



# Texas Brine Company, LLC

1301 Highway 70  
Belle Rose, LA 70341  
Phone: 985-369-6657  
Fax: 985-369-7873



December 5, 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	Eric Rucinski - 07:30 - 08:30, Britt Barnett (Code Red) - 00:00 - 06:00; 18:00 - 24:00; Chad Deshotel (Code Red) - 06:00 - 18:00		12/4/2013	NA	NA	NA	NA	12/5/2013	
	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		12/4/2013	NA	NA	NA	NA	NA	
	Well Gas Sampling	No work performed		12/4/2013	NA	NA	NA	NA	NA	
	Under Slab Gas Sampling	No work performed		12/4/2013	NA	NA	NA	NA	NA	
	Indoor Air Monitoring	No work performed		12/4/2013	NA	NA	NA	NA	NA	
Respec	Inclinometers/Tilt Meters/Transducers	12/4/2013	Picked up materials to reinforce artificial reflector structures and dug post holes at one AR location.	N. Marnach	NA	NA	NA	NA	NA	NA
	InSAR Reflector Installations	12/4/2013	No work Conducted	NA	NA	NA	NA	NA	NA	NA
	Subsidence Survey-Fenstermaker	12/4/2013	No work Conducted	NA	NA	NA	NA	NA	NA	NA
	Shallow Geophone Installation	12/4/2013	No work Conducted	NA	NA	NA	NA	NA	NA	NA
	Deep Geophone Installation	12/4/2013	No work Conducted	NA	NA	NA	NA	NA	NA	NA
	Amendment #3, Directive #2	12/4/2013	No work Conducted	NA	NA	NA	NA	NA	NA	NA
	Expansion of geoprobe gas sampling locations	12/4/2013	No work Conducted	NA	NA	NA	NA	NA	NA	NA
	DPVE	12/4/2013	No work Conducted	NA	NA	NA	NA	NA	NA	NA
	Abandon Casing Survey	12/4/2013	Investigated BS-23 and BS-09	NA	NA	NA	NA	NA	NA	NA
	Passive Vent Well at NSDBSS6	12/4/2013	Grouted GP-56 and installed bollards. Investigated bubbles around GP-56 after installation.	D. Gnage	NA	NA	NA	NA	NA	NA
MIHPT	12/4/2013	No work Conducted	NA	NA	NA	NA	NA	NA	NA	
Miller	Weekly Stability Survey	No work performed		December 4, 2013	NA	NA	NA	NA	NA	
	Misc. Survey Work	M. Fore		December 4, 2013	NA	NA	NA	NA	NA	
	Sinkhole Hydro/Perimeter Survey	No work performed		December 4, 2013	NA	NA	NA	NA	NA	
Pisani	Surface Water	NA		December 4, 2013	NA	NA	NA	NA	NA	
	Sinkhole	NA		December 4, 2013	NA	NA	NA	NA	NA	
	Industrial Well Water	NA		December 4, 2013	NA	NA	NA	NA	NA	
	MRAA Well Water	NA		December 4, 2013	NA	NA	NA	NA	NA	
	GP/ORW Water	NA		December 4, 2013	NA	NA	NA	NA	NA	
	Cavern Water	NA		December 4, 2013	NA	NA	NA	NA	NA	
	Discharge/Outfall Water	NA		December 4, 2013	NA	NA	NA	NA	NA	
	Geoprobe Wells	NA		December 4, 2013	NA	NA	NA	NA	NA	
Grand Bayou Well 3A										
Daily Operations at 3A		Summary of Today's events								
12/5/2013		Oxy 3A								
		7am								
		886.17	12/5/2013							
		Relief Well #1								
12/5/2013		See ORW-01 Flare Spreadsheet								

## **Attachments**

## **Daily Action Summary**

**December 4, 2013**

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

- Eric Rucinski onsite from 07:30 – 08:30. Changed out the monitors between 07:47 and 08:10. Collected data from the monitoring database and forwarded to Steven Shaughnessy 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
  - Chad Deshotel 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. 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 (%)
12/04/2013 01:00:00 AM	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	20.9
12/04/2013 02:00:00 AM	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	20.9
12/04/2013 03:00:00 AM	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	20.9
12/04/2013 04:00:00 AM	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	20.9
12/04/2013 05:00:00 AM	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	20.9
12/04/2013 06:00:00 AM	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	20.9
12/04/2013 07:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/04/2013 08:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0
12/04/2013 09:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0
12/04/2013 10:00:00 AM	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	21.0
12/04/2013 11:00:00 AM	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	21.0
12/04/2013 12:00:00 PM	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	21.0
12/04/2013 01:00:00 PM	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	21.0
12/04/2013 02:00:00 PM	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	21.0
12/04/2013 03:00:00 PM	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	21.0
12/04/2013 04:00:00 PM	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	21.0
12/04/2013 05:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.1	0.0	0.0	21.0
12/04/2013 06:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0
12/04/2013 07:00:00 PM	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	21.0
12/04/2013 08:00:00 PM	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	21.0
12/04/2013 09:00:00 PM	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	21.0
12/04/2013 10:00:00 PM	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	21.0
12/04/2013 11:00:00 PM	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	21.0
12/05/2013 12:00:00 AM	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	21.0

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 (%)
12/04/2013 01:00:00 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	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/04/2013 02:00:00 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	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/04/2013 03:00:00 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	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/04/2013 04:00:00 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	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/04/2013 05:00:00 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	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/04/2013 06:00:00 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	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/04/2013 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	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
12/04/2013 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	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/04/2013 09:00:00 AM	<1.0	0.0	0.0	0.0	20.5	<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
12/04/2013 10:00:00 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	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/04/2013 11:00:00 AM	<1.0	0.0	<1.0	0.0	20.5	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
12/04/2013 12:00:00 PM	<1.0	0.0	<1.0	0.0	20.8	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
12/04/2013 01:00:00 PM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/04/2013 02:00:00 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	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/04/2013 03:00:00 PM	<1.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	21.2	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/04/2013 04:00:00 PM	<1.0	0.0	0.0	0.0	20.9	<1.0	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	20.9
12/04/2013 05:00:00 PM	<1.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	21.2	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.2	0.0	0.0	0.0	0.0	20.9
12/04/2013 06:00:00 PM	<1.0	0.0	0.0	0.0	20.7	<1.0	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	21.1	0.0	0.0	0.0	0.0	20.9
12/04/2013 07:00:00 PM	<1.0	0.0	0.0	0.0	20.7	<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
12/04/2013 08:00:00 PM	<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	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/04/2013 09:00:00 PM	<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	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/04/2013 10:00:00 PM	<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	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/04/2013 11:00:00 PM	<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	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/05/2013 12:00:00 AM	<1.0	0.0	0.0	0.0	20.6	<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:



**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 (%)
12/04/2013 05:00:00 AM	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	20.9
12/04/2013 06:00:00 AM	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	20.9
12/04/2013 07:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	20.9
12/04/2013 08:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0
12/04/2013 09:00:00 AM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0
12/04/2013 10:00:00 AM	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	21.0
12/04/2013 11:00:00 AM	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	21.0
12/04/2013 12:00:00 PM	0.0	0.0	20.9	0.0	0.0	20.9	0.0	0.0	21.0
12/04/2013 01:00:00 PM	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	21.0
12/04/2013 02:00:00 PM	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	21.0
12/04/2013 03:00:00 PM	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	21.0
12/04/2013 04:00:00 PM	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	21.0
12/04/2013 05:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.1	0.0	0.0	21.0
12/04/2013 06:00:00 PM	0.0	0.0	21.0	0.0	0.0	21.0	0.0	0.0	21.0
12/04/2013 07:00:00 PM	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	21.0
12/04/2013 08:00:00 PM	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	21.0
12/04/2013 09:00:00 PM	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	21.0
12/04/2013 10:00:00 PM	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	21.0
12/04/2013 11:00:00 PM	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	21.0
12/05/2013 12:00:00 AM	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	21.0
12/05/2013 01:00:00 AM	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	21.0
12/05/2013 02:00:00 AM	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	21.0
12/05/2013 03:00:00 AM	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	21.0
12/05/2013 04:00:00 AM	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	21.0
12/05/2013 05:00:00 AM	0.0	0.0	21.0	0.0	0.0	20.9	0.0	0.0	21.0

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 (%)
12/04/2013 05:00:00 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	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/04/2013 06:00:00 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	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/04/2013 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	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
12/04/2013 08:00:00 AM	<1.0	0.0	0.0	0.0	20.6	<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
12/04/2013 09:00:00 AM	<1.0	0.0	0.0	0.0	20.5	<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
12/04/2013 10:00:00 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	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/04/2013 11:00:00 AM	<1.0	0.0	<1.0	0.0	20.5	<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
12/04/2013 12:00:00 PM	<1.0	0.0	<1.0	0.0	20.8	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
12/04/2013 01:00:00 PM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/04/2013 02:00:00 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	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/04/2013 03:00:00 PM	<1.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	21.2	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/04/2013 04:00:00 PM	<1.0	0.0	0.0	0.0	20.9	<1.0	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	20.9
12/04/2013 05:00:00 PM	<1.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	21.2	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.2	0.0	0.0	0.0	0.0	20.9
12/04/2013 06:00:00 PM	<1.0	0.0	0.0	0.0	20.7	<1.0	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	21.1	0.0	0.0	0.0	0.0	20.9
12/04/2013 07:00:00 PM	<1.0	0.0	0.0	0.0	20.7	<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
12/04/2013 08:00:00 PM	<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	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/04/2013 09:00:00 PM	<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	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/04/2013 10:00:00 PM	<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	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/04/2013 11:00:00 PM	<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	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/05/2013 12:00:00 AM	<1.0	0.0	0.0	0.0	20.6	<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
12/05/2013 01:00:00 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	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/05/2013 02:00:00 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	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/05/2013 03:00:00 AM	<1.0	0.0	0.0	0.0	20.6	<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
12/05/2013 04:00:00 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	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
12/05/2013 05:00:00 AM	<1.0	0.0	0.0	0.0	20.6	<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:

**RESPEC Consulting & Services**

Texas Brine, L.L.C.

Assumption Parish, Louisiana

Daily Field Report

Report By: David Gnage

Date: 12/02/13

Company: RESPEC

Job #: 02241

<b>Personnel</b>	<b>Company</b>	<b>Job Title</b>
Nick Marnach	RESPEC	Staff Engineer
David Gnage	RESPEC	Staff Geologist

**Time Onsite:** Start Time: 7:00 End Time: 17:30

**DAILY ACTIVITY:**

**Attended Daily Contractor meeting.**

**Instrumentation Program:**

Installed SIM card and 10' long 2" OD Extension Pipe, raise control box/solar panel/ & antenna, adjust re-wire control box at Site #33. Met with Mark of Miller Engineering and compiled a list of tilt meter and water level sites to include in survey. Cemented in AR posts and added horizontal reinforcement Site #27. Delivered all materials to AR Sites #23, #28, #38.

**Other Programs:**

*Passive Vent Well Program*

Grouted GP-56 and installed bollards. Investigated bubbles around GP-56 after installation. Bubbles disappeared when well was uncapped allowing gas and water flow. Water flowed in a rolling fashion for approximately 90 minutes at which point the well only vented gas. By the end of the day CB&I and AOEM were satisfied with the state of the well.

*Abandon Casing Survey*

WHE and RESPEC investigated BS-23 and BS-09, during the investigation holes of approximately 4 inches in diameter and 20 feet deep were found. At BS-23 when a 1-inch PVC pipe was inserted into the bubble site the bubble site stopped and the gas and the water associated with the bubble site came out of the 1-inch PVC pipe.

**PROPOSED SCHEDULE:**

**Instrumentation Program:**

Install WL at Site #41. Visit all sites accessible from Pad 10 and verify coordinates, apply marking tape to selected survey sites, install site identification, and replace desiccant.

**Other Programs:**

Paint bollards and install valve system at GP-56.

Initials: DJG

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

December 4, 2013

### **Subsidence Survey:**

- Surveyed Subsidence Points around Brine Tanks

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

- No Work Done

### **Support Sinkhole Cleanup**

- No Work Done

### **Misc. Survey Work**

- Arrived @ 8:15 am
- Surveyed Containment Berm Settlement Plates
- Surveyed South Berm Settlement Rods
- Surveyed North Access Road Settlement Points
- Surveyed DPVE 47 Settlement Points
- Departed @ 1:30 pm