

Texas Brine Company, LLC 1301 Highway 70 Belle Rose, LA 70341

T

Phone: 985-369-6657 Fax: 985-369-7873

July 9, 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.

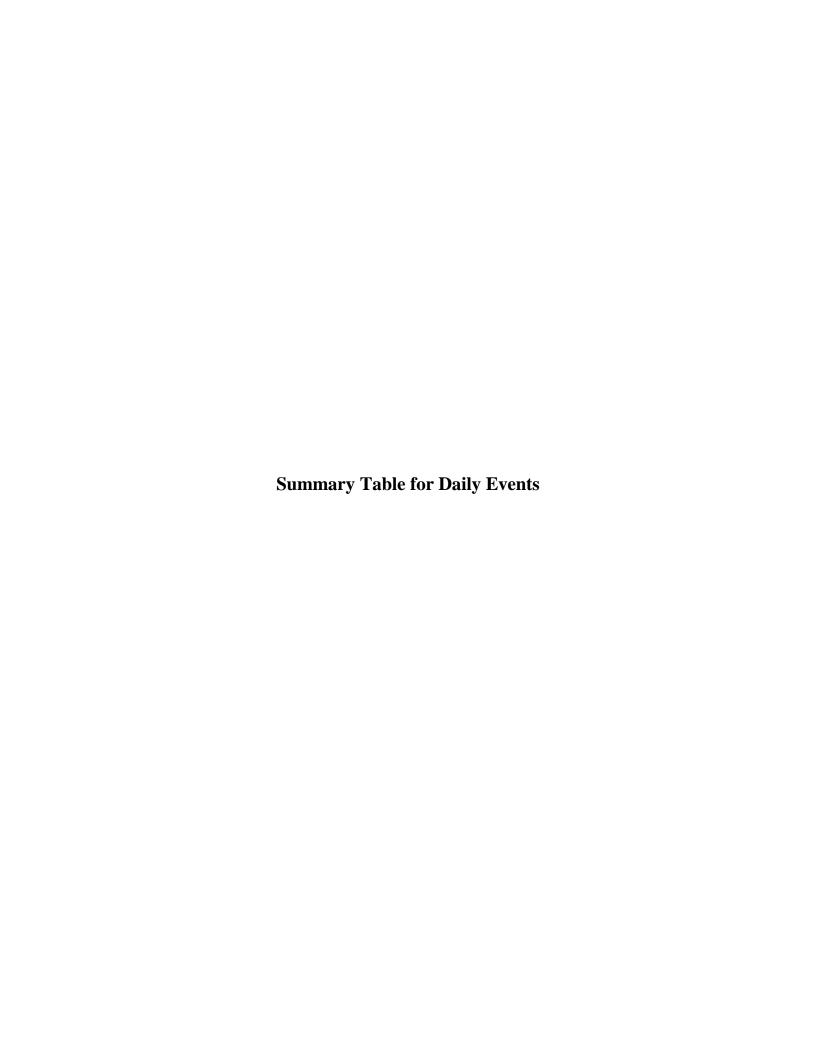
TBC believes that the submittal of this report satisfies the requirements of the Declaration of Emergency and Directive issued on September 25, 2012. As directed this report is submitted by email to <u>conservationorder@la.gov</u>, ref. "Emergency Declaration-Texas Brine Company LLC-9/25/2012.

Bruce E. Martin

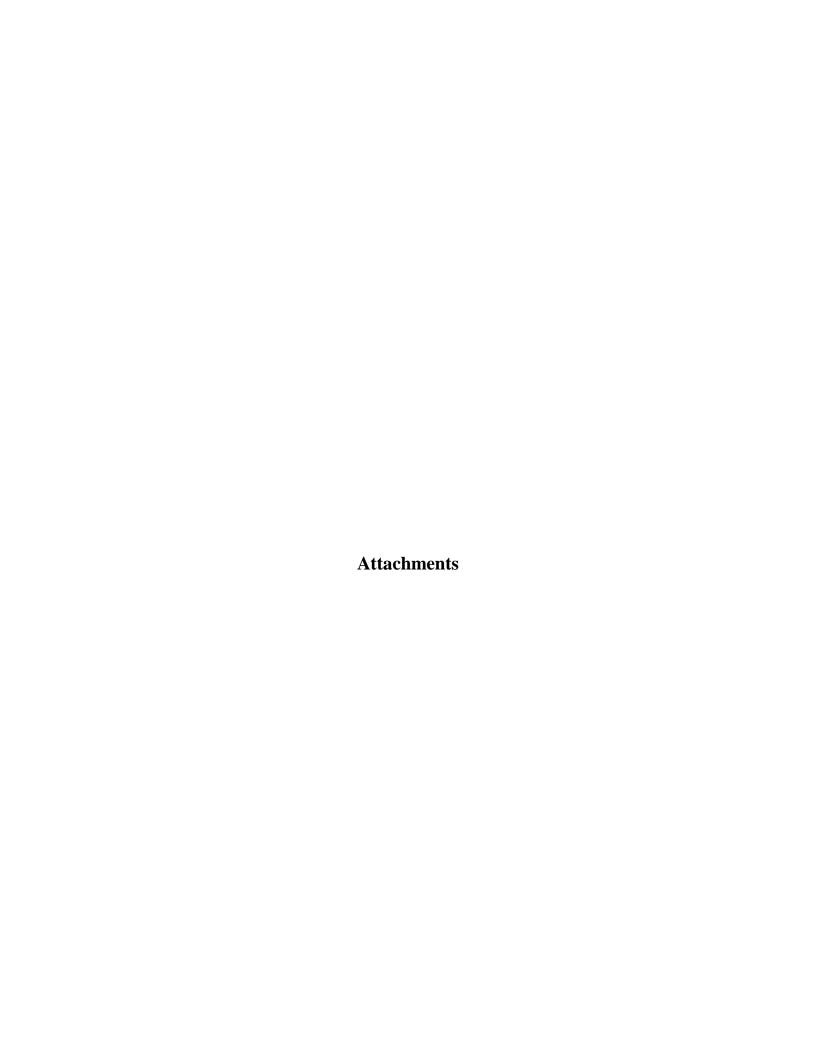
Vice President, Operations

Bana EMart

Texas Brine Company, LLC



			TBC Oxy Gran	nd Bayou Data Manager	ment-Enviro	nmental								
Contractor	Responsibilities	Coll	ected By	Date Collect	ed	Delivered to Lab	Results from Lab	Laboratory	Method	Date to Ag	encies			
Sage	Stationary Air Monitoring	Darlene McManu	rjee - 08:05 - 10:35 s (Code Red) - 07:00 - 17:00	7/8/2013		NA	NA	NA	AreaRAE Monitors	7/9/20	113			
	Residential Air Monitoring	bimonthly reside Therefore, Sage v	equested to suspend ential air monitoring. will discontinue these tivities.	NA		NA	NA	NA	NA	NA				
	Gas Seep Sampling	No work	k performed	7/8/2013		NA	NA	NA	NA	NA				
	Well Gas Sampling	No work	k performed	7/8/2013		NA	NA	NA	NA	NA NA				
ŀ	Under Slab Gas Sampling	_	k performed	7/8/2013		NA	NA	NA NA	NA NA	NA.				
ŀ	Indoor Air Monitoring		k performed	7/8/2013		NA	NA	NA	NA NA	NA				
Respec	Inclinometers/Tilt Meters	7/8/2013	NA NA	NA	NA	NA	NA NA		NA NA	NA	NA			
	InSAR Reflector Installations	7/8/2013	NA	NA	NA	NA	NA		NA	NA	NA			
	Subsidence Survey-Fenstermaker	7/8/2013 NA		NA NA		NA	NA		NA	NA	NA			
	Shallow Geophone Installation	7/8/2013 NA		NA NA		NA	NA		NA	NA	NA			
	Deep Geophone Installation	7/8/2013	NA	NA	NA	NA	NA		NA	NA	NA			
	Amendment #3, Directive #2	7/8/2013	NA	NA	NA	NA	NA		NA	NA	NA			
	Expansion of geoprobe gas sampling locations	7/8/2013	NA	NA	NA	NA	NA		NA	NA	NA			
Miller	Weekly Stability Survey	No Wor	k Performed	July 8, 2013	3	NA	NA	NA	NA	NA				
	Misc. Survey Work	No Wor	k Performed	July 8, 2013	3	NA	NA	NA	NA	NA				
	Sinkhole Hydro/Perimeter Survey	No Wor	k Performed	July 8, 2013	3	NA	NA	NA	NA	NA				
Pisani	Surface Water		NA	July 8, 2013	3	NA	NA	NA	NA	NA				
	Industrial Well Water		NA	July 8, 2013	3	NA	NA	NA NA		NA				
	MRAA Well Water		NA	July 8, 2013	3	NA	NA	NA	NA	NA				
	GP/ORW Water		NA	July 8, 2013		NA	NA	NA	NA	NA.				
	Cavern Brine		NA	July 8, 2013		NA	NA	NA	NA	NA.				
	Geoprobe Wells		NA	July 8, 2013		NA	NA	NA	NA	NA.				
	,													
				Grand Bayou Well	3A									
	Daily Operations at 3A			•		Summary of	Today's events							
	, , , , , , , , , , , , , , , , , , , ,						ry 3A							
	7/9/2013	7am 597.89		7/9/2013	<u> </u>									
		597.69 //9/2013 Relief Well #1												
						Renei	**************************************							
	7/9/2013	See ORW-01 Flare Spreadsheet												



Daily Action Summary

July 8, 2013

Stationary Air Monitoring

- Bijeet Mukherjee onsite from 08:05 to 10:35. Changed out the monitors between 08:13 and 10:16. Collected data from the monitoring database and forwarded to Eric Rucinski in the Baton Rouge office for processing.
- Darlene McManus 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

• Not Scheduled

Under Slab Gas Sampling

• Not Scheduled

Air Indoor Monitoring

Not Scheduled

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

	South-most Pipeline Site						Middle-most Pipeline Site					North-most Pipeline Site					So	outh of OG3A	A-1		Onsite Trailers					
	ST-3						ST-2b					ST-1				Pad #9					TR-1					
		Non-				l	Non-					Non-					Non-					Non-				
		Methane				l	Methane					Methane					Methane					Methane				
Date-Time *	CO (ppm)	VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	SO2 (ppm)	VOC (ppm)	H2S (ppm)	LEL (%)		CO (ppm)	VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	
07/08/2013 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	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	
07/08/2013 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	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	
07/08/2013 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	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	
07/08/2013 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	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	
07/08/2013 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	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	
07/08/2013 06:00:00 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	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	
07/08/2013 07:00:00 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	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	
07/08/2013 08:00:00 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	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	21.1	0.0	0.0	<1.0	0.0	20.9	
07/08/2013 09:00:00 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	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	
07/08/2013 10:00:00 AM	1.2	<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	21.0	0.0	0.0	0.0	0.0	21.3	0.0	0.0	0.0	0.0	20.9	
07/08/2013 11:00:00 AM	<1.0	<1.0	<1.0	0.0	20.6	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	21.2	0.0	0.0	0.0	0.0	21.3	0.0	0.0	0.0	0.0	20.9	
07/08/2013 12:00:00 PM	<1.0	<1.0	<1.0	0.0	20.4	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	21.3	0.0	0.0	0.0	0.0	21.3	0.0	0.0	0.0	0.0	20.9	
07/08/2013 01:00:00 PM	<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	21.4	0.0	0.0	0.0	0.0	21.3	0.0	0.0	0.0	0.0	20.9	
07/08/2013 02:00:00 PM	<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	21.4	0.0	0.0	0.0	0.0	21.3	0.0	0.0	0.0	0.0	20.9	
07/08/2013 03:00:00 PM	<1.0	<1.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9		0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	21.4	0.0	0.0	0.0	0.0	20.9	
07/08/2013 04:00:00 PM	<1.0	<1.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9		<1.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	21.4	0.0	0.0	0.0	0.0	20.9	
07/08/2013 05:00:00 PM	<1.0	<1.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9		0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	21.2	0.0	0.0	0.0	0.0	20.9	
07/08/2013 06:00:00 PM	<1.0	<1.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9		0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	21.4	0.0	0.0	0.0	0.0	20.9	
07/08/2013 07:00:00 PM	<1.0	<1.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	See Note	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	21.4	0.0	0.0	0.0	0.0	20.9	
07/08/2013 08:00:00 PM	<1.0	<1.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9		<1.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	21.4	0.0	0.0	0.0	0.0	20.9	
07/08/2013 09:00:00 PM	<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	20.9	0.0	0.0	0.0	0.0	21.4	0.0	0.0	0.0	0.0	20.9	
07/08/2013 10:00:00 PM 07/08/2013 11:00:00 PM	<1.0	<1.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	-	<1.0	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	
0.1.00.2010.11100100.111	<1.0	<1.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9		1.1	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	
07/09/2013 12:00:00 AM	<1.0	<1.0	<1.0	0.0	21.4	0.0	0.0	0.0	0.0	20.9		1.3	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	21.3	0.0	0.0	0.0	0.0	20.9	

Notes:
RTU-8 was inadvertently placed at ST-1 at 2:55 PM on 7/8/2013. RTU-8 is not equipped with a CO sensor; thus no CO data was collected while RTU-8 was deployed at ST-1.

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

		South	-most Pipelii	ne Site		Middle-most Pipeline Site						North	-most Pipelir	ne Site			S	outh of OG3A	-1		Onsite Trailers					
	ST-3					ST-2b						ST-1					Pad #9					TR-1				
		Non-					Non-					Non-					Non-					Non-			1	
		Methane					Methane					Methane					Methane					Methane			1	
Date-Time *	CO (ppm)	VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	OC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	SO2 (ppm)	VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	
07/08/2013 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	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	
07/08/2013 06:00:00 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	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	
07/08/2013 07:00:00 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	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	
07/08/2013 08:00:00 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	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	21.1	0.0	0.0	<1.0	0.0	20.9	
07/08/2013 09:00:00 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	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	
07/08/2013 10:00:00 AM	1.2	<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	21.0	0.0	0.0	0.0	0.0	21.3	0.0	0.0	0.0	0.0	20.9	
07/08/2013 11:00:00 AM	<1.0	<1.0	<1.0	0.0	20.6	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	21.2	0.0	0.0	0.0	0.0	21.3	0.0	0.0	0.0	0.0	20.9	
07/08/2013 12:00:00 PM	<1.0	<1.0	<1.0	0.0	20.4	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	21.3	0.0	0.0	0.0	0.0	21.3	0.0	0.0	0.0	0.0	20.9	
07/08/2013 01:00:00 PM	<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	21.4	0.0	0.0	0.0	0.0	21.3	0.0	0.0	0.0	0.0	20.9	
07/08/2013 02:00:00 PM	<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	21.4	0.0	0.0	0.0	0.0	21.3	0.0	0.0	0.0	0.0	20.9	
07/08/2013 03:00:00 PM	<1.0	<1.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9		0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	21.4	0.0	0.0	0.0	0.0	20.9	
07/08/2013 04:00:00 PM	<1.0	<1.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9		<1.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	21.4	0.0	0.0	0.0	0.0	20.9	
07/08/2013 05:00:00 PM	<1.0	<1.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9		0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	21.2	0.0	0.0	0.0	0.0	20.9	
07/08/2013 06:00:00 PM	<1.0	<1.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9		0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	21.4	0.0	0.0	0.0	0.0	20.9	
07/08/2013 07:00:00 PM	<1.0	<1.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9		0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	21.4	0.0	0.0	0.0	0.0	20.9	
07/08/2013 08:00:00 PM	<1.0	<1.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9		<1.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	21.4	0.0	0.0	0.0	0.0	20.9	
07/08/2013 09:00:00 PM	<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	20.9	0.0	0.0	0.0	0.0	21.4	0.0	0.0	0.0	0.0	20.9	
07/08/2013 10:00:00 PM	<1.0	<1.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	See Note	<1.0	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	
07/08/2013 11:00:00 PM	<1.0	<1.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9		1.1	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	
07/09/2013 12:00:00 AM	<1.0	<1.0	<1.0	0.0	21.4	0.0	0.0	0.0	0.0	20.9		1.3	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	21.3	0.0	0.0	0.0	0.0	20.9	
07/09/2013 01:00:00 AM	<1.0	<1.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9		1.7	<1.0	0.0	20.9	0.0	<1.0	0.0	0.0	21.3	0.0	0.0	0.0	0.0	20.9	
07/09/2013 02:00:00 AM	<1.0	<1.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9		1.8	<1.0	0.0	20.9	0.0	<1.0	0.0	0.0	21.4	0.0	0.0	0.0	0.0	20.9	
07/09/2013 03:00:00 AM	<1.0	<1.0	<1.0	0.0	20.9	0.0	<1.0	<1.0	0.0	20.9		1.9	<1.0	0.0	20.9	0.0	<1.0	0.0	0.0	21.4	0.0	0.0	0.0	0.0	20.9	
07/09/2013 04:00:00 AM	<1.0	<1.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9		1.8	<1.0	0.0	20.9	0.0	<1.0	0.0	0.0	21.4	0.0	0.0	0.0	0.0	20.9	
07/09/2013 05:00:00 AM	<1.0	<1.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9		1.4	<1.0	0.0	20.9	0.0	<1.0	0.0	0.0	21.4	0.0	0.0	0.0	0.0	20.9	

Notes: RTU-8 was inadvertently placed at ST-1 at 2:55 PM on 7/8/2013. RTU-8 is not equipped with a CO sensor; thus no CO data was collected while RTU-8 was deployed at ST-1.

ME&A Daily Action Summary

July 8, 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	_		Date Work Order	
Company:	MP&A	_		Work Order	# 80-05
Health and S	Safety Meeting	YES	NO		
Weather:	84 F Mostly Cloudy				
					_
D 1 D 1	Personnel	MDOA	Company	Job Title	
Patrick Ritch	nie	MP&A		Environmental Scientis	<u>.t </u>
		_			
		_			
		_			
C:4 - A -4:	:4:	0.20	11.2	0	
Site Acti	vities: Start Time	9:30	End Time 11:3	<u></u>	
Fauinment	On site				
Equipment	On-site:				
Daily Activi					
Measure pre	essure and water level at	TBC Geopre	obe locations		
	me of completion:				
On-going					
Proposed so	hedule:				
	situ monitoring of indust	rial water w	ells		
	ter level for the industria				
	essure and water level at				
	ratory samples from the				
	leo, measure bubble sites				
F 4	C 1				
Estimated till On-going	me of completion:				
OII-goilig				Initials:	PMR
				minute de la constant	