



# Texas Brine Company, LLC

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January 17, 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 (TBC) 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	Bjeet Mukherjee - 07:15 - 11:30, Megan Tramonte (CodeRed) - 07:00 - 17:00		1/16/2014		NA	NA	NA	NA	1/17/2014	
	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		1/16/2014		NA	NA	NA	NA	NA	
	Well Gas Sampling	No work performed		1/16/2014		NA	NA	NA	NA	NA	
	Under Slab Gas Sampling	No work performed		1/16/2014		NA	NA	NA	NA	NA	
	Indoor Air Monitoring	No work performed		1/16/2014		NA	NA	NA	NA	NA	
Respec	Inclinometers/Tilt Meters/Transducers	1/16/2014	Relocate site 33.	Eric Krantz	NA	NA	NA	NA	NA	NA	
	InSAR Reflector Installations	1/16/2014	No work Conducted	NA	NA	NA	NA	NA	NA	NA	
	Subsidence Survey-Fenstermaker	1/16/2014	No work Conducted	NA	NA	NA	NA	NA	NA	NA	
	Shallow Geophone Installation	1/16/2014	No work Conducted	NA	NA	NA	NA	NA	NA	NA	
	Deep Geophone Installation	1/16/2014	No work Conducted	NA	NA	NA	NA	NA	NA	NA	
	Amendment #3, Directive #2	1/16/2014	No work Conducted	NA	NA	NA	NA	NA	NA	NA	
	Expansion of geoprobe gas sampling locations	1/16/2014	No work Conducted	NA	NA	NA	NA	NA	NA	NA	
	DPVE	1/16/2014	No work Conducted	NA	NA	NA	NA	NA	NA	NA	
	Abandon Casing Survey	1/16/2014	No work Conducted	NA	NA	NA	NA	NA	NA	NA	
	Passive Vent Wells	1/16/2014	Drill and Install PVW-03.	John Knight	NA	NA	NA	NA	NA	NA	
	MIHPT	1/16/2014	No work Conducted	NA	NA	NA	NA	NA	NA	NA	
	Miller	Weekly Stability Survey	NA		January 16, 2014		NA	NA	NA	NA	NA
		Misc. Survey Work	NA		January 16, 2014		NA	NA	NA	NA	NA
Sinkhole Hydro/Perimeter Survey		NA		January 16, 2014		NA	NA	NA	NA	NA	
Pisani	Surface Water	NA		January 16, 2014		NA	NA	NA	NA	NA	
	Sinkhole	NA		January 16, 2014		NA	NA	NA	NA	NA	
	Industrial Well Water	NA		January 16, 2014		NA	NA	NA	NA	NA	
	MRAA Well Water	NA		January 16, 2014		NA	NA	NA	NA	NA	
	GP/ORW Water	NA		January 16, 2014		NA	NA	NA	NA	NA	
	Cavern Water	NA		January 16, 2014		NA	NA	NA	NA	NA	
	Discharge/Outfall Water	NA		January 16, 2014		NA	NA	NA	NA	NA	
	Geoprobe Wells	NA		January 16, 2014		NA	NA	NA	NA	NA	
Grand Bayou Well 3A											
Daily Operations at 3A		Summary of Today's events									
		Oxy 3A									
1/17/2014		7:00am	1106.25	1/17/2014							
1/17/2014		Relief Well #1									
		See ORW-01 Flare Spreadsheet (will be provided 1/2/14)									

## **Attachments**

## **Daily Action Summary**

**January 16, 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-9a, ORW-5, and PVW-BS-56a. And, the following locations are equipped with electrical power: ORW-49-WH and ORW-50-WH. Thus, daily monitor change-out is no longer necessary. All monitors will continue to be calibrated and serviced as necessary.
- Bijet Mukherjee onsite from 07:15 to 11:30. Assisted in deployment of monitors at the new neighborhood monitoring locations PVW-03 and PVW-03-S. Please see the attached map for location details.
- Megan Tramonte of Code Red (monitor sub-contractor) onsite from 07:00 to 17:00. Assisted in maintenance of the monitoring equipment 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 ORW-49-WH			Observation Relief Well - 50 at the Well Head ORW-50-WH			Passive Vent Well -56 PVW-BS-56a			Passive Vent Well - 03 PVW-03			Passive Vent Well - 03 Downwind Monitoring PVW-03-S		
	H2S (ppm)	LEL (%)	O2 (%)	H2S (ppm)	LEL (%)	O2 (%)	H2S (ppm)	LEL (%)	O2 (%)	H2S (ppm)	LEL (%)	O2 (%)	H2S (ppm)	LEL (%)	O2 (%)
01/16/2014 01:00:00 AM	<1.0	0.0	20.5	<1.0	0.0	20.9	0.0	0.0	20.9	RTU-6 was deployed at 08:00 AM on 01/16/2014	RTU-9 was deployed at 08:00 AM on 01/16/2014	RTU-9 was deployed at 08:00 AM on 01/16/2014	RTU-9 was deployed at 08:00 AM on 01/16/2014	RTU-9 was deployed at 08:00 AM on 01/16/2014	RTU-9 was deployed at 08:00 AM on 01/16/2014
01/16/2014 02:00:00 AM	<1.0	0.0	20.5	<1.0	0.0	20.9	0.0	0.0	20.9						
01/16/2014 03:00:00 AM	<1.0	0.0	20.4	<1.0	0.0	20.9	0.0	0.0	20.9						
01/16/2014 04:00:00 AM	<1.0	0.0	20.4	<1.0	0.0	20.9	0.0	0.0	20.9						
01/16/2014 05:00:00 AM	<1.0	0.0	20.4	<1.0	0.0	20.9	0.0	0.0	20.9						
01/16/2014 06:00:00 AM	<1.0	0.0	20.4	<1.0	0.0	20.9	0.0	0.0	20.9						
01/16/2014 07:00:00 AM	<1.0	0.0	20.4	<1.0	0.0	20.9	0.0	0.0	20.9						
01/16/2014 08:00:00 AM	<1.0	0.0	20.4	<1.0	0.0	20.9	0.0	0.0	20.9						
01/16/2014 09:00:00 AM	<1.0	0.0	20.5	<1.0	0.0	20.9	0.0	0.0	20.9	0.0	<1.0	21.0	0.0	0.0	21.0
01/16/2014 10:00:00 AM	<1.0	0.0	20.6	<1.0	0.0	20.9	<1.0	0.0	20.9	0.0	0.0	21.0	0.0	0.0	21.0
01/16/2014 11:00:00 AM	0.0	0.0	20.9	0.0	0.0	20.9	<1.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0
01/16/2014 12:00:00 PM	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	21.0	0.0	0.0	21.0
01/16/2014 01:00:00 PM	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	21.0	0.0	0.0	21.0
01/16/2014 02:00:00 PM	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	21.0	0.0	0.0	21.0
01/16/2014 03:00:00 PM	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	21.0	0.0	0.0	21.0
01/16/2014 04:00:00 PM	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	21.0	0.0	0.0	20.9
01/16/2014 05:00:00 PM	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	21.0	0.0	0.0	21.0
01/16/2014 06:00:00 PM	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	21.0	0.0	0.0	21.0
01/16/2014 07:00:00 PM	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	21.0	0.0	0.0	21.0
01/16/2014 08:00:00 PM	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	21.0	0.0	0.0	21.0
01/16/2014 09:00:00 PM	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	21.0	0.0	0.0	20.8
01/16/2014 10:00:00 PM	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	21.0
01/16/2014 11:00:00 PM	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.8	<1.0	0.0	21.0
01/17/2014 12:00:00 AM	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.5	0.0	0.0	21.0

Notes:  
At approximately 17:00, when the drilling activities for 01/16/2014 were complete, RTU-9, located at PVW-03-S, was relocated to PVW-03 so that the monitor could be secure overnight. RTU-9 will be relocated to PVW-03-S before any drilling commences on 01/17/2014.

**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 (%)
01/16/2014 01:00:00 AM	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.6	<1.0	0.0	0.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
01/16/2014 02:00:00 AM	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.5	<1.0	0.0	0.0	0.0	20.9	0.0	<1.0	<1.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9
01/16/2014 03:00:00 AM	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.5	<1.0	0.0	0.0	0.0	20.9	0.0	<1.0	<1.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9
01/16/2014 04:00:00 AM	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.5	<1.0	0.0	0.0	0.0	20.7	<1.0	<1.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
01/16/2014 05:00:00 AM	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.5	<1.0	0.0	0.0	0.0	20.5	<1.0	<1.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
01/16/2014 06:00:00 AM	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.5	<1.0	0.0	0.0	0.0	20.5	<1.0	<1.0	<1.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9
01/16/2014 07:00:00 AM	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.5	<1.0	0.0	0.0	0.0	20.5	<1.0	<1.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
01/16/2014 08:00:00 AM	<1.0	0.0	0.0	0.0	20.7	<1.0	0.0	0.0	0.0	20.5	<1.0	0.0	0.0	0.0	20.5	0.0	<1.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
01/16/2014 09:00:00 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	<1.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
01/16/2014 10:00:00 AM	<1.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	<1.0	<1.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9
01/16/2014 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	<1.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.8	<1.0	0.0	0.0	0.0	20.9
01/16/2014 12:00:00 PM	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9
01/16/2014 01:00:00 PM	0.0	0.0	0.0	0.0	21.0	0.0	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	<1.0	0.0	0.0	0.0	20.9
01/16/2014 02:00:00 PM	0.0	0.0	0.0	0.0	21.2	<1.0	<1.0	0.0	0.0	20.9	<1.0	<1.0	0.0	0.0	21.2	0.0	0.0	<1.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9
01/16/2014 03:00:00 PM	<1.0	0.0	0.0	0.0	21.1	0.0	<1.0	0.0	0.0	20.9	<1.0	<1.0	0.0	0.0	21.1	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9
01/16/2014 04:00:00 PM	<1.0	0.0	0.0	0.0	21.0	<1.0	<1.0	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	<1.0	0.0	0.0	0.0	20.9
01/16/2014 05:00:00 PM	<1.0	0.0	0.0	0.0	21.1	0.0	<1.0	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	<1.0	0.0	0.0	0.0	20.9
01/16/2014 06:00:00 PM	<1.0	0.0	0.0	0.0	20.9	0.0	<1.0	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	<1.0	0.0	0.0	0.0	20.9
01/16/2014 07:00:00 PM	<1.0	<1.0	0.0	0.0	20.9	0.0	<1.0	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	<1.0	0.0	0.0	0.0	20.9
01/16/2014 08:00:00 PM	<1.0	0.0	0.0	0.0	20.9	0.0	<1.0	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	<1.0	0.0	0.0	0.0	20.9
01/16/2014 09:00:00 PM	<1.0	0.0	0.0	0.0	20.9	0.0	<1.0	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	<1.0	<1.0	0.0	0.0	20.9
01/16/2014 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	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	<1.0	<1.0	0.0	0.0	20.9
01/16/2014 11:00:00 PM	<1.0	<1.0	0.0	0.0	20.9	<1.0	<1.0	0.0	0.0	20.6	<1.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	<1.0	<1.0	0.0	0.0	20.9
01/17/2014 12:00:00 AM	<1.0	0.0	0.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.6	<1.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	<1.0	<1.0	0.0	0.0	20.9

Notes:





## **PVW-03 and PVW-03-S Monitoring Locations**

**January 16, 2014**

**S A G E**  
ENVIRONMENTAL CONSULTING

**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			Passive Vent Well - 03 Downwind Monitoring			
	ORW-49-WH			ORW-50-WH			PVW-BS-56a			PVW-03			PVW-03-S			
	H2S (ppm)	LEL (%)	O2 (%)	H2S (ppm)	LEL (%)	O2 (%)	H2S (ppm)	LEL (%)	O2 (%)	H2S (ppm)	LEL (%)	O2 (%)	H2S (ppm)	LEL (%)	O2 (%)	
01/16/2014 05:00:00 AM	<1.0	0.0	20.4	<1.0	0.0	20.9	0.0	0.0	20.9	RTU-6 was deployed at 08:00 AM on 01/16/2014	<1.0	21.0	0.0	0.0	21.0	
01/16/2014 06:00:00 AM	<1.0	0.0	20.4	<1.0	0.0	20.9	0.0	0.0	20.9							RTU-9 was deployed at 08:00 AM on 01/16/2014
01/16/2014 07:00:00 AM	<1.0	0.0	20.4	<1.0	0.0	20.9	0.0	0.0	20.9							
01/16/2014 08:00:00 AM	<1.0	0.0	20.4	<1.0	0.0	20.9	0.0	0.0	20.9	0.0	<1.0	21.0	0.0	0.0	21.0	
01/16/2014 09:00:00 AM	<1.0	0.0	20.5	<1.0	0.0	20.9	0.0	0.0	20.9	0.0	<1.0	21.0	0.0	0.0	21.0	
01/16/2014 10:00:00 AM	<1.0	0.0	20.6	<1.0	0.0	20.9	<1.0	0.0	20.9	0.0	0.0	21.0	0.0	0.0	21.0	
01/16/2014 11:00:00 AM	0.0	0.0	20.9	0.0	0.0	20.9	<1.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0	
01/16/2014 12:00:00 PM	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	21.0	0.0	0.0	21.0	
01/16/2014 01:00:00 PM	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	21.0	0.0	0.0	21.0	
01/16/2014 02:00:00 PM	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	21.0	0.0	0.0	21.0	
01/16/2014 03:00:00 PM	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	21.0	0.0	0.0	21.0	
01/16/2014 04:00:00 PM	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	21.0	0.0	0.0	20.9	
01/16/2014 05:00:00 PM	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	21.0	0.0	0.0	21.0	
01/16/2014 06:00:00 PM	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	21.0	0.0	0.0	21.0	
01/16/2014 07:00:00 PM	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	21.0	0.0	0.0	21.0	
01/16/2014 08:00:00 PM	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	21.0	0.0	0.0	21.0	
01/16/2014 09:00:00 PM	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	21.0	0.0	0.0	20.8	
01/16/2014 10:00:00 PM	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	21.0	
01/16/2014 11:00:00 PM	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.8	<1.0	0.0	21.0	
01/17/2014 12:00:00 AM	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.5	0.0	0.0	21.0	
01/17/2014 01:00:00 AM	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.2	0.0	0.0	20.8	
01/17/2014 02:00:00 AM	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.6	0.0	0.0	21.0	
01/17/2014 03:00:00 AM	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.8	0.0	0.0	21.0	
01/17/2014 04:00:00 AM	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	20.8	0.0	0.0	21.0	
01/17/2014 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	20.8	0.0	0.0	20.7	

Notes:  
At approximately 17:00, when the drilling activities for 01/16/2014 were complete, RTU-9, located at PVW-03-S, was relocated to PVW-03 so that the monitor could be secure overnight. RTU-9 will be relocated to PVW-03-S before any drilling commences on 01/17/2014.

**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 (%)
01/16/2014 05:00:00 AM	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.5	<1.0	0.0	0.0	0.0	20.5	<1.0	<1.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
01/16/2014 06:00:00 AM	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.5	<1.0	0.0	0.0	0.0	20.5	<1.0	<1.0	<1.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9
01/16/2014 07:00:00 AM	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.5	<1.0	0.0	0.0	0.0	20.5	<1.0	<1.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
01/16/2014 08:00:00 AM	<1.0	0.0	0.0	0.0	20.7	<1.0	0.0	0.0	0.0	20.5	<1.0	0.0	0.0	0.0	20.5	0.0	<1.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
01/16/2014 09:00:00 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	<1.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
01/16/2014 10:00:00 AM	<1.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	<1.0	<1.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9
01/16/2014 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	<1.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.8	<1.0	0.0	0.0	0.0	20.9
01/16/2014 12:00:00 PM	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9
01/16/2014 01:00:00 PM	0.0	0.0	0.0	0.0	21.0	0.0	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	<1.0	0.0	0.0	0.0	20.9
01/16/2014 02:00:00 PM	0.0	0.0	0.0	0.0	21.2	<1.0	<1.0	0.0	0.0	20.9	<1.0	<1.0	0.0	0.0	21.2	0.0	0.0	<1.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9
01/16/2014 03:00:00 PM	<1.0	0.0	0.0	0.0	21.1	0.0	<1.0	0.0	0.0	20.9	<1.0	<1.0	0.0	0.0	21.1	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9
01/16/2014 04:00:00 PM	<1.0	0.0	0.0	0.0	21.0	<1.0	<1.0	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	<1.0	0.0	0.0	0.0	20.9
01/16/2014 05:00:00 PM	<1.0	0.0	0.0	0.0	21.1	0.0	<1.0	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	<1.0	0.0	0.0	0.0	20.9
01/16/2014 06:00:00 PM	<1.0	0.0	0.0	0.0	20.9	0.0	<1.0	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	<1.0	0.0	0.0	0.0	20.9
01/16/2014 07:00:00 PM	<1.0	<1.0	0.0	0.0	20.9	0.0	<1.0	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	<1.0	0.0	0.0	0.0	20.9
01/16/2014 08:00:00 PM	<1.0	0.0	0.0	0.0	20.9	0.0	<1.0	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	<1.0	0.0	0.0	0.0	20.9
01/16/2014 09:00:00 PM	<1.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	<1.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	<1.0	<1.0	0.0	0.0	20.9
01/16/2014 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	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	<1.0	<1.0	0.0	0.0	20.9
01/16/2014 11:00:00 PM	<1.0	<1.0	0.0	0.0	20.9	<1.0	<1.0	0.0	0.0	20.6	<1.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	<1.0	<1.0	0.0	0.0	20.9
01/17/2014 12:00:00 AM	<1.0	0.0	0.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.6	<1.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	<1.0	<1.0	0.0	0.0	20.9
01/17/2014 01:00:00 AM	<1.0	0.0	0.0	0.0	20.9	<1.0	<1.0	0.0	0.0	20.6	<1.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	<1.0	<1.0	0.0	0.0	20.9
01/17/2014 02:00:00 AM	<1.0	0.0	0.0	0.0	20.9	<1.0	<1.0	0.0	0.0	20.6	<1.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	<1.0	<1.0	0.0	0.0	20.9
01/17/2014 03:00:00 AM	<1.0	0.0	0.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.6	<1.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	<1.0	<1.0	0.0	0.0	20.9
01/17/2014 04:00:00 AM	<1.0	<1.0	0.0	0.0	20.9	<1.0	<1.0	0.0	0.0	20.6	<1.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	<1.0	<1.0	0.0	0.0	20.9
01/17/2014 05:00:00 AM	<1.0	<1.0	0.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.6	<1.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	<1.0	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: Crystal Hocking

Date: 1/16/2014

Company: RESPEC

Job #: 2241

<b>Personnel</b>	<b>Company</b>	<b>Job Title</b>
Eric Krantz	RESPEC	Staff Engineer
John Knight	RESPEC	Staff Geologist

**Time Onsite:** Start Time: 9:30 End Time: 16:30

**DAILY ACTIVITY:**

**Instrumentation Program:**

Relocate site 33 (dismantle and move housing, solar panel, datalogger, and inclinometer, and reinstall on new site 33). Test radio communication and cell modem connection. Move AR to new site.

**Other Programs:**

*Passive Vent Wells:* RESPEC observed WHE drilling for PVW-03. A soil boring was drilled and core was logged and photographed. Significant methane gas was detected in the first soil boring to support installation of the 2-inch PVW. The well was drilled (approx. TD = 31 ft bgs), screen placed (15 to 30 ft bgs), sand packed, and left overnight to set bentonite plug. PVW-03 well site is located approximately 20 feet west of GP-5.

*Berm Mapping:* No Work Conducted.

**PROPOSED SCHEDULE:**

**Instrumentation Program:**

Install structures and move equipment for site 89. Test radio and modem for deep array IPIs. **Tentative** installation of deep array inclinometers 1/22/14.

**Other Programs:**

*Passive Vent Wells:* PVW-03 will be grouted and well head assembled on 1/17/14. Retrofit wellhead for monitoring at GP-05. Installation of PVW-01 (near NSDMW-006) is planned for 1/18-1/19. **Tentative** installation of PVW-02 on 1/20-1/21. RESPEC will work with WHE and TBC to begin demobilizing the barge from PVW-56 (located near the former location of NSDBS-056).

Berm Mapping: Finish mapping berms west of sinkhole.

Initials: CMH