

# Texas Brine Company, LLC 1301 Highway 70

Belle Rose, LA 70341

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



November 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 <a href="mailto:conservationorder@la.gov">conservationorder@la.gov</a>, ref. "Emergency Declaration-Texas Brine Company LLC-9/25/2012.

Bruce E. Martin

Vice President, Operations

Bana EMart

Texas Brine Company, LLC



				TBC Oxy Grand	Bayou Data Mana	gement-Environme	ental			
Contractor	Responsibilities	Col	lected By	Date Col		Delivered to Lab		Laboratory	Method	Date to Agencies
Sage	Stationary Air Monitoring	Roxana Dubose 17:00; Bijeet Mul Roxana Dubose 11:00; Steven S 09:00, Roxana I	rjee - 07:45 - 09:15, c (Code Red) - 07:00 - kherjee - 07:25 - 08:30, c (Code Red) - 07:00 - khaughnessy - 07:50 - Dubose (Code Red) - 00 - 11:00	11/8 - 11/:	10/2013	NA	NA	NA	AreaRAE Monitors	11/9- 11/11/2013
	Residential Air Monitoring	bimonthly resid Therefore, Sage	equested to suspend ential air monitoring. will discontinue these tivities.	NA		NA	NA	NA	NA .	NA
ľ	Gas Seep Sampling	No wor	rk performed	11/8 - 11/2	10/2013	NA	NA	NA	NA NA	NA
ľ	Well Gas Sampling		rk performed	11/8 - 11/2	10/2013	NA	NA	NA	NA NA	NA
F	Under Slab Gas Sampling	No wor	rk performed	11/8 - 11/2	10/2013	NA	NA	NA	NA NA	NA
F	Indoor Air Monitoring		rk performed	11/8 - 11/2		NA	NA	NA	NA NA	NA
Respec		11/8 -	x periorineu	,,-	1	1				· · · · · · · · · · · · · · · · · · ·
- nespec	Inclinometers/Tilt Meters/Transducers	11/10/2213 11/8 -	No work Conducted	NA	NA	NA	NA	NA	NA	NA
-	InSAR Reflector Installations	11/10/2213 11/8 -	No work Conducted	NA	NA	NA	NA	NA	NA NA	NA
-	Subsidence Survey-Fenstermaker	11/10/2213 11/8 -	No work Conducted	NA	NA	NA	NA	NA	NA NA	NA
-	Shallow Geophone Installation	11/10/2213 11/8 -	No work Conducted	NA	NA	NA	NA	NA	NA NA	NA
-	Deep Geophone Installation	11/10/2213 11/8 -	No work Conducted	NA	NA	NA	NA	NA	NA NA	NA
-	Amendment #3, Directive #2	11/10/2213 11/8 -	No work Conducted	NA	NA	NA	NA	NA	NA NA	NA
-	Expansion of geoprobe gas sampling locations	11/10/2213 11/8 -	No work Conducted demobilize	NA	NA	NA	NA	NA	NA NA	NA
-	DPVE	11/10/2213 11/8 -	equipment	Non-RESPEC Staff	NA	NA	NA	NA	NA NA	NA
-	Abandon Casing Survey	11/10/2213 11/8 -	No work Conducted	NA	NA	NA	NA	NA	NA NA	NA
Miller	MIHPT Weekly Stability Survey	11/10/2213	No work Conducted	NA 11/8 - 11/2	NA 10/2013	NA NA	NA NA	NA NA	NA NA	NA NA
Ī	Misc. Survey Work		rk Performed	11/8 - 11/2		NA	NA	NA	NA	NA
ľ	Sinkhole Hydro/Perimeter Survey		rk Performed	11/8 - 11/2		NA	NA	NA	NA	NA
Pisani	Surface Water		NA	11/8 - 11/2		NA	NA	NA	NA	NA
ľ	Sinkhole		NA	11/8 - 11/2	10/2013	NA	NA	NA	NA	NA
ľ	Industrial Well Water		NA	11/8 - 11/2		NA	NA	NA	NA	NA
	MRAA Well Water	EN	NK/PMR	11/7/2		11/8/2013	NA	GCAL	Chloride, Bromide and Sulfate (Inorganic Anions) – SW- 846 9056A, Conductivity – SM 2510B, TDS – SM 2540C, Cations/metals – SW-846 6010B, Carbonate & Bicarbonate Alkalinity – SM 2320B, BTEX – SW-846 8260B, TPH Fractions – TX 1006/LA 1006, and Dissolved Gases - RSK-175, PAH	<b>N</b> A
	GP/ORW Water		NA	11/8 - 11/2		NA	NA	NA	NA	NA
	Cavern Water		NA	11/8 - 11/2		NA	NA	NA	NA	NA
	Discharge/Outfall Water		NA	11/8 - 11/2		NA	NA	NA	NA	
	Geoprobe Wells		NA	11/8 - 11/2	10/2013	NA	NA	NA	NA	NA
	Della Grandiana et 24	1			Grand Bayou W					
	Daily Operations at 3A					Sur	mmary of Today's	events		
	11/9 - 11/11/2013	7am 763.59		11/9/2	2013		Oxv 3A			
		7am 773.91		44 /40 /	2012					
		773.31 7am 778.83		11/10/						
							Relief Well #1			

See ORW-01 Flare Spreadsheet

11/9 - 11/11/2013



#### **Daily Action Summary**

#### **November 8, 2013**

#### **Stationary Air Monitoring**

- Bijeet Mukherjee onsite from 07:45 to 09:15. Changed out the monitors between 08:01 and 08:51. Collected data from the monitoring database and forwarded to Eric Rucinski in the Baton Rouge office for processing.
- Roxana Dubose 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

		Obser	vation Relief V	Well -5			Observ	ation Relief	Well - 9			Observ	ation Relief	Well -11			So	outh of OG3A	<b>-</b> 1			C	Onsite Traile	rs	
			ORW-5a					ORW-9					ORW-11a					Pad #9					TR-1		
		Non-					Non-					Non-					Non-					Non-		1	
		Methane					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) V	OC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)
11/08/2013 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	0.0	0.0	<1.0	0.0	21.2	0.0	0.0	0.0	0.0	20.9
11/08/2013 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	0.0	0.0	<1.0	0.0	21.0	0.0	0.0	0.0	0.0	20.9
11/08/2013 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	0.0	0.0	0.0	0.0	21.1	0.0	0.0	0.0	0.0	20.9
11/08/2013 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	0.0	0.0	<1.0	0.0	21.1	0.0	0.0	0.0	0.0	20.9
11/08/2013 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	0.0	0.0	0.0	0.0	21.1	0.0	0.0	0.0	0.0	20.9
11/08/2013 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	21.0	0.0	0.0	0.0	0.0	20.9
11/08/2013 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	20.7	<1.0	0.0	0.0	0.0	21.1	0.0	0.0	0.0	0.0	20.9
11/08/2013 08:00:00 AM	0.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.8	0.0	<1.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9
11/08/2013 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	<1.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9
11/08/2013 10:00:00 AM	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	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9
11/08/2013 11:00:00 AM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.4	0.0	0.0	0.0	0.0	21.0	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9
11/08/2013 12:00:00 PM	0.0	0.0	0.0	0.0	21.0	0.0	0.0	0.0	0.0	21.5	0.0	0.0	0.0	0.0	21.2	0.0	0.0	0.0	0.0	21.0	<1.0	0.0	0.0	0.0	20.9
11/08/2013 01:00:00 PM	0.0	0.0	0.0	0.0	21.1	0.0	0.0	0.0	0.0	21.8	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	20.9
11/08/2013 02:00:00 PM	0.0	0.0	0.0	0.0	21.2	0.0	0.0	0.0	0.0	22.0	0.0	0.0	0.0	0.0	21.3	<1.0	0.0	0.0	0.0	21.0	<1.0	0.0	0.0	0.0	20.9
11/08/2013 03:00:00 PM	0.0	0.0	0.0	0.0	21.2	0.0	0.0	0.0	0.0	22.0	0.0	0.0	0.0	0.0	21.4	<1.0	0.0	0.0	0.0	21.2	<1.0	0.0	0.0	0.0	20.9
11/08/2013 04:00:00 PM	0.0	0.0	0.0	0.0	21.2	0.0	0.0	0.0	0.0	22.0	0.0	0.0	0.0	0.0	21.2	0.0	0.0	0.0	0.0	21.3	<1.0	0.0	0.0	0.0	20.9
11/08/2013 05:00:00 PM	0.0	0.0	0.0	0.0	21.2	0.0	0.0	0.0	0.0	21.7	0.0	0.0	0.0	0.0	21.2	0.0	<1.0	0.0	0.0	21.1	<1.0	0.0	0.0	0.0	20.9
11/08/2013 06:00:00 PM	0.0	0.0	0.0	0.0	21.2	0.0	0.0	0.0	0.0	21.5	0.0	0.0	0.0	0.0	20.9	0.0	<1.0	0.0	0.0	21.0	<1.0	0.0	0.0	0.0	20.9
11/08/2013 07:00:00 PM	0.0	0.0	0.0	0.0	21.1	0.0	0.0	0.0	0.0	21.3	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
11/08/2013 08:00:00 PM	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	0.0	<1.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9
11/08/2013 09:00:00 PM	0.0	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	20.9	0.0	<1.0	0.0	0.0	20.9	<1.0	<1.0	0.0	0.0	20.9
11/08/2013 10:00:00 PM	0.0	0.0	0.0	0.0	21.0	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9
11/08/2013 11:00:00 PM	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	<1.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9
11/09/2013 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	0.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9

Notes:

		Observa	ation Relief	Well -5			Observ	ation Relief	Well - 9			Observ	vation Relief	Well -11			So	uth of OG3A	1			(	Onsite Trailers		
			ORW-5a					ORW-9					ORW-11a					Pad #9					TR-1		
		Non-					Non-					Non-					Non-					Non-			ĺ
		Methane					Methane					Methane					Methane					Methane			I
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 (%)	O2 (%)	CO (ppm)	VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)
11/08/2013 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	0.0	0.0	0.0	0.0	21.1	0.0	0.0	0.0	0.0	20.9
11/08/2013 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	21.0	0.0	0.0	0.0	0.0	20.9
11/08/2013 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	20.7	<1.0	0.0	0.0	0.0	21.1	0.0	0.0	0.0	0.0	20.9
11/08/2013 08:00:00 AM	0.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.8	0.0	<1.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9
11/08/2013 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	<1.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9
11/08/2013 10:00:00 AM	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	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9
11/08/2013 11:00:00 AM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.4	0.0	0.0	0.0	0.0	21.0	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9
11/08/2013 12:00:00 PM	0.0	0.0	0.0	0.0	21.0	0.0	0.0	0.0	0.0	21.5	0.0	0.0	0.0	0.0	21.2	0.0	0.0	0.0	0.0	21.0	<1.0	0.0	0.0	0.0	20.9
11/08/2013 01:00:00 PM	0.0	0.0	0.0	0.0	21.1	0.0	0.0	0.0	0.0	21.8	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	20.9
11/08/2013 02:00:00 PM	0.0	0.0	0.0	0.0	21.2	0.0	0.0	0.0	0.0	22.0	0.0	0.0	0.0	0.0	21.3	<1.0	0.0	0.0	0.0	21.0	<1.0	0.0	0.0	0.0	20.9
11/08/2013 03:00:00 PM	0.0	0.0	0.0	0.0	21.2	0.0	0.0	0.0	0.0	22.0	0.0	0.0	0.0	0.0	21.4	<1.0	0.0	0.0	0.0	21.2	<1.0	0.0	0.0	0.0	20.9
11/08/2013 04:00:00 PM	0.0	0.0	0.0	0.0	21.2	0.0	0.0	0.0	0.0	22.0	0.0	0.0	0.0	0.0	21.2	0.0	0.0	0.0	0.0	21.3	<1.0	0.0	0.0	0.0	20.9
11/08/2013 05:00:00 PM	0.0	0.0	0.0	0.0	21.2	0.0	0.0	0.0	0.0	21.7	0.0	0.0	0.0	0.0	21.2	0.0	<1.0	0.0	0.0	21.1	<1.0	0.0	0.0	0.0	20.9
11/08/2013 06:00:00 PM	0.0	0.0	0.0	0.0	21.2	0.0	0.0	0.0	0.0	21.5	0.0	0.0	0.0	0.0	20.9	0.0	<1.0	0.0	0.0	21.0	<1.0	0.0	0.0	0.0	20.9
11/08/2013 07:00:00 PM	0.0	0.0	0.0	0.0	21.1	0.0	0.0	0.0	0.0	21.3	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
11/08/2013 08:00:00 PM	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	0.0	<1.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9
11/08/2013 09:00:00 PM	0.0	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	20.9	0.0	<1.0	0.0	0.0	20.9	<1.0	<1.0	0.0	0.0	20.9
11/08/2013 10:00:00 PM	0.0	0.0	0.0	0.0	21.0	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9
11/08/2013 11:00:00 PM	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	<1.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9
11/09/2013 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	0.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9
11/09/2013 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	<1.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9
11/09/2013 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	0.0	<1.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9
11/09/2013 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	0.0	<1.0	0.0	0.0	20.9	<1.0	<1.0	0.0	0.0	20.9
11/09/2013 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	0.0	<1.0	0.0	0.0	20.9	No Data Collected - Battery Malfunction				nn .
11/09/2013 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	0.0	<1.0	0.0	0.0	20.9	No Data Collected - Battery Malfunction				

#### Notes

 $TR-1\ experienced\ downtime\ beginning\ at\ approximately\ 04:03\ AM\ on\ 11/09/2013\ due\ to\ a\ battery\ malfunction\ with\ RTU-6.\ RTU-1\ replaced\ RTU-6\ at\ 07:54\ AM\ on\ 11/09/2013\ , and\ normal\ data\ collection\ resumed.$ 

### **Daily Action Summary**

#### **November 9, 2013**

#### **Stationary Air Monitoring**

- Bijeet Mukherjee onsite from 07:25 to 08:30. Changed out the monitors between 07:50 and 08:18. Collected data from the monitoring database and forwarded to Steven Shaughnessy in the Baton Rouge office for processing.
- Roxana Dubose of Code Red (monitor sub-contractor) onsite from 07:00 to 11:00. Assisted in battery change outs and maintenance of the monitoring equipment.

<u>NOTE</u>: TR-1 experienced downtime beginning at approximately 04:03 on 11/09/2013 due to a battery malfunction with RTU-6. RTU-1 replaced RTU-6 at 07:54 on 11/09/2013, and normal data collection resumed.

#### **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

		Obser	vation Relief	Well -5			Observ	ation Relief	Well - 9			Observ	ation Relief V	Vell -11			So	outh of OG3A	1			0	nsite Trailer	rs	
			ORW-5a					ORW-9					ORW-11a					Pad #9					TR-1		
		Non-					Non-					Non-					Non-					Non-			
		Methane					Methane					Methane					Methane					Methane		l 1	
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 (%)	O2 (%)	CO (ppm)	VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)
11/09/2013 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	<1.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9
11/09/2013 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	0.0	<1.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9
11/09/2013 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	0.0	<1.0	0.0	0.0	20.9	<1.0	<1.0	0.0	0.0	20.9
11/09/2013 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	0.0	<1.0	0.0	0.0	20.9					
11/09/2013 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	0.0	<1.0	0.0	0.0	20.9		No Data Colle	atad Datta	m: Malfunatic	
11/09/2013 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	0.0	<1.0	0.0	0.0	20.9		NO Data Colle	cieu - Daniei	y Manufictio	A11
11/09/2013 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	0.0	<1.0	0.0	0.0	20.9					
11/09/2013 08:00:00 AM	0.0	0.0	0.0	0.0	20.9	0.0	<1.0	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	<1.0	0.0	0.0	20.9
11/09/2013 09:00:00 AM	0.0	0.0	0.0	0.0	21.0	0.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.9
11/09/2013 10:00:00 AM	0.0	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	21.1	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
11/09/2013 11:00:00 AM	0.0	0.0	0.0	0.0	21.3	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.0	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
11/09/2013 12:00:00 PM	0.0	0.0	0.0	0.0	21.4	0.0	0.0	0.0	0.0	20.9	0.0	<1.0	0.0	0.0	21.2	0.0	0.0	0.0	0.0	21.0	0.0	0.0	0.0	0.0	20.9
11/09/2013 01:00:00 PM	0.0	0.0	0.0	0.0	21.4	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.3	0.0	0.0	0.0	0.0	21.2	0.0	0.0	0.0	0.0	21.2
11/09/2013 02:00:00 PM	0.0	0.0	0.0	0.0	21.5	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.3	0.0	0.0	0.0	0.0	21.3	0.0	0.0	0.0	0.0	21.3
11/09/2013 03:00:00 PM	0.0	0.0	0.0	0.0	21.5	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.3	0.0	0.0	0.0	0.0	21.3	0.0	0.0	0.0	0.0	21.3
11/09/2013 04:00:00 PM	0.0	0.0	0.0	0.0	21.4	0.0	0.0	0.0	0.0	21.3	0.0	0.0	0.0	0.0	21.2	0.0	0.0	0.0	0.0	21.4	0.0	0.0	0.0	0.0	21.3
11/09/2013 05:00:00 PM	0.0	0.0	0.0	0.0	21.3	0.0	0.0	0.0	0.0	21.2	0.0	0.0	0.0	0.0	21.1	0.0	0.0	0.0	0.0	21.3	0.0	0.0	0.0	0.0	21.3
11/09/2013 06:00:00 PM	0.0	0.0	0.0	0.0	21.2	0.0	0.0	0.0	0.0	21.1	0.0	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	21.3
11/09/2013 07:00:00 PM	0.0	0.0	0.0	0.0	21.3	0.0	<1.0	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	21.2
11/09/2013 08:00:00 PM	0.0	0.0	0.0	0.0	21.2	0.0	<1.0	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	21.2
11/09/2013 09:00:00 PM	0.0	0.0	0.0	0.0	21.1	0.0	1.2	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.1	0.0	0.0	0.0	0.0	21.2
11/09/2013 10:00:00 PM	0.0	0.0	0.0	0.0	21.1	0.0	1.7	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	<1.0	0.0	0.0	21.1	0.0	0.0	0.0	0.0	21.2
11/09/2013 11:00:00 PM	0.0	0.0	0.0	0.0	21.1	0.0	1.9	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.1	0.0	0.0	0.0	0.0	21.2
11/10/2013 12:00:00 AM	0.0	0.0	0.0	0.0	21.1	0.0	1.9	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	<1.0	0.0	0.0	21.1	0.0	0.0	0.0	0.0	21.2

#### Notes:

TR-1 experienced downtime beginning at approximately 04:03 AM on 11/09/2013 due to a battery malfunction with RTU-6. RTU-1 replaced RTU-6 at 07:54 AM on 11/09/2013, and normal data collection resumed.

		Observ	ation Relief	Well -5			Observ	ation Relief	Well - 9			Observ	vation Relief	Well -11			Sou	th of OG3A	<b>1</b> -1			Ons	site Trailer	'S	
			ORW-5a					ORW-9					ORW-11a					Pad #9					TR-1		
		Non-					Non-					Non-					Non-					Non-			
		Methane					Methane					Methane					Methane					Methane			İ
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) I	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	VOC (ppm) H	2S (ppm)	LEL (%)	O2 (%)
11/09/2013 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	0.0	<1.0	0.0	0.0	20.9		•			
11/09/2013 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	0.0	<1.0	0.0	0.0	20.9	1	No Data Collect	ed - Batter	y Malfunctio	n
11/09/2013 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	0.0	<1.0	0.0	0.0	20.9					
11/09/2013 08:00:00 AM	0.0	0.0	0.0	0.0	20.9	0.0	<1.0	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	<1.0	0.0	0.0	20.9
11/09/2013 09:00:00 AM	0.0	0.0	0.0	0.0	21.0	0.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.9
11/09/2013 10:00:00 AM	0.0	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	21.1	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
11/09/2013 11:00:00 AM	0.0	0.0	0.0	0.0	21.3	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.0	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
11/09/2013 12:00:00 PM	0.0	0.0	0.0	0.0	21.4	0.0	0.0	0.0	0.0	20.9	0.0	<1.0	0.0	0.0	21.2	0.0	0.0	0.0	0.0	21.0	0.0	0.0	0.0	0.0	20.9
11/09/2013 01:00:00 PM	0.0	0.0	0.0	0.0	21.4	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.3	0.0	0.0	0.0	0.0	21.2	0.0	0.0	0.0	0.0	21.2
11/09/2013 02:00:00 PM	0.0	0.0	0.0	0.0	21.5	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.3	0.0	0.0	0.0	0.0	21.3	0.0	0.0	0.0	0.0	21.3
11/09/2013 03:00:00 PM	0.0	0.0	0.0	0.0	21.5	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.3	0.0	0.0	0.0	0.0	21.3	0.0	0.0	0.0	0.0	21.3
11/09/2013 04:00:00 PM	0.0	0.0	0.0	0.0	21.4	0.0	0.0	0.0	0.0	21.3	0.0	0.0	0.0	0.0	21.2	0.0	0.0	0.0	0.0	21.4	0.0	0.0	0.0	0.0	21.3
11/09/2013 05:00:00 PM	0.0	0.0	0.0	0.0	21.3	0.0	0.0	0.0	0.0	21.2	0.0	0.0	0.0	0.0	21.1	0.0	0.0	0.0	0.0	21.3	0.0	0.0	0.0	0.0	21.3
11/09/2013 06:00:00 PM	0.0	0.0	0.0	0.0	21.2	0.0	0.0	0.0	0.0	21.1	0.0	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	21.3
11/09/2013 07:00:00 PM	0.0	0.0	0.0	0.0	21.3	0.0	<1.0	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	21.2
11/09/2013 08:00:00 PM	0.0	0.0	0.0	0.0	21.2	0.0	<1.0	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	21.2
11/09/2013 09:00:00 PM	0.0	0.0	0.0	0.0	21.1	0.0	1.2	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.1	0.0	0.0	0.0	0.0	21.2
11/09/2013 10:00:00 PM	0.0	0.0	0.0	0.0	21.1	0.0	1.7	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	<1.0	0.0	0.0	21.1	0.0	0.0	0.0	0.0	21.2
11/09/2013 11:00:00 PM	0.0	0.0	0.0	0.0	21.1	0.0	1.9	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.1	0.0	0.0	0.0	0.0	21.2
11/10/2013 12:00:00 AM	0.0	0.0	0.0	0.0	21.1	0.0	1.9	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	<1.0	0.0	0.0	21.1	0.0	0.0	0.0	0.0	21.2
11/10/2013 01:00:00 AM	0.0	0.0	0.0	0.0	21.1	0.0	138.3	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	<1.0	0.0	0.0	21.1	0.0	0.0	0.0	0.0	21.1
11/10/2013 02:00:00 AM	0.0	0.0	0.0	0.0	20.9	0.0	152.4	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	21.1
11/10/2013 03:00:00 AM	0.0	0.0	0.0	0.0	20.9	0.0	109.6	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	21.1
11/10/2013 04:00:00 AM	0.0	0.0	0.0	0.0	20.9	0.0	105.5	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.1
11/10/2013 05:00:00 AM	0.0	0.0	0.0	0.0	20.9	0.0	127.3	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	0.0	0.0	21.0

TR-1 experienced downtime beginning at approximately 04:03 AM on 11/09/2013 due to a battery malfunction with RTU-6. RTU-1 replaced RTU-6 at 07:54 AM on 11/09/2013, and normal data collection resumed.

RTU-9, located at ORW-9, began recording elevated VOC readings at approximately 01:25 AM on 11/10/2013. RTU-4 replaced RTU-9 at 08:38 AM on 11/10/2013, and VOC readings returned to 0 ppm. RTU-9 will be inspected and serviced by the onsite technician. Additionally, new monitoring units are scheduled to be delivered to the site on 11/11/2013.

#### **Daily Action Summary**

#### **November 10, 2013**

#### **Stationary Air Monitoring**

- Steven Shaughnessy onsite from 07:50 to 09:00. Changed out the monitors between 08:20 and 08:38. Collected data from the monitoring database and forwarded to Eric Rucinski in the Baton Rouge office for processing.
- Roxana Dubose of Code Red (monitor sub-contractor) onsite from 07:00 to 11:00. Assisted in battery change outs and maintenance of the monitoring equipment.

<u>NOTE</u>: RTU-9, located at ORW-9, began recording elevated VOC readings at approximately 01:25 on 11/10/2013. RTU-4 replaced RTU-9 at 08:38 on 11/10/2013, and VOC readings returned to 0 ppm. RTU-9 will be inspected and serviced by the onsite technician. Additionally, new monitoring units are being delivered to the site on 11/11/2013.

RTU-14, located at ORW-5a, began recording elevated LEL readings at approximately 12:47 on 11/11/2013. LEL readings returned to 0% at approximately 07:36 on 11/11/2013. The maximum instantaneous LEL reading recorded was 6.2%.

### **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

		Observ	vation Relief	Well -5			Observ	ation Relief	Well - 9			Observ	ation Relief V	Vell -11			So	uth of OG3A	1			0	nsite Traile	rs	
			ORW-5a					ORW-9					ORW-11a					Pad #9					TR-1		
		Non-					Non-					Non-					Non-					Non-			
		Methane					Methane					Methane					Methane					Methane			ı
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 (%)	O2 (%)	CO (ppm)	VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)
11/10/2013 01:00:00 AM	0.0	0.0	0.0	0.0	21.1	0.0	138.3	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	<1.0	0.0	0.0	21.1	0.0	0.0	0.0	0.0	21.1
11/10/2013 02:00:00 AM	0.0	0.0	0.0	0.0	20.9	0.0	152.4	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	21.1
11/10/2013 03:00:00 AM	0.0	0.0	0.0	0.0	20.9	0.0	109.6	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	21.1
11/10/2013 04:00:00 AM	0.0	0.0	0.0	0.0	20.9	0.0	105.5	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.1
11/10/2013 05:00:00 AM	0.0	0.0	0.0	0.0	20.9	0.0	127.3	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	0.0	0.0	21.0
11/10/2013 06:00:00 AM	0.0	0.0	0.0	0.0	20.9	0.0	134.6	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.0
11/10/2013 07:00:00 AM	0.0	0.0	0.0	0.0	20.9	0.0	134.6	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
11/10/2013 08:00:00 AM	<1.0	<1.0	0.0	0.0	20.9	<1.0	42.4	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	<1.0	0.0	20.9
11/10/2013 09:00:00 AM	0.0	0.0	<1.0	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	0.0	0.0	<1.0	0.0	20.9
11/10/2013 10:00:00 AM	0.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9	0.0	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
11/10/2013 11:00:00 AM	<1.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	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	<1.0	0.0	20.9
11/10/2013 12:00:00 PM	0.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	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	<1.0	0.0	20.9
11/10/2013 01:00:00 PM	0.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	21.5	0.0	0.0	0.0	0.0	21.0	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9
11/10/2013 02:00:00 PM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	<1.0	0.0	21.5	0.0	0.0	0.0	0.0	21.2	0.0	0.0	0.0	0.0	21.0	0.0	0.0	<1.0	0.0	20.9
11/10/2013 03:00:00 PM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	<1.0	0.0	21.6	0.0	0.0	0.0	0.0	21.2	0.0	0.0	0.0	0.0	21.1	0.0	0.0	<1.0	0.0	20.9
11/10/2013 04:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.4	0.0	0.0	0.0	0.0	21.1	0.0	0.0	0.0	0.0	21.1	0.0	0.0	<1.0	0.0	20.9
11/10/2013 05:00:00 PM	0.0	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	21.0	0.0	0.0	<1.0	0.0	20.9
11/10/2013 06:00:00 PM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	21.0	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9
11/10/2013 07:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	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
11/10/2013 08:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	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	21.0
11/10/2013 09:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	<1.0	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
11/10/2013 10:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	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
11/10/2013 11:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	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
11/11/2013 12:00:00 AM	0.0	0.0	0.0	<1.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	<1.0	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:

RTU-9, located at ORW-9, began recording elevated VOC readings at approximately 01:25 AM on 11/10/2013. RTU-4 replaced RTU-9 at 08:38 AM on 11/10/2013, and VOC readings returned to 0 ppm. RTU-9 will be inspected and serviced by the onsite technician. Additionally, new monitoring units are being delivered to the site on 11/11/2013.

RTU-14, located at ORW-5a, began recording elevated LEL readings at approximately 12:47 AM on 11/11/2013. LEL readings returned to 0% at approximately 07:36 AM on 11/11/2013. The maximum instantaneous LEL reading recorded was 6.2%.

		Observa	ation Relief	Well -5			Observ	ation Relief	Well - 9			Observ	ation Relief	Well -11			So	uth of OG3A	<b>-</b> 1			(	Onsite Trailers		
			ORW-5a					ORW-9					ORW-11a					Pad #9					TR-1		
		Non-					Non-					Non-					Non-					Non-			
		Methane					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 (%)	O2 (%)	CO (ppm) V	OC (ppm)	H2S (ppm)	LEL (%)	O2 (%)
11/10/2013 05:00:00 AM	0.0	0.0	0.0	0.0	20.9	0.0	127.3	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	0.0	0.0	21.0
11/10/2013 06:00:00 AM	0.0	0.0	0.0	0.0	20.9	0.0	134.6	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.0
11/10/2013 07:00:00 AM	0.0	0.0	0.0	0.0	20.9	0.0	134.6	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
11/10/2013 08:00:00 AM	<1.0	<1.0	0.0	0.0	20.9	<1.0	42.4	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	<1.0	0.0	20.9
11/10/2013 09:00:00 AM	0.0	0.0	<1.0	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	0.0	0.0	<1.0	0.0	20.9
11/10/2013 10:00:00 AM	0.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9	0.0	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
11/10/2013 11:00:00 AM	<1.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	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	<1.0	0.0	20.9
11/10/2013 12:00:00 PM	0.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	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	<1.0	0.0	20.9
11/10/2013 01:00:00 PM	0.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	21.5	0.0	0.0	0.0	0.0	21.0	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9
11/10/2013 02:00:00 PM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	<1.0	0.0	21.5	0.0	0.0	0.0	0.0	21.2	0.0	0.0	0.0	0.0	21.0	0.0	0.0	<1.0	0.0	20.9
11/10/2013 03:00:00 PM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	<1.0	0.0	21.6	0.0	0.0	0.0	0.0	21.2	0.0	0.0	0.0	0.0	21.1	0.0	0.0	<1.0	0.0	20.9
11/10/2013 04:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.4	0.0	0.0	0.0	0.0	21.1	0.0	0.0	0.0	0.0	21.1	0.0	0.0	<1.0	0.0	20.9
11/10/2013 05:00:00 PM	0.0	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	21.0	0.0	0.0	<1.0	0.0	20.9
11/10/2013 06:00:00 PM	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	21.0	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9
11/10/2013 07:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	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
11/10/2013 08:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	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	21.0
11/10/2013 09:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	<1.0	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
11/10/2013 10:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	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
11/10/2013 11:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	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
11/11/2013 12:00:00 AM	0.0	0.0	0.0	<1.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	<1.0	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
11/11/2013 01:00:00 AM	0.0	0.0	0.0	3.4	20.9	0.0	0.0	0.0	0.0	20.7	0.0	<1.0	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
11/11/2013 02:00:00 AM	0.0	0.0	0.0	4.0	20.9	0.0	0.0	0.0	0.0	20.6	0.0	<1.0	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
11/11/2013 03:00:00 AM	0.0	0.0	0.0	4.7	20.9	<1.0	0.0	0.0	0.0	20.6	0.0	<1.0	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
11/11/2013 04:00:00 AM	0.0	0.0	0.0	5.1	20.9	0.0	0.0	0.0	0.0	20.6	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
11/11/2013 05:00:00 AM	0.0	0.0	0.0	5.5	20.9	<1.0	0.0	0.0	0.0	20.6	0.0	<1.0	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:

RTU-9, located at ORW-9, began recording elevated VOC readings at approximately 01:25 AM on 11/10/2013. RTU-4 replaced RTU-9 at 08:38 AM on 11/10/2013, and VOC readings returned to 0 ppm. RTU-9 will be inspected and serviced by the onsite technician. Additionally, new monitoring units are being delivered to the site on 11/11/2013.

RTU-14, located at ORW-5a, began recording elevated LEL readings at approximately 12:47 AM on 11/11/2013. LEL readings returned to 0% at approximately 07:36 AM on 11/11/2013. The maximum instantaneous LEL reading recorded was 6.2%.

# **RESPEC Consulting & Services**

Report By: David Gnage  Company: RESPEC		Date: <u>11/10/13</u> Job #: <u>02241</u>
Personnel	Company	Job Title
Time Onsite: Start Time	e: NA End Time:	NA
DAILY ACTIVITY:		
No Field Work Conducted. RESP	EC was not on-site	
DPVE pilot program: RESPEC's subcontractors continue is available, without RESPEC pres	e to demobilize equipment from NSI ent.	DBS#47 pilot study site as transport
Instrumentation Program: No Work Conducted.		
Other Programs: No Work Conducted.		
PROPOSED SCHEDULE:		
DPVE pilot program: RESPEC's subcontractors will con transport is available.	tinue to demobilize equipment from	NSDBS#47 pilot study site as
Instrumentation Program: No Work Currently Scheduled.		
Other Programs: No Work Currently Scheduled.		
		Initials: DJG

# **RESPEC Consulting & Services**

Report By: David Gnage  Company: RESPEC		Date: <u>11/8/13</u> Job #: <u>02241</u>
Personnel	Company	Job Title
Time Onsite: Start Time	e <u>: NA</u> End Time <u>:</u>	NA
DAILY ACTIVITY:		
No Field Work Conducted. RESP.	EC was not on-site	
DPVE pilot program: RESPEC's subcontractors continuis available, without RESPEC pres		SDBS#47 pilot study site as transport
Instrumentation Program: No Work Conducted.		
Other Programs: No Work Conducted.		
PROPOSED SCHEDULE:		
DPVE pilot program: RESPEC's subcontractors will con transport is available.	tinue to demobilize equipment from	n NSDBS#47 pilot study site as
Instrumentation Program: No Work Currently Scheduled.		
Other Programs: No Work Currently Scheduled.		
		Initials:DJG

# **RESPEC Consulting & Services**

Report By: David Gnage  Company: RESPEC		Date: <u>11/9/13</u> Job #: <u>02241</u>
Personnel	Company	Job Title
Time Onsite: Start Time	e <u>: NA</u> End Time <u>:</u>	NA
DAILY ACTIVITY:		
No Field Work Conducted. RESP	EC was not on-site	
DPVE pilot program: RESPEC's subcontractors continuities available, without RESPEC pres		SDBS#47 pilot study site as transport
Instrumentation Program: No Work Conducted.		
Other Programs: No Work Conducted.		
PROPOSED SCHEDULE:		
DPVE pilot program: RESPEC's subcontractors will con transport is available.	tinue to demobilize equipment from	n NSDBS#47 pilot study site as
Instrumentation Program: No Work Currently Scheduled.		
Other Programs: No Work Currently Scheduled.		
		Initials: DJG

Company:	MP&A			Work Order #	80-05
	Safety Meeting	y YES	NO NO	•	
Weather:					
	Personnel		Company	Job Title	
				· <del></del>	
Site Acti	vities: Start	Time	End Time		
Equipment	On-site:				
Daily Activ NO FIELD	<u>ity:</u> ACTIVITIES				
Estimated t	ime of completion:				
On-going		-			
Proposed so	chedule:				
Conduct in-	situ monitoring of in				
			vells and MRAA wells		
_	essure and water lever ratory samples from		_		
	leo, measure bubble		water werrs		
	ransucer data				
	ime of completion:	<u>i</u>			
On-going				Initials:	PMR
				imuais:	TIVIK

Report By: Company:	Patrick Ritchie MP&A	_		Da Work Orde		
Company.	WII &A	<b>-</b> -		Work Order	. т	
Health and S	Safety Meeting V	YES	NO			
Weather:	80 F Mostly Sunny				_	
	Personnel		Company	Job Tit	le	
Patrick Ritcl	hie	MP&A	-	Environmental Scient	ist	
Charles Tral	nan	MP&A		Geologist		
Eric Kocken	t	MP&A		Environmental Scient	ist	
		_				
		_				
		_				
		_				
Site Acti	vities: Start Time	6:50	End Time 16:30			
		-	<del>-</del>			
Equipment	On-site:					
Sonic rig	OH BREEF					
_	poly water tank					
Vac truck	pory water tank					
vac truck						
Daily Activ	<b>it</b> ****					
Grouted MR						
	RAA-4D location.					
_	5/8" surface casing to 80	, pag				
			.11 <sub>0</sub>			
Conect labo	ratory samples from MR	AA water we	ens			
	ime of completion:					
On-going						
Proposed so						
	situ monitoring of indust					
	ter level for the industria					
	ssure and water level at					
	ratory samples from the		ter wells			
	leo, measure bubble sites	S				
Download tr	ansucer data					
L.						
	ime of completion:					
On-going						
				Initials:	PMR	

Company	Patrick Ritchie	•		Want-C		20.05
Company:	MP&A	•		Work C	nuer #	80-05
Health and S	Safety Meeting y	YES	NO NO			
Weather:	72 F Clear Sunny					
	Personnel		Company	Joh	Title	
Patrick Ritch		MP&A	company	Environmental Sc		
Charles Trahan		MP&A		Geologist		
				_		
Site Acti	vities: Start Time	6:55	End Time 12:45			
Site Acti	vities. Start Time		End Time 12:45	<del>_</del>		
Equipment	On-site:					
Sonic rig	On-site.					
-	poly water tank					
Vac truck	1 3					
Daily Activi						
	5/8" surface casing with		0' to 160' bgs at MR	AA-4D location.		
_	cap at top of surface cas	-	11			
	ratory samples from MRA		lls			
Denver labo	ratory samples to GCAL	in BK				
	ime of completion:					
On-going						
D 1	l Jl					
Proposed sc			1.			
	situ monitoring of industr ter level for the industrial					
	ssure and water level at T					
	ratory samples from the i					
	leo, measure bubble sites		or weng			
	ansucer data					
	ime of completion:					
On-going				Initial		DMD

Report By: Company:	Patrick Ritchie MP&A			Date: Work Order #	
Health and S	Safety Meeting V	YES [	NO		
Weather:					
	Personnel	Comp	any	Job Title	
Site Acti	vities: Start Time	End Ti	me		
Equipment	On-site:				
Daily Activ					
NO FIELD .	ACTIVITIES				
I					
Fetimated t	ime of completion:				
On-going	mic of completion.				
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Proposed so		al water walls			
	situ monitoring of industri ter level for the industrial		RAA wells		
	essure and water level at T				
_	ratory samples from the in	_			
	deo, measure bubble sites				
Download to	ransucer data				
Estimated t	ime of completion:				
On-going					
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