



# Texas Brine Company, LLC

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February 14, 2014

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	Steven Shaughnessy onsite for Well Gas Sampling - see below Roxana Dubose (CodeRed) - 07:00 - 17:00		2/13/2014		NA	NA	NA	NA	2/14/2014	
	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		2/13/2014		NA	NA	NA	NA	NA	
	Well Gas Sampling	Steve Shaughnessy - 08:15 2 samples from PVW-03		2/13/2014		To be delivered on 2/14/2014	No	Isotech SPL	Isotopic Sulfur	upon receipt of results from labs	
	Under Slab Gas Sampling	No work performed		2/13/2014		NA	NA	NA	NA	NA	
	Indoor Air Monitoring	No work performed		2/13/2014		NA	NA	NA	NA	NA	
Respec	Inclinometers/Tilt Meters/Transducers	2/13/2014	NA	NA	NA	NA	NA	NA	NA	NA	
	InSAR Reflector Installations	2/13/2014	NA	NA	NA	NA	NA	NA	NA	NA	
	Subsidence Survey-Fenstermaker	2/13/2014	NA	NA	NA	NA	NA	NA	NA	NA	
	Shallow Geophone Installation	2/13/2014	NA	NA	NA	NA	NA	NA	NA	NA	
	Deep Geophone Installation	2/13/2014	NA	NA	NA	NA	NA	NA	NA	NA	
	Amendment #3, Directive #2	2/13/2014	NA	NA	NA	NA	NA	NA	NA	NA	
	Expansion of geoprobe gas sampling locations	2/13/2014	NA	NA	NA	NA	NA	NA	NA	NA	
	DPVE	2/13/2014	NA	NA	NA	NA	NA	NA	NA	NA	
	Abandon Casing Survey	2/13/2014	NA	NA	NA	NA	NA	NA	NA	NA	
	Passive Vent Wells	2/13/2014	NA	NA	NA	NA	NA	NA	NA	NA	
	MIHPT	2/13/2014	NA	NA	NA	NA	NA	NA	NA	NA	
	Miller	Weekly Stability Survey	NA	NA	February 13, 2014		NA	NA	NA	NA	NA
		Misc. Survey Work	NA	NA	February 13, 2014		NA	NA	NA	NA	NA
		Sinkhole Hydro/Perimeter Survey	NA	NA	February 13, 2014		NA	NA	NA	NA	NA
Pisani	Surface Water	NA	NA	February 13, 2014		NA	NA	NA	NA	NA	
	Sinkhole	NA	NA	February 13, 2014		NA	NA	NA	NA	NA	
	Industrial Well Water	NA	NA	February 13, 2014		NA	NA	NA	NA	NA	
	MRAA Well Water	NA	NA	February 13, 2014		NA	NA	NA	NA	NA	
	GP/ORW Water	NA	NA	February 13, 2014		NA	NA	NA	NA	NA	
	Cavern Water	NA	NA	February 13, 2014		NA	NA	NA	NA	NA	
	Discharge/Outfall Water	NA	NA	February 13, 2014		NA	NA	NA	NA	NA	
	Geoprobe Wells	NA	NA	February 13, 2014		NA	NA	NA	NA	NA	
Grand Bayou Well 3A											
Daily Operations at 3A	Summary of Today's events										
	2/14/2014	Oxy 3A									
	7:00am	1102.73	2/14/2014								
2/14/2014	Relief Well #1										
	See ORW-01 Flare Spreadsheet (will be provided 1/2/14)										

## **Attachments**

## **Daily Action Summary**

**February 13, 2014**

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

- The following locations are equipped with solar-powered weather boxes: Pad #9, TR-1a, ORW-11a, ORW-6, ORW-18, PVW-02, and PVW-BS-56a. And, the following locations are equipped with electrical power: ORW-49-WH, ORW-50-WH, and PVW-03. Thus, daily monitor change-out is no longer necessary for these locations. All monitors will continue to be calibrated and serviced as necessary.
- Steven Shaughnessy onsite from 08:00 to 08:30 for well gas sampling (see Well Gas Sampling section below).
- Roxana Dubose of Code Red (monitor sub-contractor) onsite from 07:00 to 17:00. Assisted in maintenance of the monitoring equipment as necessary.

NOTE: PVW-04 and PVW-05 were equipped with solar-powered boxes on 02/13/2014.

### **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 PVW-03. Steven Shaughnessy started the scheduled well gas sampling at 08:15. Two samples were collected; one for isotopic analysis and one for sulfur analysis. Both samples will be delivered to the Accutest service center on 02/14/2014. Samples will be transported to the SPL Louisiana laboratory for the designated sulfur analysis. SPL will also ship the designated sample to Isotech Laboratories in Illinois for isotopic analysis.

### **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			Passive Vent Well - 03		
	ORW-49-WH			ORW-50-WH			PVW-BS-56a			PVW-03		
	H2S (ppm)	LEL (%)	O2 (%)	H2S (ppm)	LEL (%)	O2 (%)	H2S (ppm)	LEL (%)	O2 (%)	H2S (ppm)	LEL (%)	O2 (%)
02/13/2014 01:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0
02/13/2014 02:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0
02/13/2014 03:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0
02/13/2014 04:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0
02/13/2014 05:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0
02/13/2014 06:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0
02/13/2014 07:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0
02/13/2014 08:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0
02/13/2014 09:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0
02/13/2014 10:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0
02/13/2014 11:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0
02/13/2014 12:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0
02/13/2014 01:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0
02/13/2014 02:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0
02/13/2014 03:00:00 PM	<1.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0
02/13/2014 04:00:00 PM	<1.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0
02/13/2014 05:00:00 PM	<1.0	0.0	21.8	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0
02/13/2014 06:00:00 PM	0.0	0.0	21.6	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0
02/13/2014 07:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0
02/13/2014 08:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0
02/13/2014 09:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0
02/13/2014 10:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0
02/13/2014 11:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0
02/14/2014 12:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0

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 *	Passive Vent Well - 02			Observation Relief Well - 58			Passive Vent Well - 04			Passive Vent Well -05		
	PVW-02			ORW-58			PVW-04			PVW-05		
	H2S (ppm)	LEL (%)	O2 (%)	H2S (ppm)	LEL (%)	O2 (%)	H2S (ppm)	LEL (%)	O2 (%)	H2S (ppm)	LEL (%)	O2 (%)
02/13/2014 01:00:00 AM	0.0	0.0	21.0	0.0	0.0	20.5	0.0	0.0	20.6	0.0	0.0	20.6
02/13/2014 02:00:00 AM	0.0	0.0	21.0	0.0	0.0	20.5	0.0	0.0	20.6	0.0	0.0	20.6
02/13/2014 03:00:00 AM	0.0	0.0	21.0	0.0	0.0	20.5	0.0	0.0	20.6	0.0	0.0	20.6
02/13/2014 04:00:00 AM	0.0	0.0	21.0	0.0	0.0	20.5	0.0	0.0	20.6	0.0	0.0	20.6
02/13/2014 05:00:00 AM	0.0	0.0	21.0	0.0	0.0	20.5	0.0	0.0	20.5	0.0	0.0	20.6
02/13/2014 06:00:00 AM	0.0	0.0	21.0	0.0	0.0	20.5	0.0	0.0	20.5	0.0	0.0	20.6
02/13/2014 07:00:00 AM	0.0	0.0	21.0	0.0	0.0	20.5	0.0	0.0	20.5	0.0	0.0	20.6
02/13/2014 08:00:00 AM	0.0	0.0	21.0	0.0	0.0	20.5	0.0	0.0	20.6	0.0	0.0	20.6
02/13/2014 09:00:00 AM	0.0	0.0	21.0	0.0	0.0	20.5	0.0	0.0	20.6	0.0	0.0	20.6
02/13/2014 10:00:00 AM	0.0	0.0	21.0	0.0	0.0	20.6	0.0	0.0	20.6	0.0	0.0	20.6
02/13/2014 11:00:00 AM	0.0	0.0	21.0	0.0	0.0	20.6	0.0	0.0	20.9	0.0	0.0	20.6
02/13/2014 12:00:00 PM	0.0	0.0	21.0	0.0	0.0	20.6	0.0	0.0	20.9	<1.0	0.0	20.8
02/13/2014 01:00:00 PM	0.0	0.0	21.0	0.0	0.0	20.8	0.0	0.0	20.9	0.0	0.0	20.9
02/13/2014 02:00:00 PM	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9
02/13/2014 03:00:00 PM	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9
02/13/2014 04:00:00 PM	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9
02/13/2014 05:00:00 PM	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9
02/13/2014 06:00:00 PM	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9
02/13/2014 07:00:00 PM	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9
02/13/2014 08:00:00 PM	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9
02/13/2014 09:00:00 PM	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9
02/13/2014 10:00:00 PM	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9
02/13/2014 11:00:00 PM	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9
02/14/2014 12:00:00 AM	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	20.9	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 - 18					Observation Relief Well - 6					Observation Relief Well -11					South of OG3A-1					Onsite Trailers				
	ORW-18					ORW-6					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 (%)
02/13/2014 01:00:00 AM	<1.0	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	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
02/13/2014 02:00:00 AM	<1.0	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	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
02/13/2014 03:00:00 AM	<1.0	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	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
02/13/2014 04:00:00 AM	<1.0	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	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
02/13/2014 05:00:00 AM	<1.0	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	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
02/13/2014 06:00:00 AM	<1.0	0.0	0.0	0.0	20.8	<1.0	0.0	0.0	0.0	20.9	<1.0	<1.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
02/13/2014 07:00:00 AM	<1.0	0.0	0.0	0.0	20.6	<1.0	0.0	0.0	0.0	20.9	<1.0	<1.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
02/13/2014 08:00:00 AM	<1.0	0.0	0.0	0.0	20.6	<1.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
02/13/2014 09:00:00 AM	<1.0	0.0	0.0	0.0	20.6	<1.0	<1.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.8	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
02/13/2014 10:00:00 AM	<1.0	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	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
02/13/2014 11:00:00 AM	<1.0	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	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
02/13/2014 12:00:00 PM	<1.0	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	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	21.0
02/13/2014 01:00:00 PM	<1.0	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	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	21.2
02/13/2014 02:00:00 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	21.2	0.0	0.0	<1.0	0.0	21.1	0.0	0.0	0.0	0.0	21.2
02/13/2014 03:00:00 PM	<1.0	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	21.2	0.0	0.0	0.0	0.0	21.2	0.0	0.0	0.0	0.0	21.3
02/13/2014 04:00:00 PM	<1.0	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	21.2	0.0	0.0	0.0	0.0	21.2	0.0	0.0	0.0	0.0	21.4
02/13/2014 05:00:00 PM	<1.0	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	21.0	0.0	0.0	0.0	0.0	21.2	0.0	0.0	0.0	0.0	21.4
02/13/2014 06:00:00 PM	<1.0	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	21.2	0.0	0.0	0.0	0.0	21.4
02/13/2014 07:00:00 PM	<1.0	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	<1.0	0.0	21.0	0.0	0.0	0.0	0.0	21.2
02/13/2014 08:00:00 PM	<1.0	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	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	21.0
02/13/2014 09:00:00 PM	<1.0	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	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
02/13/2014 10:00:00 PM	<1.0	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	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
02/13/2014 11:00:00 PM	<1.0	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	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
02/14/2014 12:00:00 AM	<1.0	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	<1.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9

Notes:



**PVW-03 Well Gas Sampling Location**

**February 13, 2014**



**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			Passive Vent Well - 03		
	ORW-49-WH			ORW-50-WH			PVW-BS-56a			PVW-03		
	H2S (ppm)	LEL (%)	O2 (%)	H2S (ppm)	LEL (%)	O2 (%)	H2S (ppm)	LEL (%)	O2 (%)	H2S (ppm)	LEL (%)	O2 (%)
02/13/2014 05:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0
02/13/2014 06:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0
02/13/2014 07:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0
02/13/2014 08:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0
02/13/2014 09:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0
02/13/2014 10:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0
02/13/2014 11:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0
02/13/2014 12:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0
02/13/2014 01:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0
02/13/2014 02:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0
02/13/2014 03:00:00 PM	<1.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0
02/13/2014 04:00:00 PM	<1.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0
02/13/2014 05:00:00 PM	<1.0	0.0	21.8	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0
02/13/2014 06:00:00 PM	0.0	0.0	21.6	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0
02/13/2014 07:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0
02/13/2014 08:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0
02/13/2014 09:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0
02/13/2014 10:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0
02/13/2014 11:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0
02/14/2014 12:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0
02/14/2014 01:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	21.0
02/14/2014 02:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	21.0
02/14/2014 03:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	21.0
02/14/2014 04:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	21.0
02/14/2014 05:00:00 AM	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9	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 *	Passive Vent Well - 02			Observation Relief Well - 58			Passive Vent Well - 04			Passive Vent Well -05		
	PVW-02			ORW-58			PVW-04			PVW-05		
	H2S (ppm)	LEL (%)	O2 (%)	H2S (ppm)	LEL (%)	O2 (%)	H2S (ppm)	LEL (%)	O2 (%)	H2S (ppm)	LEL (%)	O2 (%)
02/13/2014 05:00:00 AM	0.0	0.0	21.0	0.0	0.0	20.5	0.0	0.0	20.5	0.0	0.0	20.6
02/13/2014 06:00:00 AM	0.0	0.0	21.0	0.0	0.0	20.5	0.0	0.0	20.5	0.0	0.0	20.6
02/13/2014 07:00:00 AM	0.0	0.0	21.0	0.0	0.0	20.5	0.0	0.0	20.5	0.0	0.0	20.6
02/13/2014 08:00:00 AM	0.0	0.0	21.0	0.0	0.0	20.5	0.0	0.0	20.6	0.0	0.0	20.6
02/13/2014 09:00:00 AM	0.0	0.0	21.0	0.0	0.0	20.5	0.0	0.0	20.6	0.0	0.0	20.6
02/13/2014 10:00:00 AM	0.0	0.0	21.0	0.0	0.0	20.6	0.0	0.0	20.6	0.0	0.0	20.6
02/13/2014 11:00:00 AM	0.0	0.0	21.0	0.0	0.0	20.6	0.0	0.0	20.9	0.0	0.0	20.6
02/13/2014 12:00:00 PM	0.0	0.0	21.0	0.0	0.0	20.6	0.0	0.0	20.9	<1.0	0.0	20.8
02/13/2014 01:00:00 PM	0.0	0.0	21.0	0.0	0.0	20.8	0.0	0.0	20.9	0.0	0.0	20.9
02/13/2014 02:00:00 PM	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9
02/13/2014 03:00:00 PM	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9
02/13/2014 04:00:00 PM	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9
02/13/2014 05:00:00 PM	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9
02/13/2014 06:00:00 PM	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9
02/13/2014 07:00:00 PM	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9
02/13/2014 08:00:00 PM	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9
02/13/2014 09:00:00 PM	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9
02/13/2014 10:00:00 PM	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9
02/13/2014 11:00:00 PM	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9
02/14/2014 12:00:00 AM	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9
02/14/2014 01:00:00 AM	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.6
02/14/2014 02:00:00 AM	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.6
02/14/2014 03:00:00 AM	0.0	0.0	21.0	0.0	0.0	20.8	0.0	0.0	20.8	0.0	0.0	20.6
02/14/2014 04:00:00 AM	0.0	0.0	21.0	0.0	0.0	20.6	<1.0	0.0	20.6	0.0	0.0	20.6
02/14/2014 05:00:00 AM	0.0	0.0	20.9	0.0	0.0	20.5	0.0	0.0	20.6	0.0	0.0	20.6

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 - 18					Observation Relief Well - 6					Observation Relief Well -11					South of OG3A-1					Onsite Trailers				
	ORW-18					ORW-6					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 (%)
02/13/2014 05:00:00 AM	<1.0	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	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
02/13/2014 06:00:00 AM	<1.0	0.0	0.0	0.0	20.8	<1.0	0.0	0.0	0.0	20.9	<1.0	<1.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
02/13/2014 07:00:00 AM	<1.0	0.0	0.0	0.0	20.6	<1.0	0.0	0.0	0.0	20.9	<1.0	<1.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
02/13/2014 08:00:00 AM	<1.0	0.0	0.0	0.0	20.6	<1.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
02/13/2014 09:00:00 AM	<1.0	0.0	0.0	0.0	20.6	<1.0	<1.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.8	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
02/13/2014 10:00:00 AM	<1.0	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	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
02/13/2014 11:00:00 AM	<1.0	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	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
02/13/2014 12:00:00 PM	<1.0	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	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	21.0
02/13/2014 01:00:00 PM	<1.0	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	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	21.2
02/13/2014 02:00:00 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	21.2	0.0	0.0	<1.0	0.0	21.1	0.0	0.0	0.0	0.0	21.2
02/13/2014 03:00:00 PM	<1.0	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	21.2	0.0	0.0	0.0	0.0	21.2	0.0	0.0	0.0	0.0	21.3
02/13/2014 04:00:00 PM	<1.0	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	21.2	0.0	0.0	0.0	0.0	21.2	0.0	0.0	0.0	0.0	21.4
02/13/2014 05:00:00 PM	<1.0	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	21.0	0.0	0.0	0.0	0.0	21.2	0.0	0.0	0.0	0.0	21.4
02/13/2014 06:00:00 PM	<1.0	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	21.2	0.0	0.0	0.0	0.0	21.4
02/13/2014 07:00:00 PM	<1.0	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	<1.0	0.0	21.0	0.0	0.0	0.0	0.0	21.2
02/13/2014 08:00:00 PM	<1.0	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	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	21.0
02/13/2014 09:00:00 PM	<1.0	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	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
02/13/2014 10:00:00 PM	<1.0	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	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
02/13/2014 11:00:00 PM	<1.0	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	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
02/14/2014 12:00:00 AM	<1.0	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	<1.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
02/14/2014 01:00:00 AM	<1.0	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	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
02/14/2014 02:00:00 AM	<1.0	0.0	0.0	0.0	20.9	<1.0	<1.0	0.0	0.0	20.8	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
02/14/2014 03:00:00 AM	<1.0	0.0	0.0	0.0	20.9	<1.0	<1.0	0.0	0.0	20.6	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
02/14/2014 04:00:00 AM	<1.0	0.0	0.0	0.0	20.9	<1.0	<1.0	0.0	0.0	20.6	<1.0	0.0	0.0	0.0	20.9	0.0	<1.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
02/14/2014 05:00:00 AM	<1.0	0.0	0.0	0.0	20.9	<1.0	<1.0	0.0	0.0	20.6	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9

Notes: