from 0:00 to 06:00; 18:00 to 24:00
  - Roxana Dubose onsite from 06:00 to 18:00

Technicians also assisted in battery change outs and maintenance of the monitoring equipment as necessary.

NOTE: The sinkhole monitors are now housed in solar-powered weather boxes; thus, daily monitor change-out not necessary for Pad 9, TR-1a, ORW-11a, ORW-9a, and ORW-5. Neighborhood monitoring locations ORW-49-WH and ORW-50-WH are now equipped with electrical power; thus, daily monitor change-out is additionally not necessary for these locations. All monitors will continue to be calibrated and serviced as necessary.

### **Residential Air Monitoring**

- Sage has been requested to suspend bimonthly residential air monitoring. Therefore, Sage will discontinue these activities. The last event was conducted on March 26, 2013.

### **Gas Seep Sampling**

- Not Scheduled

### **Well Gas Sampling**

- Not Scheduled

### **Under Slab Gas Sampling**

- Not Scheduled

### **Air Indoor Monitoring**

- Not Scheduled

**Texas Brine - Belle Rose, Louisiana**  
**Hourly Air Monitoring Data**  
**Neighborhood Monitoring**

\*Time indicates start of time period (ex. 12:00:00 AM gives the time period 12:00:00 AM to 12:59:59 AM)

Date-Time *	Observation Relief Well -49 at the Well Head			Observation Relief Well - 50 at the Well Head			Passive Vent Well -56		
	ORW-49-WH			ORW-50-WH			PVW-BS-56		
	H2S (ppm)	LEL (%)	O2 (%)	H2S (ppm)	LEL (%)	O2 (%)	H2S (ppm)	LEL (%)	O2 (%)
12/14/2013 01:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/14/2013 02:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/14/2013 03:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/14/2013 04:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/14/2013 05:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/14/2013 06:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/14/2013 07:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/14/2013 08:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/14/2013 09:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/14/2013 10:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/14/2013 11:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/14/2013 12:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/14/2013 01:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/14/2013 02:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/14/2013 03:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/14/2013 04:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/14/2013 05:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/14/2013 06:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/14/2013 07:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/14/2013 08:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/14/2013 09:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/14/2013 10:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/14/2013 11:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/15/2013 12:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9

Notes:

**Texas Brine - Belle Rose, Louisiana**  
**Hourly Air Monitoring Data**  
**Sinkhole Perimeter Monitoring**

\*Time indicates start of time period (ex. 12:00:00 AM gives the time period 12:00:00 AM to 12:59:59 AM)

Date-Time *	Observation Relief Well -5					Observation Relief Well - 9					Observation Relief Well -11					South of OG3A-1					Onsite Trailers				
	ORW-5					ORW-9a					ORW-11a					Pad #9					TR-1a				
	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	SO2 (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)
12/14/2013 01:00:00 AM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/14/2013 02:00:00 AM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/14/2013 03:00:00 AM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/14/2013 04:00:00 AM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/14/2013 05:00:00 AM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/14/2013 06:00:00 AM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/14/2013 07:00:00 AM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/14/2013 08:00:00 AM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/14/2013 09:00:00 AM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/14/2013 10:00:00 AM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/14/2013 11:00:00 AM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/14/2013 12:00:00 PM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/14/2013 01:00:00 PM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/14/2013 02:00:00 PM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/14/2013 03:00:00 PM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/14/2013 04:00:00 PM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/14/2013 05:00:00 PM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/14/2013 06:00:00 PM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.0
12/14/2013 07:00:00 PM	0.0	0.0	0.0	0.0	21.1	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.1	0.0	0.0	0.0	0.0	20.9
12/14/2013 08:00:00 PM	0.0	0.0	0.0	0.0	21.2	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.1	0.0	0.0	0.0	0.0	21.0
12/14/2013 09:00:00 PM	0.0	0.0	0.0	0.0	21.2	<1.0	<1.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.1	0.0	0.0	0.0	0.0	20.9
12/14/2013 10:00:00 PM	0.0	0.0	0.0	0.0	21.2	<1.0	<1.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/14/2013 11:00:00 PM	0.0	0.0	0.0	0.0	21.2	<1.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/15/2013 12:00:00 AM	0.0	0.0	0.0	0.0	21.2	<1.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9

Notes:



**Texas Brine - Belle Rose, Louisiana**  
**Hourly Air Monitoring Data**  
**Neighborhood Monitoring**

\*Time indicates start of time period (ex. 12:00:00 AM gives the time period 12:00:00 AM to 12:59:59 AM)

Date-Time *	Observation Relief Well -49 at the Well Head			Observation Relief Well - 50 at the Well Head			Passive Vent Well -56		
	ORW-49-WH			ORW-50-WH			PVW-BS-56		
	H2S (ppm)	LEL (%)	O2 (%)	H2S (ppm)	LEL (%)	O2 (%)	H2S (ppm)	LEL (%)	O2 (%)
12/14/2013 05:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/14/2013 06:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/14/2013 07:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/14/2013 08:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/14/2013 09:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/14/2013 10:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/14/2013 11:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/14/2013 12:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/14/2013 01:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/14/2013 02:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/14/2013 03:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/14/2013 04:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/14/2013 05:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/14/2013 06:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/14/2013 07:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/14/2013 08:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/14/2013 09:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/14/2013 10:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/14/2013 11:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/15/2013 12:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/15/2013 01:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/15/2013 02:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/15/2013 03:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/15/2013 04:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/15/2013 05:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9

Notes:

**Texas Brine - Belle Rose, Louisiana**  
**Hourly Air Monitoring Data**  
**Sinkhole Perimeter Monitoring**

\*Time indicates start of time period (ex. 12:00:00 AM gives the time period 12:00:00 AM to 12:59:59 AM)

Date-Time *	Observation Relief Well -5					Observation Relief Well - 9					Observation Relief Well -11					South of OG3A-1					Onsite Trailers				
	ORW-5					ORW-9a					ORW-11a					Pad #9					TR-1a				
	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	SO2 (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)
12/14/2013 05:00:00 AM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/14/2013 06:00:00 AM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/14/2013 07:00:00 AM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/14/2013 08:00:00 AM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/14/2013 09:00:00 AM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/14/2013 10:00:00 AM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/14/2013 11:00:00 AM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/14/2013 12:00:00 PM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/14/2013 01:00:00 PM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/14/2013 02:00:00 PM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/14/2013 03:00:00 PM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/14/2013 04:00:00 PM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/14/2013 05:00:00 PM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/14/2013 06:00:00 PM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.0
12/14/2013 07:00:00 PM	0.0	0.0	0.0	0.0	21.1	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.1	0.0	0.0	0.0	0.0	20.9
12/14/2013 08:00:00 PM	0.0	0.0	0.0	0.0	21.2	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.1	0.0	0.0	0.0	0.0	21.0
12/14/2013 09:00:00 PM	0.0	0.0	0.0	0.0	21.2	<1.0	<1.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.1	0.0	0.0	0.0	0.0	20.9
12/14/2013 10:00:00 PM	0.0	0.0	0.0	0.0	21.2	<1.0	<1.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/14/2013 11:00:00 PM	0.0	0.0	0.0	0.0	21.2	<1.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/15/2013 12:00:00 AM	0.0	0.0	0.0	0.0	21.2	<1.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/15/2013 01:00:00 AM	0.0	0.0	0.0	0.0	21.1	<1.0	<1.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/15/2013 02:00:00 AM	0.0	0.0	0.0	0.0	21.2	<1.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/15/2013 03:00:00 AM	0.0	0.0	0.0	0.0	21.2	<1.0	<1.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/15/2013 04:00:00 AM	0.0	0.0	0.0	0.0	21.2	<1.0	<1.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/15/2013 05:00:00 AM	0.0	0.0	0.0	0.0	21.2	<1.0	<1.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9

Notes:

## **Daily Action Summary**

**December 15, 2013**

### **Sinkhole Perimeter Air Monitoring and Neighborhood ORWs Air Monitoring**

- Bijet Mukherjee onsite from 07:35 – 08:50. Conducted monitor change out at 08:37. Collected data from the monitoring database and forwarded to Eric Rucinski in the Baton Rouge office for processing.
- Code Red (monitor sub-contractor) onsite for continuous 24/7 monitoring:
  - Britt Barnett onsite from 0:00 to 06:00; 18:00 to 24:00
  - Roxana Dubose onsite from 06:00 to 18:00

Technicians also assisted in battery change outs and maintenance of the monitoring equipment as necessary.

NOTE: The sinkhole monitors are now housed in solar-powered weather boxes; thus, daily monitor change-out not necessary for Pad 9, TR-1a, ORW-11a, ORW-9a, and ORW-5. Neighborhood monitoring locations ORW-49-WH and ORW-50-WH are now equipped with electrical power; thus, daily monitor change-out is additionally not necessary for these locations. All monitors will continue to be calibrated and serviced as necessary.

### **Residential Air Monitoring**

- Sage has been requested to suspend bimonthly residential air monitoring. Therefore, Sage will discontinue these activities. The last event was conducted on March 26, 2013.

### **Gas Seep Sampling**

- Not Scheduled

### **Well Gas Sampling**

- Not Scheduled

### **Under Slab Gas Sampling**

- Not Scheduled

### **Air Indoor Monitoring**

- Not Scheduled

**Texas Brine - Belle Rose, Louisiana**  
**Hourly Air Monitoring Data**  
**Neighborhood Monitoring**

\*Time indicates start of time period (ex. 12:00:00 AM gives the time period 12:00:00 AM to 12:59:59 AM)

Date-Time *	Observation Relief Well -49 at the Well Head			Observation Relief Well - 50 at the Well Head			Passive Vent Well -56		
	ORW-49-WH			ORW-50-WH			PVW-BS-56		
	H2S (ppm)	LEL (%)	O2 (%)	H2S (ppm)	LEL (%)	O2 (%)	H2S (ppm)	LEL (%)	O2 (%)
12/15/2013 01:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/15/2013 02:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/15/2013 03:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/15/2013 04:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/15/2013 05:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/15/2013 06:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/15/2013 07:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/15/2013 08:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/15/2013 09:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/15/2013 10:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/15/2013 11:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/15/2013 12:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/15/2013 01:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/15/2013 02:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/15/2013 03:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/15/2013 04:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/15/2013 05:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/15/2013 06:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/15/2013 07:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/15/2013 08:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/15/2013 09:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/15/2013 10:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/15/2013 11:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/16/2013 12:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9

Notes:

**Texas Brine - Belle Rose, Louisiana**  
**Hourly Air Monitoring Data**  
**Sinkhole Perimeter Monitoring**

\*Time indicates start of time period (ex. 12:00:00 AM gives the time period 12:00:00 AM to 12:59:59 AM)

Date-Time *	Observation Relief Well -5					Observation Relief Well - 9					Observation Relief Well -11					South of OG3A-1					Onsite Trailers				
	ORW-5					ORW-9a					ORW-11a					Pad #9					TR-1a				
	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	SO2 (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)
12/15/2013 01:00:00 AM	0.0	0.0	0.0	0.0	21.1	<1.0	<1.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/15/2013 02:00:00 AM	0.0	0.0	0.0	0.0	21.2	<1.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/15/2013 03:00:00 AM	0.0	0.0	0.0	0.0	21.2	<1.0	<1.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/15/2013 04:00:00 AM	0.0	0.0	0.0	0.0	21.2	<1.0	<1.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/15/2013 05:00:00 AM	0.0	0.0	0.0	0.0	21.2	<1.0	<1.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/15/2013 06:00:00 AM	0.0	0.0	0.0	0.0	21.1	<1.0	<1.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/15/2013 07:00:00 AM	0.0	0.0	0.0	0.0	21.1	<1.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/15/2013 08:00:00 AM	0.0	0.0	0.0	0.0	21.1	<1.0	<1.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/15/2013 09:00:00 AM	0.0	0.0	0.0	0.0	21.0	<1.0	<1.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/15/2013 10:00:00 AM	0.0	0.0	0.0	0.0	20.9	<1.0	<1.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/15/2013 11:00:00 AM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.8	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/15/2013 12:00:00 PM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/15/2013 01:00:00 PM	0.0	0.0	0.0	0.0	21.2	<1.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.2	0.0	0.0	0.0	0.0	20.9
12/15/2013 02:00:00 PM	0.0	0.0	0.0	0.0	21.3	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.3	0.0	0.0	0.0	0.0	20.9
12/15/2013 03:00:00 PM	0.0	0.0	0.0	0.0	21.3	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.0	0.0	0.0	0.0	0.0	21.4	0.0	0.0	0.0	0.0	21.0
12/15/2013 04:00:00 PM	0.0	0.0	0.0	0.0	21.3	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.4	0.0	0.0	0.0	0.0	21.2
12/15/2013 05:00:00 PM	0.0	0.0	0.0	0.0	21.3	<1.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.2	0.0	0.0	0.0	0.0	21.2
12/15/2013 06:00:00 PM	0.0	0.0	0.0	0.0	21.2	<1.0	<1.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.1	0.0	0.0	0.0	0.0	21.2
12/15/2013 07:00:00 PM	0.0	0.0	0.0	0.0	21.2	<1.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.0
12/15/2013 08:00:00 PM	0.0	0.0	0.0	0.0	21.2	<1.0	<1.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/15/2013 09:00:00 PM	0.0	0.0	0.0	0.0	21.0	<1.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/15/2013 10:00:00 PM	0.0	0.0	0.0	0.0	21.0	<1.0	<1.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.8	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/15/2013 11:00:00 PM	0.0	0.0	0.0	0.0	21.0	<1.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.6	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/16/2013 12:00:00 AM	0.0	0.0	0.0	0.0	20.9	<1.0	<1.0	0.0	0.0	20.7	<1.0	0.0	0.0	0.0	20.6	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9

Notes:

**Texas Brine - Belle Rose, Louisiana**  
**Hourly Air Monitoring Data**  
**Neighborhood Monitoring**

\*Time indicates start of time period (ex. 12:00:00 AM gives the time period 12:00:00 AM to 12:59:59 AM)

Date-Time *	Observation Relief Well -49 at the Well Head			Observation Relief Well - 50 at the Well Head			Passive Vent Well -56		
	ORW-49-WH			ORW-50-WH			PVW-BS-56		
	H2S (ppm)	LEL (%)	O2 (%)	H2S (ppm)	LEL (%)	O2 (%)	H2S (ppm)	LEL (%)	O2 (%)
12/15/2013 05:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/15/2013 06:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/15/2013 07:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/15/2013 08:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/15/2013 09:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/15/2013 10:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/15/2013 11:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/15/2013 12:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/15/2013 01:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/15/2013 02:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/15/2013 03:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/15/2013 04:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/15/2013 05:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/15/2013 06:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/15/2013 07:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/15/2013 08:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/15/2013 09:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/15/2013 10:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/15/2013 11:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/16/2013 12:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/16/2013 01:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/16/2013 02:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/16/2013 03:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/16/2013 04:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/16/2013 05:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9

Notes:

**Texas Brine - Belle Rose, Louisiana**  
**Hourly Air Monitoring Data**  
**Sinkhole Perimeter Monitoring**

\*Time indicates start of time period (ex. 12:00:00 AM gives the time period 12:00:00 AM to 12:59:59 AM)

Date-Time *	Observation Relief Well -5					Observation Relief Well - 9					Observation Relief Well -11					South of OG3A-1					Onsite Trailers				
	ORW-5					ORW-9a					ORW-11a					Pad #9					TR-1a				
	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	SO2 (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)
12/15/2013 05:00:00 AM	0.0	0.0	0.0	0.0	21.2	<1.0	<1.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/15/2013 06:00:00 AM	0.0	0.0	0.0	0.0	21.1	<1.0	<1.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/15/2013 07:00:00 AM	0.0	0.0	0.0	0.0	21.1	<1.0	<1.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/15/2013 08:00:00 AM	0.0	0.0	0.0	0.0	21.1	<1.0	<1.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/15/2013 09:00:00 AM	0.0	0.0	0.0	0.0	21.0	<1.0	<1.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/15/2013 10:00:00 AM	0.0	0.0	0.0	0.0	20.9	<1.0	<1.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/15/2013 11:00:00 AM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.8	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/15/2013 12:00:00 PM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/15/2013 01:00:00 PM	0.0	0.0	0.0	0.0	21.2	<1.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.2	0.0	0.0	0.0	0.0	20.9
12/15/2013 02:00:00 PM	0.0	0.0	0.0	0.0	21.3	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.3	0.0	0.0	0.0	0.0	20.9
12/15/2013 03:00:00 PM	0.0	0.0	0.0	0.0	21.3	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.0	0.0	0.0	0.0	0.0	21.4	0.0	0.0	0.0	0.0	21.0
12/15/2013 04:00:00 PM	0.0	0.0	0.0	0.0	21.3	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.4	0.0	0.0	0.0	0.0	21.2
12/15/2013 05:00:00 PM	0.0	0.0	0.0	0.0	21.3	<1.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.2	0.0	0.0	0.0	0.0	21.2
12/15/2013 06:00:00 PM	0.0	0.0	0.0	0.0	21.2	<1.0	<1.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.1	0.0	0.0	0.0	0.0	21.2
12/15/2013 07:00:00 PM	0.0	0.0	0.0	0.0	21.2	<1.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.0
12/15/2013 08:00:00 PM	0.0	0.0	0.0	0.0	21.2	<1.0	<1.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/15/2013 09:00:00 PM	0.0	0.0	0.0	0.0	21.0	<1.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/15/2013 10:00:00 PM	0.0	0.0	0.0	0.0	21.0	<1.0	<1.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.8	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/15/2013 11:00:00 PM	0.0	0.0	0.0	0.0	21.0	<1.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.6	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/16/2013 12:00:00 AM	0.0	0.0	0.0	0.0	20.9	<1.0	<1.0	0.0	0.0	20.7	<1.0	0.0	0.0	0.0	20.6	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/16/2013 01:00:00 AM	0.0	0.0	0.0	0.0	20.9	<1.0	<1.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.6	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/16/2013 02:00:00 AM	0.0	0.0	0.0	0.0	20.9	<1.0	<1.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.6	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/16/2013 03:00:00 AM	0.0	0.0	0.0	0.0	20.9	<1.0	<1.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.6	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/16/2013 04:00:00 AM	0.0	0.0	0.0	0.0	20.9	<1.0	<1.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.6	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/16/2013 05:00:00 AM	0.0	0.0	0.0	0.0	20.9	<1.0	<1.0	0.0	0.0	20.8	0.0	0.0	0.0	0.0	20.6	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9

Notes:

**RESPEC Consulting & Services**

Texas Brine, L.L.C.

Assumption Parish, Louisiana

Daily Field Report

Report By: David Gnage

Date: 12/13/13

Company: RESPEC

Job #: 02241

<b>Personnel</b>	<b>Company</b>	<b>Job Title</b>

**Time Onsite:** Start Time: NA End Time: NA

**DAILY ACTIVITY:**

No Field Work Conducted. RESPEC was not on-site.

**Instrumentation Program:**

No Work Conducted.

**Other Programs:**

*Passive Vent-GP-56:* No Work Conducted.

**PROPOSED SCHEDULE:**

**Instrumentation Program:**

No Work is Currently Planned

**Other Programs:**

*Passive Vent-GP-56:* No Work is Currently Planned by RESPEC.

Initials: DJG



**RESPEC Consulting & Services**

Texas Brine, L.L.C.

Assumption Parish, Louisiana

Daily Field Report

Report By: David Gnage

Date: 12/14/13

Company: RESPEC

Job #: 02241

<b>Personnel</b>	<b>Company</b>	<b>Job Title</b>

**Time Onsite:** Start Time: NA End Time: NA

**DAILY ACTIVITY:**

No Field Work Conducted. RESPEC was not on-site.

**Instrumentation Program:**

No Work Conducted.

**Other Programs:**

*Passive Vent-GP-56:* No Work Conducted.

**PROPOSED SCHEDULE:**

**Instrumentation Program:**

No Work is Currently Planned

**Other Programs:**

*Passive Vent-GP-56:* No Work is Currently Planned by RESPEC.

Initials: DJG

**RESPEC Consulting & Services**

Texas Brine, L.L.C.

Assumption Parish, Louisiana

Daily Field Report

Report By: David Gnage

Date: 12/15/13

Company: RESPEC

Job #: 02241

<b>Personnel</b>	<b>Company</b>	<b>Job Title</b>

**Time Onsite:** Start Time: NA End Time: NA

**DAILY ACTIVITY:**

No Field Work Conducted. RESPEC was not on-site.

**Instrumentation Program:**

No Work Conducted.

**Other Programs:**

*Passive Vent-GP-56:* No Work Conducted.

**PROPOSED SCHEDULE:**

**Instrumentation Program:**

No Work is Currently Planned

**Other Programs:**

*Passive Vent-GP-56:* No Work is Currently Planned by RESPEC.

Initials: DJG

## **ME&A Daily Action Summary**

December 12, 2013

### **Subsidence Survey:**

- No Work Done

### **Sinkhole Perimeter/Hydrographic Survey:**

- Fathometer & Wireline Survey

### **Support Sinkhole Cleanup**

- No Work Done

### **Misc. Survey Work**

- Arrived @ 8:30 am
- Surveyed Containment Berm Settlement Plates
- Departed @ 3:00 pm

## **ME&A Daily Action Summary**

December 13, 2013

### **Subsidence Survey:**

- No Work Done

### **Sinkhole Perimeter/Hydrographic Survey:**

- Perimeter survey of sinkhole

### **Support Sinkhole Cleanup**

- No Work Done

### **Misc. Survey Work**

- Arrived @ 8:45 am
- Surveyed Containment Berm Settlement Plates
- Surveyed South Berm Rods
- Departed @ 3:30 am

## **ME&A Daily Action Summary**

December 14, 2013

### **Subsidence Survey:**

- No Work Done

### **Sinkhole Perimeter/Hydrographic Survey:**

- No Work Done

### **Support Sinkhole Cleanup**

- No Work Done

### **Misc. Survey Work**

- Arrived @ 8:45 am
- Surveyed Containment Berm Settlement Plates
- Departed @ 11:15 am