



# Texas Brine Company, LLC

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June 11, 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	Bijeet Mukherjee - 07:45 - 09:10 Pete Hyatt IV (Code Red) - 07:00 - 17:00		6/10/2013		NA	NA	NA	AreaRAE Monitors	6/11/2013
	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		6/10/2013		NA	NA	NA	NA	NA
	Well Gas Sampling	No work performed		6/10/2013		NA	NA	NA	NA	NA
	Under Slab Gas Sampling	No work performed		6/10/2013		NA	NA	NA	NA	NA
	Indoor Air Monitoring	No work performed		6/10/2013		NA	NA	NA	NA	NA
Respec	Inclinometers/Tilt Meters	6/10/2013	NA	NA	NA	NA	NA	NA	NA	NA
	InSAR Reflector Installations	6/10/2013	NA	NA	NA	NA	NA	NA	NA	NA
	Subsidence Survey-Fenstermaker	6/10/2013	NA	NA	NA	NA	NA	NA	NA	NA
	Shallow Geophone Installation	6/10/2013	NA	NA	NA	NA	NA	NA	NA	NA
	Deep Geophone Installation	6/10/2013	NA	NA	NA	NA	NA	NA	NA	NA
	Amendment #3, Directive #2	6/10/2013	NA	NA	NA	NA	NA	NA	NA	NA
	Expansion of geoprobe gas sampling locations	6/10/2013	NA	NA	NA	NA	NA	NA	NA	NA
	Weekly Stability Survey	No Work Performed		June 10, 2013		NA	NA	NA	NA	NA
	Misc. Survey Work	No Work Performed		June 10, 2013		NA	NA	NA	NA	NA
Sinkhole Hydro/Perimeter Survey	No Work Performed		June 10, 2013		NA	NA	NA	NA	NA	
Pisani	Surface Water	NA		NA		NA	NA	NA	NA	NA
	Industrial Well Water	NA		NA		NA	NA	NA	NA	NA
	MRAAWell Water	NA		NA		NA	NA	NA	NA	NA
	Geoprobe Wells	NA		NA		NA	NA	NA	NA	NA
<b>Grand Bayou Well 3A</b>										
Daily Operations at 3A	<u>Summary of Today's events</u>									
	6/11/2013	Oxy 3A								
		7am								
	558.52	6/11/2013								
6/11/2013	Relief Well #1									
	See ORW-01 Flare Spreadsheet									

## **Attachments**

## **Daily Action Summary**

**June 10, 2013**

### **Stationary Air Monitoring**

- Bijet Mukherjee onsite from 07:45 – 09:10. Changed out the monitors between 08:25 and 08:58. Collected data from the monitoring database and forwarded to Steve Shaughnessy in the Baton Rouge office for processing.
- Pete Hyatt IV of Code Red (monitor sub-contractor) onsite from 07:00 to 17:00. Assisted in battery change outs and maintenance of the monitoring equipment.

### **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**

- No Scheduled

### **Under Slab Gas Sampling**

- Not Scheduled

### **Air Indoor Monitoring**

- Not Scheduled

Texas Brine - Belle Rose, Louisiana  
Hourly Air Monitoring Data

\*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 *	South-most Pipeline Site					Middle-most Pipeline Site					North-most Pipeline Site					South of OG3A-1					Onsite Trailers					
	ST-3					ST-2b					ST-1					Pad #9					TR-1					
	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 (%)	
06/10/2013 01:00:00 AM	0.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	21.5	0.0	<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	
06/10/2013 02:00:00 AM	0.0	<1.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9	0.0	<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	
06/10/2013 03:00:00 AM	0.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9	0.0	<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	
06/10/2013 04:00:00 AM	0.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9	0.0	<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	
06/10/2013 05:00:00 AM	0.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9	0.0	<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	
06/10/2013 06:00:00 AM	0.0	<1.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9	0.0	<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	
06/10/2013 07:00:00 AM	0.0	<1.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9	0.0	<1.0	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	
06/10/2013 08:00:00 AM	<1.0	<1.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	
06/10/2013 09:00:00 AM	0.0	<1.0	0.0	0.0	20.9	Downtime - See Note					0.0	0.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9
06/10/2013 10:00:00 AM	0.0	<1.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	
06/10/2013 11:00:00 AM	<1.0	<1.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	
06/10/2013 12:00:00 PM	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	
06/10/2013 01:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	
06/10/2013 02:00:00 PM	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	
06/10/2013 03:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	
06/10/2013 04:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	
06/10/2013 05:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	
06/10/2013 06:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	
06/10/2013 07:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	
06/10/2013 08:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	
06/10/2013 09:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	
06/10/2013 10:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	
06/10/2013 11:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	
06/11/2013 12:00:00 AM	0.0	0.0	0.0	0.0	20.9	0.0	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	0.0	0.0	<1.0	0.0	20.9	

Notes:  
Downtime from approximately 08:28 AM - 11:07 AM on 6/10/2013 at ST-2b due to the remote data transmitter not being properly activated on RTU-2.

Texas Brine - Belle Rose, Louisiana  
Hourly Air Monitoring Data

\*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 *	South-most Pipeline Site ST-3					Middle-most Pipeline Site ST-2b					North-most Pipeline Site ST-1					South of OG3A-1 Pad #9					Onsite Trailers TR-1					
	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 (%)	
06/10/2013 05:00:00 AM	0.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9	0.0	<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	
06/10/2013 06:00:00 AM	0.0	<1.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9	0.0	<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	
06/10/2013 07:00:00 AM	0.0	<1.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9	0.0	<1.0	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	
06/10/2013 08:00:00 AM	<1.0	<1.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	
06/10/2013 09:00:00 AM	0.0	<1.0	0.0	0.0	20.9	Downtime - See Note					0.0	0.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9
06/10/2013 10:00:00 AM	0.0	<1.0	0.0	0.0	20.9	Downtime - See Note					0.0	0.0	<1.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9
06/10/2013 11:00:00 AM	<1.0	<1.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	
06/10/2013 12:00:00 PM	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	
06/10/2013 01:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	
06/10/2013 02:00:00 PM	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	
06/10/2013 03:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	
06/10/2013 04:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	
06/10/2013 05:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	
06/10/2013 06:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	
06/10/2013 07:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	
06/10/2013 08:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	
06/10/2013 09:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	
06/10/2013 10:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	
06/10/2013 11:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	
06/11/2013 12:00:00 AM	0.0	0.0	0.0	0.0	20.9	0.0	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	0.0	0.0	<1.0	0.0	20.9	
06/11/2013 01:00:00 AM	0.0	0.0	0.0	0.0	20.9	0.0	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	0.0	0.0	<1.0	0.0	20.9	
06/11/2013 02:00:00 AM	0.0	0.0	0.0	0.0	20.9	0.0	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	0.0	0.0	<1.0	0.0	20.9	
06/11/2013 03:00:00 AM	0.0	0.0	0.0	0.0	20.9	0.0	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	0.0	0.0	<1.0	0.0	20.9	
06/11/2013 04:00:00 AM	0.0	0.0	0.0	0.0	20.9	0.0	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	0.0	0.0	<1.0	0.0	20.9	
06/11/2013 05:00:00 AM	0.0	0.0	0.0	0.0	20.9	0.0	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	0.0	0.0	<1.0	0.0	20.9	

Notes:  
Downtime from approximately 08:28 AM - 11:07 AM on 6/10/2013 at ST-2b due to the remote data transmitter not being properly activated on RTU-2.



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

June 10, 2013

### **Subsidence Survey:**

- No Work Done

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

- No Work Done

### **Support Sinkhole Cleanup**

- No Work Done

### **Misc. Survey Work**

- No Work Done

**Michael Pisani & Associates**  
**Texas Brine, L.L.C.**  
**Assumption Parish, Louisiana**  
**Daily Field Report**

Report By: Patrick Ritchie  
 Company: MP&A

Date: 6/10/2013  
 Work Order # 80-05

Health and Safety Meeting  YES  NO

Weather: 89 F overcast to partly cloudy

Personnel	Company	Job Title
Patrick Ritchie	MP&A	Environmental Scientist

Site Activities: Start Time 9:00 End Time 11:45

**Equipment On-site:**

**Daily Activity:**  
 Measure pressure and water level at TBC Geoprobe locations

Estimated time of completion:  
 On-going

**Proposed schedule:**  
 Conduct in-situ monitoring surface water transect and industrial water well locations  
 Measure water level for the industrial water wells and MRAA wells  
 Measure pressure and water level at TBC Geoprobe locations  
 Collect laboratory samples from the industrial water wells  
 Collect laboratory samples from surface water transect locations  
 Observe, video, measure bubble sites

Estimated time of completion:  
 On-going

Initials: PMR