Texas Brine Company, LLC
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January 14, 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, 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	William Verrett - 08:00 - 09:00 Ricky Provost (Code Red) - 07:00 - 17:00	1/11/2013	No	No	No	AreaRAE Monitors	1/12/2013
		Cy Gaudet - 08:15 - 09:40 Ricky Provost (Code Red) - 07:00 - 11:00	1/12/2013	No	No	No	AreaRAE Monitors	1/6/2013
		Cy Gaudet - 07:37 - 09:27 Ricky Provost (Code Red) - 07:00 - 11:00	1/13/2013	No	No	No	AreaRAE Monitors	1/7/2013
	Residential Air Monitoring	Sam Coker Cy Gaudet 09:58-11:35	1/12/2013	NA	NA	NA	Hand-held TVA unit	1/13/2013
	Residential Air Monitoring	No work performed	1/11/2013 & 1/13/2013					
	Gas Seep Sampling	No work performed	1/4/2013 - 1/6/2013	NA	NA	NA	NA	NA
	Well Gas Sampling	No work performed	1/4/2013 - 1/6/2013	NA	NA	NA	NA	NA
	Indoor Air Monitoring	No work performed	1/4/2013 - 1/6/2013	NA	NA	NA	NA	NA
Respec	Inclinometers/Tilt Meters	W.Goodman	1/11/2013	NA	Read from Atlas	NA	NA	NA
	InSAR Reflector Installations	No work performed	1/11/2013 - 1/13/2013	NA	NA	NA	NA	NA
	Geophone Installation	2x shelby tubes; Walker Hill	1/9/2013	1/11/2013	NA	NA	NA	NA
		No work performed	1/12/2013 - 1/13/2013	NA	NA	NA	NA	NA
	Amendment #3, Directive #2	No work performed	1/11/2013 - 1/13/2013	NA	NA	NA	NA	NA
Miller	Weekly Stability Survey	No work performed	1/11/2013 - 1/13/2013	NA	NA	NA	NA	NA
	Misc. Survey Work	No work performed	1/11/2013 - 1/13/2013	NA	NA	NA	NA	NA
	Sinkhole Hydro/Perimeter Survey	No Work Performed	1/11/2013 - 1/13/2013	NA	NA	NA	NA	NA
Pisani	Surface Water	No work performed	1/11/2013 - 1/13/2013	NA	NA	NA	NA	NA
	Well Water	PMR	1/8/2013	1/11/2013	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	NA
	Well Water	No work performed	1/12/2013 - 1/13/2013	NA	NA	NA	NA	NA
	Geoprobe Wells	No work performed	1/11/2013 - 1/13/2013	NA	NA	NA	NA	NA

Grand Bayou Well 3A

Daily Operations at 3A	**Summary of Today's events**
	OXY 3A
1/12/2013 - 1/14/2013	7 am 623 casing 1/12/2013 7 am 619 casing 1/13/2013 7 am 616 casing 1/14/2013
	Relief Well # 1
1/13/2013	Finish laying down 7" csg. R/D csg tools, floor, and laydown machine. N/D BOP'S and wellhead N/U BOP'S R/D floor, csg tools, and laydown. P/U lift nipple and screwed into hanger. Pulled 130K pulled free. Laid down 2 jts. 10 3/4" csg. CBL is postpone until Tuesday morning.

1/11/2013 - 1/14/2013	1/10-11/2013	7:00 AM	7:00 AM	24.00	.500"	96.33	2311.91	2311.91	.78psi	Metered CFM
	1/11-12/2013	7:00 AM	7:00AM	24.00	.500"	1.23	29.47	2341.38	.80psi	Metered CFM
	1/12-13/2013	7:00 AM	7:00 AM	24.00	.500"	1.20	28.78	2370.16	.62psi	Metered CFM
	1/13-14/2013	7:00 AM	7:00 AM	24.00	.500"	1.14	27.47	2397.63	.49psi	Metered CFM

Attachments

Daily Action Summary

January 11, 2013

Stationary Air Monitoring

- William Verrett onsite from 08:00 to 09:00. Changed out the monitors between 08:23 and 08:51. Collected data from the monitoring database and forwarded to Jill Martin in the Baton Rouge office for processing.

- Ricky Provost 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

- Not Scheduled

Gas Seep Sampling

- Not Scheduled

Well 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)

	South-most Pipeline Site					Middle-most Pipeline Site					North-most Pipeline Site					On Drill Rig Boom					Relief Well				
	AM-3					AM-2					AM-1					OG 3A-1					RW-1				
Date-Time *	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	SO2 (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)
01/11/2013 01:00:00 AM	<1.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	21.2	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
01/11/2013 02:00:00 AM	<1.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	21.2	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
01/11/2013 03:00:00 AM	0.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	21.2	0.0	<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
01/11/2013 04:00:00 AM	<1.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	21.2	0.0	<1.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	<1.0	<1.0	0.0	20.9
01/11/2013 05:00:00 AM	0.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	21.2	0.0	<1.0	<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
01/11/2013 06:00:00 AM	0.0	<1.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	21.2	0.0	<1.0	<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
01/11/2013 07:00:00 AM	<1.0	<1.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	21.2	<1.0	<1.0	<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
01/11/2013 08:00:00 AM	<1.0	0.0	<1.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	21.0	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9
01/11/2013 09:00:00 AM	<1.0	0.0	<1.0	0.0	20.9	0.0	3.5	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	<1.0	<1.0	<1.0	0.0	20.9
01/11/2013 10:00:00 AM	<1.0	0.0	<1.0	0.0	20.9	0.0	6.5	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	<1.0	0.0	<1.0	0.0	20.9
01/11/2013 11:00:00 AM	<1.0	<1.0	<1.0	0.0	20.9	0.0	8.2	<1.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	<1.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9
01/11/2013 12:00:00 PM	<1.0	<1.0	<1.0	0.0	20.9	0.0	8.2	0.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.9	0.0	<1.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9
01/11/2013 01:00:00 PM	<1.0	<1.0	<1.0	0.0	20.9	0.0	14.3	0.0	0.0	20.9	0.0	2.2	0.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9
01/11/2013 02:00:00 PM	<1.0	<1.0	<1.0	0.0	20.9	0.0	24.1	0.0	0.0	20.9	0.0	2.1	0.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9
01/11/2013 03:00:00 PM	0.0	0.0	<1.0	0.0	20.9	0.0	31.7	0.0	0.0	20.9	0.0	2.1	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9
01/11/2013 04:00:00 PM	0.0	0.0	<1.0	0.0	20.9	<1.0	4.3	<1.0	0.0	20.9	0.0	2.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9
01/11/2013 05:00:00 PM	<1.0	<1.0	<1.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9	0.0	1.9	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9
01/11/2013 06:00:00 PM	<1.0	<1.0	<1.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9	0.0	2.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9
01/11/2013 07:00:00 PM	0.0	0.0	<1.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9	0.0	2.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9
01/11/2013 08:00:00 PM	<1.0	<1.0	<1.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9	0.0	2.2	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9
01/11/2013 09:00:00 PM	<1.0	<1.0	<1.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9	0.0	2.1	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9
01/11/2013 10:00:00 PM	<1.0	<1.0	<1.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9	0.0	2.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9
01/11/2013 11:00:00 PM	<1.0	<1.0	<1.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9	0.0	2.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	<1.0	0.0	21.0
01/12/2013 12:00:00 AM	<1.0	<1.0	<1.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9	0.0	2.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	<1.0	0.0	21.0

Notes:
AM-2: RTU-5 recorded elevated VOC readings between 9:00 AM and 4:00 PM on 1/11/2013. Probable cause due to VOC sensor. RTU-5 will be serviced by technician. RTU-7 was placed at AM-2 at 4:09 PM and recorded normal VOC readings.

Daily Action Summary

January 12, 2013

Stationary Air Monitoring

- Cy Gaudet onsite from 08:15 to 09:40. Changed out the monitors between 09:02 and 09:33. Collected data from the monitoring database and forwarded to Jill Martin in the Baton Rouge office for processing.

- Ricky Provost of Code Red (monitor sub-contractor) onsite from 07:00 to 11:00. Assisted in battery change outs and maintenance of the monitoring equipment.

Residential Air Monitoring

- The residential monitoring team members were Sam Coker and Cy Gaudet. After calibrating the portable TVA unit, the residential walkthrough occurred between 9:58 and 11:35. The portable TVA unit was re-calibrated after the walkthrough. The collected data was compiled by Sam Coker and forwarded to Jill Martin in the Baton Rouge office for processing.

Gas Seep Sampling

- Not Scheduled

Well 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)

	South-most Pipeline Site					Middle-most Pipeline Site					North-most Pipeline Site					On Drill Rig Boom					Relief Well				
	AM-3					AM-2					AM-1					OG 3A-1					RW-1				
Date-Time *	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	SO2 (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)
01/12/2013 01:00:00 AM	0.0	<1.0	<1.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9	0.0	1.8	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	<1.0	0.0	21.0
01/12/2013 02:00:00 AM	0.0	<1.0	<1.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9	0.0	1.7	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	<1.0	0.0	21.0
01/12/2013 03:00:00 AM	0.0	<1.0	<1.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9	0.0	1.6	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9
01/12/2013 04:00:00 AM	<1.0	<1.0	<1.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9	0.0	1.5	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9
01/12/2013 05:00:00 AM	0.0	<1.0	<1.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9	0.0	1.4	<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
01/12/2013 06:00:00 AM	<1.0	<1.0	<1.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9	0.0	1.3	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
01/12/2013 07:00:00 AM	0.0	<1.0	<1.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9	0.0	1.3	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9
01/12/2013 08:00:00 AM	<1.0	<1.0	<1.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9	0.0	1.4	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9
01/12/2013 09:00:00 AM	<1.0	<1.0	<1.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9
01/12/2013 10:00:00 AM	0.0	0.0	<1.0	0.0	20.9	0.0	<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
01/12/2013 11:00:00 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	<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
01/12/2013 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
01/12/2013 01:00:00 PM	0.0	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	0.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9
01/12/2013 02:00:00 PM	0.0	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	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9
01/12/2013 03:00:00 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
01/12/2013 04:00:00 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
01/12/2013 05:00:00 PM	0.0	0.0	<1.0	0.0	20.9	0.0	<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
01/12/2013 06:00:00 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
01/12/2013 07:00:00 PM	0.0	0.0	<1.0	0.0	20.9	0.0	<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	<1.0	0.0	<1.0	0.0	20.9
01/12/2013 08:00:00 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
01/12/2013 09:00:00 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
01/12/2013 10:00:00 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	<1.0	0.0	<1.0	0.0	20.9
01/12/2013 11:00:00 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
01/13/2013 12:00:00 AM	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

Residential Air Monitoring Data

		1/12/2013
No.	**Street Address**	**VOC Concentration (ppm)**
1	114 Sportsman Paradise Drive	0.78
2	117 Sportsman Paradise Drive	0.70
3	120 Sportsman Paradise Drive	0.75
4	121 Sportsman Paradise Drive	0.86
5	122 Sportsman Paradise Drive	0.93
6	123 Sportsman Paradise Drive	0.84
7	Purple House on Left Sportsman Paradise Drive	0.85
8	126 Sportsman Paradise Drive	0.85
9	132 Sportsman Paradise Drive	0.82
10	133 Sportsman Paradise Drive	0.84
11	134 Sportsman Paradise Drive	0.78
12	135 Sportsman Paradise Drive	0.76
13	137 Sportsman Paradise Drive	0.75
14	138 Sportsman Paradise Drive	0.79
15	139 Sportsman Paradise Drive	0.90
16	140 Sportsman Paradise Drive	0.72
17	142 Sportsman Paradise Drive	0.82
18	143 Sportsman Paradise Drive	0.72
19	144 Sportsman Paradise Drive	0.81
20	145 Sportsman Paradise Drive	0.85
21	149 Sportsman Paradise Drive	0.83
22	153 Sportsman Paradise Drive	0.85
23	1434 Jambalaya Street	0.7
24	1432 Jambalaya Street	0.72
25	102 Bream Street	0.70
26	107 Bream Street	0.63
27	1426 Jambalaya Street	0.74
28	1426 A Jambalaya Street	0.73
29	1428 Jambalaya Street	0.78
30	1428 A Jambalaya Street	0.80
31	1454 Jambalaya Street	0.82
32	1422 Jambalaya Street	0.85
33	1421 Jambalaya Street	0.85
34	1420 Jambalaya Street	0.83
35	1418 A Jambalaya Street	0.67
36	1418 B Jambalaya Street	0.64
37	1419 Jambalaya Street	0.62
38	1416 Jambalaya Street	0.60
39	1414 A Jambalaya Street	0.63

Residential Air Monitoring Data

		1/12/2013
No.	**Street Address**	**VOC Concentration (ppm)**
40	1414 B Jambalaya Street	0.65
41	1412 Jambalaya Street	0.68
42	1412 A Jambalaya Street	0.75
43	1412 B Jambalaya Street	0.64
44	1410 Jambalaya Street	0.78
45	1410 A Jambalaya Street	0.8
46	1410 B Jambalaya Street	0.82
47	1411 Jambalaya Street	0.81
48	1409 Jambalaya Street	0.80
49	1408 Jambalaya Street	0.80
50	1408 A Jambalaya Street	0.78
51	1406 Jambalaya Street	Not Recorded
52	1406 A Jambalaya Street	0.80
53	1406 B Jambalaya Street	0.83
54	1407 Jambalaya Street	0.84
55	1405 Jambalaya Street	0.69
56	1403 Jambalaya Street	0.70
57	1402 Jambalaya Street	0.71
58	1400 Jambalaya Street	Not Recorded
59	117 Gumbo Street	0.80
60	1402 Sauce Piquante Lane	0.80
61	1401 Sauce Piquante Lane	0.82
62	1403 Sauce Piquante Lane	0.71
63	1408 Sauce Piquante Lane	0.71
64	1409 Sauce Piquante Lane	0.72
65	1410 Sauce Piquante Lane	0.72
66	1411 Sauce Piquante Lane	0.72
67	1413 Sauce Piquante Lane	0.62
68	1414 Sauce Piquante Lane	0.79
69	1417 Sauce Piquante Lane	0.68
70	1418 Sauce Piquante Lane	0.81
71	1419 Sauce Piquante Lane	0.74
72	The Jeansonne's	0.73
73	Yellow house between 1418/1426 Sauce Piquante Lane	0.72
74	Blue and White Trailer on Sauce Piquante Lane	0.66
75	1425 Sauce Piquante Lane	0.69
76	1426 Sauce Piquante Lane	0.74
77	1428 Sauce Piquante Lane	0.69

Residential Air Monitoring Data

		1/12/2013
No.	**Street Address**	**VOC Concentration (ppm)**
78	1430 Sauce Piquante Lane	0.66
79	1433 Sauce Piquante Lane	0.67
80	1434 Sauce Piquante Lane	0.60
81	1434 B Sauce Piquante Lane	0.57
82	1436 Sauce Piquante Lane	0.59
83	1438 Sauce Piquante Lane	0.67
84	1439 Sauce Piquante Lane	0.71
85	Camper between 1438/1442 Sauce Piquante Lane	0.72
86	Red and White Trailer Sauce Piquante Lane	0.71
87	Spunky's Place Sauce Piquante Lane	0.54
88	1442 Sauce Piquante Lane	0.61
89	1443 Sauce Piquante Lane	0.60
90	1444 Sauce Piquante Lane	0.66
91	1445 Sauce Piquante Lane	0.61
92	1446 Sauce Piquante Lane	0.76
93	1449 Sauce Piquante Lane	0.63
94	1453 Sauce Piquante Lane	0.57
95	1454 Sauce Piquante Lane	0.69
96	1455 Sauce Piquante Lane	0.58
97	1457 Sauce Piquante Lane	0.64
98	1458 Sauce Piquante Lane	0.67
99	1459 Sauce Piquante Lane	0.70
100	1460 Sauce Piquante Lane	0.67
101	1461 Sauce Piquante Lane	0.72
102	1463 Sauce Piquante Lane	0.65
103	1465 Sauce Piquante Lane	0.71
104	1467 Sauce Piquante Lane	0.58
105	1468 Sauce Piquante Lane	0.61
106	1469 Sauce Piquante Lane	0.65
107	1471 Sauce Piquante Lane	0.68
108	1472 Sauce Piquante Lane	0.57
109	1473 Sauce Piquante Lane	0.67
110	1474 Sauce Piquante Lane	0.50
111	1477 Sauce Piquante Lane	0.58
112	1478 Sauce Piquante Lane	0.51
113	1479 Sauce Piquante Lane	0.65
114	100 Crawfish Stew Street	0.63

Residential Air Monitoring Data

		1/12/2013
No.	**Street Address**	**VOC Concentration (ppm)**
115	101 Crawfish Stew Street	0.64
116	Trailer between 101/107 Crawfish Stew Street	0.61
117	107 Crawfish Stew Street	0.72
118	108 Crawfish Stew Street	0.64
119	111 Crawfish Stew Street	0.73
120	113 Crawfish Stew Street	0.79
121	114 Crawfish Stew Street	0.78
122	Trailer across from 114 Crawfish Stew Street	Not Recorded
123	116 Crawfish Stew Street	0.51
124	127 Crawfish Stew Street	0.78
125	135 Crawfish Stew Street	0.77
126	Wooden house between 135/141 Crawfish Stew Street	0.69
127	141 Crawfish Stew Street	0.83
128	145 Crawfish Stew Street	0.75
129	147 Crawfish Stew Street	1.02
130	149 Crawfish Stew Street	0.67
131	153 Crawfish Stew Street	0.70
132	156 Crawfish Stew Street	0.71
133	159 Crawfish Stew Street	0.62
134	163 Crawfish Stew Street	0.59
135	165 Crawfish Stew Street	0.75
136	170 Crawfish Stew Street	0.73
137	174 Crawfish Stew Street	0.79
138	1400 Highway 70 South	0.83
139	1408 Highway 70 South	0.91
140	1412 Highway 70 South	0.94
141	1420 Highway 70 South	0.89
142	1424 Highway 70 South	0.84
143	1439 Highway 70 South	0.88
144	1440 Highway 70 South	1.02
145	1443 Highway 70 South	0.91
146	1447 Highway 70 South	0.89
147	1451 Highway 70 South	0.91
148	1455 Highway 70 South	0.87
149	1490 Highway 70 (Last house before the bridge, going west)	Not Recorded
150	1501 Highway 70 South	0.85

Residential Air Monitoring Data

		1/12/2013
No.	**Street Address**	**VOC Concentration (ppm)**
151	1503 Highway 70 South	0.83
152	1506 Highway 70 South	0.78
153	111 Edmond Lane	0.83
154	113 Edmond Lane	0.78
155	Trailer Edmond Lane	0.81
156	Trailer on left side Edmond Lane	0.91
157	103 Bayou Corne Street	0.90
158	Trailer Bayou Corne Street	0.91
159	Camp Bayou Corne Street	0.89
	MIN	0.50
	MAX	1.02
	AVG	0.74

Daily Action Summary

January 13, 2013

Stationary Air Monitoring

- Cy Gaudet onsite from 07:37 to 09:27. Changed out the monitors between 08:18 and 08:50. Collected data from the monitoring database and forwarded to Jill Martin in the Baton Rouge office for processing.

- Ricky Provost of Code Red (monitor sub-contractor) onsite from 07:00 to 11:00. Assisted in battery change outs and maintenance of the monitoring equipment.

Residential Air Monitoring

- Not Scheduled

Gas Seep Sampling

- Not Scheduled

Well 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)

	South-most Pipeline Site					Middle-most Pipeline Site					North-most Pipeline Site					On Drill Rig Boom					Relief Well				
	AM-3					AM-2					AM-1					OG 3A-1					RW-1				
Date-Time *	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	SO2 (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)
01/13/2013 01:00:00 AM	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
01/13/2013 02:00:00 AM	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
01/13/2013 03:00:00 AM	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
01/13/2013 04:00:00 AM	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
01/13/2013 05:00:00 AM	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
01/13/2013 06:00:00 AM	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
01/13/2013 07:00:00 AM	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	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9
01/13/2013 08:00:00 AM	<1.0	0.0	<1.0	0.0	21.0	<1.0	<1.0	<1.0	0.0	20.9	0.0	1.4	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
01/13/2013 09:00:00 AM	<1.0	0.0	<1.0	0.0	21.5	<1.0	0.0	<1.0	0.0	20.9	0.0	1.2	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
01/13/2013 10:00:00 AM	<1.0	0.0	<1.0	0.0	21.9	0.0	0.0	<1.0	0.0	20.9	0.0	1.1	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
01/13/2013 11:00:00 AM	<1.0	0.0	<1.0	0.0	22.0	0.0	0.0	<1.0	0.0	21.0	0.0	<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
01/13/2013 12:00:00 PM	<1.0	0.0	<1.0	0.0	22.0	0.0	0.0	<1.0	0.0	21.2	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
01/13/2013 01:00:00 PM	<1.0	0.0	<1.0	0.0	22.1	0.0	0.0	<1.0	0.0	21.1	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
01/13/2013 02:00:00 PM	<1.0	0.0	<1.0	0.0	22.1	0.0	0.0	<1.0	0.0	21.2	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
01/13/2013 03:00:00 PM	<1.0	0.0	<1.0	0.0	21.8	0.0	0.0	<1.0	0.0	21.1	0.0	<1.0	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
01/13/2013 04:00:00 PM	<1.0	0.0	<1.0	0.0	21.6	0.0	0.0	<1.0	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
01/13/2013 05:00:00 PM	<1.0	0.0	<1.0	0.0	21.5	0.0	0.0	<1.0	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
01/13/2013 06:00:00 PM	<1.0	0.0	<1.0	0.0	21.5	0.0	0.0	<1.0	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
01/13/2013 07:00:00 PM	<1.0	0.0	0.0	0.0	21.4	0.0	0.0	<1.0	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
01/13/2013 08:00:00 PM	<1.0	0.0	0.0	0.0	21.4	0.0	0.0	<1.0	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
01/13/2013 09:00:00 PM	<1.0	0.0	0.0	0.0	21.4	0.0	0.0	<1.0	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
01/13/2013 10:00:00 PM	<1.0	0.0	<1.0	0.0	21.4	0.0	0.0	<1.0	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
01/13/2013 11:00:00 PM	<1.0	0.0	0.0	0.0	21.4	0.0	0.0	<1.0	0.0	20.8	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
01/14/2013 12:00:00 AM	<1.0	0.0	0.0	0.0	21.4	0.0	0.0	<1.0	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

RESPEC Consulting & Services

Texas Brine, L.L.C.

Assumption Parish, Louisiana

Daily Field Report

Report By: Eric Krantz

Company: RESPEC

Date: 01-11-2013

Work Order #: ()

Personnel	Company	Job Title
Eric Krantz	RESPEC	Engineer
Gary Hill	WHE	WHE President
Bo	WHE	Driller- Sonic
	WHE	Helper
	WHE	Helper

Time On Site: Start Time: 0800 End Time: 1700

Weather: Overcast, heavy rain, high ~70 F.

Equipment: Sonic rig and other drilling related equipment; FID (WHE);

Daily Activity: Safety meeting. Finished, sounded, rigged off ORW-12; Mobilize equipment; weld wellhead ORW-12; pump out 2 wells TBC-LA; built and applied housing pole extensions; nippled up wellhead on 12; site recon w/ Dario and procure supplies; planning geophone install. Work w/ solar panels, Mike frame fabrication and pole extension.

Proposed Schedule: Install larger solar panels at IPI-3 and Tank Tiltmeter. Install ground rods at geophone wells. IPI and tiltmeter maintenance.

Initials: ELK

RESPEC Consulting & Services

Texas Brine, L.L.C.

Assumption Parish, Louisiana

Daily Field Report

Report By: Eric Krantz

Company: RESPEC

Date: 01-12-2013

Work Order #: ()

Personnel	Company	Job Title
Eric Krantz	RESPEC	Engineer

Time On Site: Start Time: 0900 End Time: 1600

Weather: Partly cloudy, high ~72 F.

Equipment: Airboat, handtools

Daily Activity: Safety meeting. Visit TBC-LA-12 to determine water depth and potential for installing geophone; retrieve geophone-well pump; visit all IPI sites for maintenance; install pole extension at IPI-3 and raise box 1.5'.

Proposed Schedule: Install larger solar panels at IPI-3 and Tank Tiltmeter. Install ground rods at geophone wells.

Initials: ELK

RESPEC Consulting & Services

Texas Brine, L.L.C.

Assumption Parish, Louisiana

Daily Field Report

Report By: Eric Krantz

Company: RESPEC

Date: 01-13-2013

Work Order #: ()

Personnel	Company	Job Title
Eric Krantz	RESPEC	Engineer

Time On Site: Start Time: 1000 End Time: 1800

Weather: Partly cloudy, rainy, high ~72 F.

Equipment: Handtools

Daily Activity: Safety meeting. Fabricate solar panel frame for 60W panel for IPI-3; move cell modem from tanks to shop; replace 1.2A regulator with 6A regulator at tank; charging batteries; discuss w/ Dario (Nanometrics).

Proposed Schedule: Install solar panel at IPI-3 and Tank Tiltmeter. Install ground rods at geophone wells.

Initials: ELK

NELAP CERTIFICATE NUMBER 01955
DOD ELAP CERTIFICATE NUMBER ADE - 1482

ANALYTICAL RESULTS

PERFORMED BY

GULF COAST ANALYTICAL LABORATORIES, INC.

7979 GSRI Avenue

Baton Rouge, LA 70820

Report Date 01/04/2013

GCAL Report 212121409

Deliver To	Texas Brine 4800 San Felipe Houston, TX 77074
Attn	Bruce Martin

Project 80-05 Assumption Parish Sinkho

CASE NARRATIVE

Client: Michael Pisani & Associates **Report:** 212121409

Gulf Coast Analytical Laboratories received and analyzed the sample(s) listed on the sample cross-reference page of this report. Receipt of the sample(s) is documented by the attached chain of custody. This applies only to the sample(s) listed in this report. No sample integrity or quality control exceptions were identified unless noted below.

VOLATILE MASS SPECTROMETRY

In the SW-846 8260B analysis for analytical batch 497488, the LCS/LCSD RPD is above the control limit for 1,1-Dichloroethane.

VOLATILES GAS CHROMATOGRAPHY

In the RSK 175 analysis, samples 21212140914 (OXY 1), 21212140915 (OXY 2), 21212140916 (OXY 3), 21212140917 (OXY 3), 21212140918 (WW-1), 21212140919 (WW-2) and 21212140920 (WW-3) had to be diluted to bracket the concentrations within the calibration range of the instrument.

METALS

In the SW-846 6010B analysis for prep batch 496842, the MS and/or MSD recovery is outside the control limits for Potassium. The LCS recovery is within control limits. This indicates the analysis is in control and the sample is affected by matrix interference. A post-digestion spike was performed on the QC sample for this batch with a recovery of 144%. The MS recovery is not applicable for Sodium and Calcium because the sample concentration is greater than four times the spike concentration. The MS recovery is not applicable for Calcium and Sodium because the sample concentration is greater than four times the spike concentration. All samples had to be diluted in order to bracket the concentration of Sodium within the linear dynamic range of the instrument.

CONVENTIONALS

In the SW-846 9056A analysis, samples 21212140901 (E-3 (TR)), 21212140902 (N-3 (TR)), 21212140903 (NW-2 (TR)), 21212140904 (NW-3 (TR)), 21212140905 (NW-4 (TR)), 21212140906 (W-2 (TR)), 21212140907 (W-3 (TR)), 21212140908 (W-4 (TR)), 21212140909 (SW-3 (TR)), 21212140910 (SW-4 (TR)), 21212140911 (S-4 (TR)), 21212140912 (BG-1 (TR)), 21212140913 (BG-2 (TR)), 21212140914 (OXY 1), 21212140915 (OXY 2), 21212140916 (OXY 3), 21212140917 (OXY 3), 21212140918 (WW-1), 21212140919 (WW-2) and 21212140920 (WW-3) had to be diluted in order to bracket the concentration within the calibration range of the instrument.

In the SW-846 9056A analysis, a chemical or physical interference necessitated a dilution for samples 21212140914 (OXY 1), 21212140915 (OXY 2), 21212140916 (OXY 3), 21212140917 (OXY 3), 21212140918 (WW-1), 21212140919 (WW-2) and 21212140920 (WW-3). This is reflected in the elevated reporting limit.

Laboratory Endorsement

Sample analysis was performed in accordance with approved methodologies provided by the Environmental Protection Agency or other recognized agencies. The samples and their corresponding extracts will be maintained for a period of 30 days unless otherwise arranged. Following this retention period the samples will be disposed in accordance with GCAL's Standard Operating Procedures.

Common Abbreviations Utilized in this Report

ND	Indicates the result was Not Detected at the specified RDL
DO	Indicates the result was Diluted Out
MI	Indicates the result was subject to Matrix Interference
TNTC	Indicates the result was Too Numerous To Count
SUBC	Indicates the analysis was Sub-Contracted
FLD	Indicates the analysis was performed in the Field
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
RDL	Reporting Detection Limit
00:00	Reported as a time equivalent to 12:00 AM

Reporting Flags Utilized in this Report

J	Indicates the result is between the MDL and RDL
U	Indicates the compound was analyzed for but not detected
B	Indicates the analyte was detected in the associated Method Blank

Sample receipt at GCAL is documented through the attached chain of custody. In accordance with NELAC, this report shall be reproduced only in full and with the written permission of GCAL. The results contained within this report relate only to the samples reported. The documented results are presented within this report.

This report pertains only to the samples listed in the Report Sample Summary and should be retained as a permanent record thereof. The results contained within this report are intended for the use of the client. Any unauthorized use of the information contained in this report is prohibited.

I certify that this data package is in compliance with the NELAC standard and terms and conditions of the contract and Statement of Work both technically and for completeness, for other than the conditions in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted has been authorized by the Quality Assurance Manager or his/her designee, as verified by the following signature.

Estimated uncertainty of measurement is available upon request. This report is in compliance with the DOD QSM as specified in the contract if applicable.

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Robyn Migues
Technical Director
GCAL REPORT 212121409

Report Sample Summary

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140901	E-3 (TR)	Water	12/13/2012 10:10	12/13/2012 16:35
21212140902	N-3 (TR)	Water	12/13/2012 10:25	12/13/2012 16:35
21212140903	NW-2 (TR)	Water	12/13/2012 10:35	12/13/2012 16:35
21212140904	NW-3 (TR)	Water	12/13/2012 10:40	12/13/2012 16:35
21212140905	NW-4 (TR)	Water	12/13/2012 10:45	12/13/2012 16:35
21212140906	W-2 (TR)	Water	12/13/2012 10:55	12/13/2012 16:35
21212140907	W-3 (TR)	Water	12/13/2012 11:00	12/13/2012 16:35
21212140908	W-4 (TR)	Water	12/13/2012 11:05	12/13/2012 16:35
21212140909	SW-3 (TR)	Water	12/13/2012 11:15	12/13/2012 16:35
21212140910	SW-4 (TR)	Water	12/13/2012 11:25	12/13/2012 16:35
21212140911	S-4 (TR)	Water	12/13/2012 11:30	12/13/2012 16:35
21212140912	BG-1 (TR)	Water	12/13/2012 11:45	12/13/2012 16:35
21212140913	BG-2 (TR)	Water	12/13/2012 11:55	12/13/2012 16:35
21212140914	OXY 1	Water	12/11/2012 11:00	12/13/2012 16:35
21212140915	OXY 2	Water	12/11/2012 10:40	12/13/2012 16:35
21212140916	OXY 3	Water	12/13/2012 12:55	12/13/2012 16:35
21212140917	OXY 3	Water	12/13/2012 13:30	12/13/2012 16:35
21212140918	WW-1	Water	12/11/2012 13:50	12/13/2012 16:35
21212140919	WW-2	Water	12/11/2012 13:20	12/13/2012 16:35
21212140920	WW-3	Water	12/11/2012 11:45	12/13/2012 16:35
21212140921	TRIP BLANK	Water	12/11/2012 00:00	12/13/2012 16:35

Summary of Compounds Detected

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140901	**E-3 (TR)**	Water	12/13/2012 10:10	12/13/2012 16:35

SM 2540C TDS

CAS#	Parameter	Result	RDL	REG LIMIT	Units
WET-035	**Total Dissolved Solids(TDS)**	**2530**	**10.0**		**mg/L**

SW-846 9056A

CAS#	Parameter	Result	RDL	REG LIMIT	Units
16887-00-6	**Chloride**	**1300**	**100**		**mg/L**

SM 2510 B Conductivity

CAS#	Parameter	Result	RDL	REG LIMIT	Units
C-011	**Specific Conductance**	**4410**	**10**		**umhos/cm**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140902	**N-3 (TR)**	Water	12/13/2012 10:25	12/13/2012 16:35

SM 2540C TDS

CAS#	Parameter	Result	RDL	REG LIMIT	Units
WET-035	**Total Dissolved Solids(TDS)**	**2830**	**10.0**		**mg/L**

SW-846 9056A

CAS#	Parameter	Result	RDL	REG LIMIT	Units
16887-00-6	**Chloride**	**1540**	**50.0**		**mg/L**

SM 2510 B Conductivity

CAS#	Parameter	Result	RDL	REG LIMIT	Units
C-011	**Specific Conductance**	**4890**	**10**		**umhos/cm**

TX1006/LA 1006

CAS#	Parameter	Result	RDL	REG LIMIT	Units
GCSV-02-12	**Aliphatic >C12-C16**	**0.200**	**0.150**		**mg/L**
GCSV-02-31	**Aliphatic >C16-C35**	**0.478**	**0.150**		**mg/L**

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140903	NW-2 (TR)	Water	12/13/2012 10:35	12/13/2012 16:35

SM 2540C TDS

CAS#	Parameter	Result	RDL	REG LIMIT	Units
WET-035	Total Dissolved Solids(TDS)	1840	10.0		mg/L

SW-846 9056A

CAS#	Parameter	Result	RDL	REG LIMIT	Units
16887-00-6	Chloride	965	50.0		mg/L

SM 2510 B Conductivity

CAS#	Parameter	Result	RDL	REG LIMIT	Units
C-011	Specific Conductance	3330	10		umhos/cm

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140904	NW-3 (TR)	Water	12/13/2012 10:40	12/13/2012 16:35

SM 2540C TDS

CAS#	Parameter	Result	RDL	REG LIMIT	Units
WET-035	Total Dissolved Solids(TDS)	2220	10.0		mg/L

SW-846 9056A

CAS#	Parameter	Result	RDL	REG LIMIT	Units
16887-00-6	Chloride	1200	50.0		mg/L

SM 2510 B Conductivity

CAS#	Parameter	Result	RDL	REG LIMIT	Units
C-011	Specific Conductance	3880	10		umhos/cm

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140905	NW-4 (TR)	Water	12/13/2012 10:45	12/13/2012 16:35

SW-846 9056A

CAS#	Parameter	Result	RDL	REG LIMIT	Units
16887-00-6	Chloride	1230	50.0		mg/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140905	NW-4 (TR)	Water	12/13/2012 10:45	12/13/2012 16:35

SM 2540C TDS

CAS#	Parameter	Result	RDL	REG LIMIT	Units
WET-035	Total Dissolved Solids(TDS)	2190	10.0		mg/L

SM 2510 B Conductivity

CAS#	Parameter	Result	RDL	REG LIMIT	Units
C-011	Specific Conductance	4040	10		umhos/cm

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140906	W-2 (TR)	Water	12/13/2012 10:55	12/13/2012 16:35

SM 2540C TDS

CAS#	Parameter	Result	RDL	REG LIMIT	Units
WET-035	Total Dissolved Solids(TDS)	3140	10.0		mg/L

SW-846 9056A

CAS#	Parameter	Result	RDL	REG LIMIT	Units
16887-00-6	Chloride	1800	50.0		mg/L

TX1006/LA 1006

CAS#	Parameter	Result	RDL	REG LIMIT	Units
GCSV-02-12	Aliphatic >C12-C16	0.936	0.150		mg/L
GCSV-02-31	Aliphatic >C16-C35	1.46	0.150		mg/L
GCSV-02-16	Aromatic >C12-C16	0.218	0.150		mg/L

SM 2510 B Conductivity

CAS#	Parameter	Result	RDL	REG LIMIT	Units
C-011	Specific Conductance	5590	10		umhos/cm

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140907	W-3 (TR)	Water	12/13/2012 11:00	12/13/2012 16:35

SM 2540C TDS

CAS#	Parameter	Result	RDL	REG LIMIT	Units
WET-035	Total Dissolved Solids(TDS)	1490	10.0		mg/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140907	**W-3 (TR)**	Water	12/13/2012 11:00	12/13/2012 16:35

SW-846 9056A

CAS#	Parameter	Result	RDL	REG LIMIT	Units
16887-00-6	Chloride	761	50.0		mg/L

SM 2510 B Conductivity

CAS#	Parameter	Result	RDL	REG LIMIT	Units
C-011	Specific Conductance	2680	10		umhos/cm

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140908	**W-4 (TR)**	Water	12/13/2012 11:05	12/13/2012 16:35

SM 2540C TDS

CAS#	Parameter	Result	RDL	REG LIMIT	Units
WET-035	Total Dissolved Solids(TDS)	838	10.0		mg/L

SW-846 9056A

CAS#	Parameter	Result	RDL	REG LIMIT	Units
16887-00-6	Chloride	394	10.0		mg/L

SM 2510 B Conductivity

CAS#	Parameter	Result	RDL	REG LIMIT	Units
C-011	Specific Conductance	1530	10		umhos/cm

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140909	**SW-3 (TR)**	Water	12/13/2012 11:15	12/13/2012 16:35

SM 2540C TDS

CAS#	Parameter	Result	RDL	REG LIMIT	Units
WET-035	Total Dissolved Solids(TDS)	1730	10.0		mg/L

SW-846 9056A

CAS#	Parameter	Result	RDL	REG LIMIT	Units
16887-00-6	Chloride	881	50.0		mg/L

SM 2510 B Conductivity

CAS#	Parameter	Result	RDL	REG LIMIT	Units
C-011	Specific Conductance	3010	10		umhos/cm

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140910	**SW-4 (TR)**	Water	12/13/2012 11:25	12/13/2012 16:35

SW-846 9056A

CAS#	Parameter	Result	RDL	REG LIMIT	Units
16887-00-6	Chloride	609	50.0		mg/L

SM 2540C TDS

CAS#	Parameter	Result	RDL	REG LIMIT	Units
WET-035	Total Dissolved Solids(TDS)	1150	10.0		mg/L

SM 2510 B Conductivity

CAS#	Parameter	Result	RDL	REG LIMIT	Units
C-011	Specific Conductance	2160	10		umhos/cm

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140911	**S-4 (TR)**	Water	12/13/2012 11:30	12/13/2012 16:35

SM 2540C TDS

CAS#	Parameter	Result	RDL	REG LIMIT	Units
WET-035	Total Dissolved Solids(TDS)	534	10.0		mg/L

SW-846 9056A

CAS#	Parameter	Result	RDL	REG LIMIT	Units
16887-00-6	Chloride	220	10.0		mg/L

SM 2510 B Conductivity

CAS#	Parameter	Result	RDL	REG LIMIT	Units
C-011	Specific Conductance	998	10		umhos/cm

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140912	**BG-1 (TR)**	Water	12/13/2012 11:45	12/13/2012 16:35

SM 2540C TDS

CAS#	Parameter	Result	RDL	REG LIMIT	Units
WET-035	Total Dissolved Solids(TDS)	1760	10.0		mg/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140912	**BG-1 (TR)**	Water	12/13/2012 11:45	12/13/2012 16:35

SW-846 9056A

CAS#	Parameter	Result	RDL	REG LIMIT	Units
16887-00-6	Chloride	794	50.0		mg/L

SM 2510 B Conductivity

CAS#	Parameter	Result	RDL	REG LIMIT	Units
C-011	Specific Conductance	2810	10		umhos/cm

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140913	**BG-2 (TR)**	Water	12/13/2012 11:55	12/13/2012 16:35

SW-846 9056A

CAS#	Parameter	Result	RDL	REG LIMIT	Units
16887-00-6	Chloride	436	50.0		mg/L

SM 2540C TDS

CAS#	Parameter	Result	RDL	REG LIMIT	Units
WET-035	Total Dissolved Solids(TDS)	873	10.0		mg/L

SM 2510 B Conductivity

CAS#	Parameter	Result	RDL	REG LIMIT	Units
C-011	Specific Conductance	1620	10		umhos/cm

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140914	**OXY 1**	Water	12/11/2012 11:00	12/13/2012 16:35

SW-846 6010B

CAS#	Parameter	Result	RDL	REG LIMIT	Units
7440-70-2	Calcium	204	0.10		mg/L
7439-89-6	Iron	6.58	0.10		mg/L
7439-95-4	Magnesium	73.9	0.10		mg/L
7439-96-5	Manganese	0.43	0.015		mg/L
7440-09-7	Potassium	12.5	0.50		mg/L

SW-846 6010B

CAS#	Parameter	Result	RDL	REG LIMIT	Units
7440-23-5	Sodium	1540	10.0		mg/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140914	**OXY 1**	Water	12/11/2012 11:00	12/13/2012 16:35

RSK 175

CAS#	Parameter	Result	RDL	REG LIMIT	Units
106-97-8	Butane	7.73	5.50		ug/L
74-98-6	Propane	55.8	10.0		ug/L

SM 2540C TDS

CAS#	Parameter	Result	RDL	REG LIMIT	Units
WET-035	Total Dissolved Solids(TDS)	5520	10.0		mg/L

SW-846 9056A

CAS#	Parameter	Result	RDL	REG LIMIT	Units
16887-00-6	Chloride	3140	100		mg/L

SM 2320B Bicarbonate

CAS#	Parameter	Result	RDL	REG LIMIT	Units
T-005-B	Bicarbonate Alkalinity	387	1.0		mg/L CaCO3

SM 2510 B Conductivity

CAS#	Parameter	Result	RDL	REG LIMIT	Units
C-011	Specific Conductance	9140	10		umhos/cm

RSK 175

CAS#	Parameter	Result	RDL	REG LIMIT	Units
74-84-0	Ethane	579	100		ug/L

RSK 175

CAS#	Parameter	Result	RDL	REG LIMIT	Units
74-82-8	Methane	11800	4500		ug/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140915	**OXY 2**	Water	12/11/2012 10:40	12/13/2012 16:35

SW-846 6010B

CAS#	Parameter	Result	RDL	REG LIMIT	Units
7440-70-2	Calcium	169	0.10		mg/L
7439-89-6	Iron	6.40	0.10		mg/L
7439-95-4	Magnesium	58.2	0.10		mg/L
7439-96-5	Manganese	0.35	0.015		mg/L
7440-09-7	Potassium	14.0	0.50		mg/L

SW-846 6010B

CAS#	Parameter	Result	RDL	REG LIMIT	Units
7440-23-5	Sodium	1190	10.0		mg/L

RSK 175

CAS#	Parameter	Result	RDL	REG LIMIT	Units
106-97-8	Butane	27.0	5.50		ug/L
74-98-6	Propane	154	10.0		ug/L

SW-846 9056A

CAS#	Parameter	Result	RDL	REG LIMIT	Units
24959-67-9	Bromide	3.99	2.00		mg/L

SM 2540C TDS

CAS#	Parameter	Result	RDL	REG LIMIT	Units
WET-035	Total Dissolved Solids(TDS)	4080	10.0		mg/L

SM 2510 B Conductivity

CAS#	Parameter	Result	RDL	REG LIMIT	Units
C-011	Specific Conductance	7140	10		umhos/cm

SM 2320B Bicarbonate

CAS#	Parameter	Result	RDL	REG LIMIT	Units
T-005-B	Bicarbonate Alkalinity	556	1.0		mg/L CaCO3

RSK 175

CAS#	Parameter	Result	RDL	REG LIMIT	Units
74-84-0	Ethane	1090	900		ug/L
74-82-8	Methane	26200	4500		ug/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140915	OXY 2	Water	12/11/2012 10:40	12/13/2012 16:35

SW-846 9056A

CAS#	Parameter	Result	RDL	REG LIMIT	Units
16887-00-6	Chloride	2370	100		mg/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140916	OXY 3	Water	12/13/2012 12:55	12/13/2012 16:35

SW-846 6010B

CAS#	Parameter	Result	RDL	REG LIMIT	Units
7440-70-2	Calcium	196	0.10		mg/L
7439-89-6	Iron	6.60	0.10		mg/L
7439-95-4	Magnesium	71.5	0.10		mg/L
7439-96-5	Manganese	0.42	0.015		mg/L
7440-09-7	Potassium	13.3	0.50		mg/L

SW-846 6010B

CAS#	Parameter	Result	RDL	REG LIMIT	Units
7440-23-5	Sodium	1540	10.0		mg/L

SM 2540C TDS

CAS#	Parameter	Result	RDL	REG LIMIT	Units
WET-035	Total Dissolved Solids(TDS)	5480	10.0		mg/L

RSK 175

CAS#	Parameter	Result	RDL	REG LIMIT	Units
106-97-8	Butane	7.22	5.50		ug/L
74-98-6	Propane	54.8	10.0		ug/L

SM 2510 B Conductivity

CAS#	Parameter	Result	RDL	REG LIMIT	Units
C-011	Specific Conductance	9340	10		umhos/cm

SM 2320B Bicarbonate

CAS#	Parameter	Result	RDL	REG LIMIT	Units
T-005-B	Bicarbonate Alkalinity	431	1.0		mg/L CaCO3

RSK 175

CAS#	Parameter	Result	RDL	REG LIMIT	Units
74-82-8	Methane	16500	3000		ug/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140916	OXY 3	Water	12/13/2012 12:55	12/13/2012 16:35

SW-846 9056A

CAS#	Parameter	Result	RDL	REG LIMIT	Units
16887-00-6	Chloride	3180	100		mg/L

RSK 175

CAS#	Parameter	Result	RDL	REG LIMIT	Units
74-84-0	Ethane	651	300		ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140917	OXY 3	Water	12/13/2012 13:30	12/13/2012 16:35

SW-846 6010B

CAS#	Parameter	Result	RDL	REG LIMIT	Units
7440-70-2	Calcium	204	0.10		mg/L
7439-89-6	Iron	5.39	0.10		mg/L
7439-95-4	Magnesium	74.3	0.10		mg/L
7439-96-5	Manganese	0.43	0.015		mg/L
7440-09-7	Potassium	15.1	0.50		mg/L

SW-846 6010B

CAS#	Parameter	Result	RDL	REG LIMIT	Units
7440-23-5	Sodium	1610	10.0		mg/L

RSK 175

CAS#	Parameter	Result	RDL	REG LIMIT	Units
106-97-8	Butane	7.42	5.50		ug/L
74-98-6	Propane	61.9	10.0		ug/L

SM 2540C TDS

CAS#	Parameter	Result	RDL	REG LIMIT	Units
WET-035	Total Dissolved Solids(TDS)	5520	10.0		mg/L

SM 2320B Bicarbonate

CAS#	Parameter	Result	RDL	REG LIMIT	Units
T-005-B	Bicarbonate Alkalinity	393	1.0		mg/L CaCO3

SM 2510 B Conductivity

CAS#	Parameter	Result	RDL	REG LIMIT	Units
C-011	Specific Conductance	9330	10		umhos/cm

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140917	**OXY 3**	Water	12/13/2012 13:30	12/13/2012 16:35

RSK 175

CAS#	Parameter	Result	RDL	REG LIMIT	Units
74-82-8	Methane	15200	4500		ug/L

RSK 175

CAS#	Parameter	Result	RDL	REG LIMIT	Units
74-84-0	Ethane	505	300		ug/L

SW-846 9056A

CAS#	Parameter	Result	RDL	REG LIMIT	Units
16887-00-6	Chloride	3190	100		mg/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140918	**WW-1**	Water	12/11/2012 13:50	12/13/2012 16:35

SW-846 6010B

CAS#	Parameter	Result	RDL	REG LIMIT	Units
7440-70-2	Calcium	152	0.10		mg/L
7439-89-6	Iron	5.62	0.10		mg/L
7439-95-4	Magnesium	54.4	0.10		mg/L
7439-96-5	Manganese	0.37	0.015		mg/L
7440-09-7	Potassium	11.0	0.50		mg/L

SW-846 6010B

CAS#	Parameter	Result	RDL	REG LIMIT	Units
7440-23-5	Sodium	1190	10.0		mg/L

SM 2540C TDS

CAS#	Parameter	Result	RDL	REG LIMIT	Units
WET-035	Total Dissolved Solids(TDS)	3780	10.0		mg/L

SW-846 9056A

CAS#	Parameter	Result	RDL	REG LIMIT	Units
24959-67-9	Bromide	3.98	2.00		mg/L

SM 2510 B Conductivity

CAS#	Parameter	Result	RDL	REG LIMIT	Units
C-011	Specific Conductance	6590	10		umhos/cm

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140918	**WW-1**	Water	12/11/2012 13:50	12/13/2012 16:35

SM 2320B Bicarbonate

CAS#	Parameter	Result	RDL	REG LIMIT	Units
T-005-B	Bicarbonate Alkalinity	436	1.0		mg/L CaCO3

SW-846 9056A

CAS#	Parameter	Result	RDL	REG LIMIT	Units
16887-00-6	Chloride	2090	100		mg/L

RSK 175

CAS#	Parameter	Result	RDL	REG LIMIT	Units
74-82-8	Methane	13900	3000		ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140919	**WW-2**	Water	12/11/2012 13:20	12/13/2012 16:35

SW-846 6010B

CAS#	Parameter	Result	RDL	REG LIMIT	Units
7440-70-2	Calcium	157	0.10		mg/L
7439-89-6	Iron	5.56	0.10		mg/L
7439-95-4	Magnesium	54.3	0.10		mg/L
7439-96-5	Manganese	0.41	0.015		mg/L
7440-09-7	Potassium	10.6	0.50		mg/L

SW-846 6010B

CAS#	Parameter	Result	RDL	REG LIMIT	Units
7440-23-5	Sodium	1120	10.0		mg/L

SM 2540C TDS

CAS#	Parameter	Result	RDL	REG LIMIT	Units
WET-035	Total Dissolved Solids(TDS)	3940	10.0		mg/L

SW-846 9056A

CAS#	Parameter	Result	RDL	REG LIMIT	Units
16887-00-6	Chloride	2280	100		mg/L

SM 2510 B Conductivity

CAS#	Parameter	Result	RDL	REG LIMIT	Units
C-011	Specific Conductance	7070	10		umhos/cm

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140919	**WW-2**	Water	12/11/2012 13:20	12/13/2012 16:35

SM 2320B Bicarbonate

CAS#	Parameter	Result	RDL	REG LIMIT	Units
T-005-B	Bicarbonate Alkalinity	437	1.0		mg/L CaCO3

SW-846 9056A

CAS#	Parameter	Result	RDL	REG LIMIT	Units
24959-67-9	Bromide	4.28	2.00		mg/L

RSK 175

CAS#	Parameter	Result	RDL	REG LIMIT	Units
74-84-0	Ethane	57.3	10.0		ug/L

RSK 175

CAS#	Parameter	Result	RDL	REG LIMIT	Units
74-82-8	Methane	16100	3000		ug/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140920	**WW-3**	Water	12/11/2012 11:45	12/13/2012 16:35

SW-846 6010B

CAS#	Parameter	Result	RDL	REG LIMIT	Units
7440-70-2	Calcium	205	0.10		mg/L
7439-89-6	Iron	8.35	0.10		mg/L
7439-95-4	Magnesium	73.2	0.10		mg/L
7439-96-5	Manganese	0.40	0.015		mg/L
7440-09-7	Potassium	12.6	0.50		mg/L

SW-846 6010B

CAS#	Parameter	Result	RDL	REG LIMIT	Units
7440-23-5	Sodium	1450	10.0		mg/L

SM 2540C TDS

CAS#	Parameter	Result	RDL	REG LIMIT	Units
WET-035	Total Dissolved Solids(TDS)	5470	10.0		mg/L

Summary of Compounds Detected (con't)

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140920	**WW-3**	Water	12/11/2012 11:45	12/13/2012 16:35

SM 2320B Bicarbonate

CAS#	Parameter	Result	RDL	REG LIMIT	Units
T-005-B	**Bicarbonate Alkalinity**	**410**	**1.0**		**mg/L CaCO3**

SM 2510 B Conductivity

CAS#	Parameter	Result	RDL	REG LIMIT	Units
C-011	**Specific Conductance**	**9390**	**10**		**umhos/cm**

RSK 175

CAS#	Parameter	Result	RDL	REG LIMIT	Units
74-82-8	**Methane**	**22600**	**3000**		**ug/L**

RSK 175

CAS#	Parameter	Result	RDL	REG LIMIT	Units
74-84-0	**Ethane**	**313**	**100**		**ug/L**

SW-846 9056A

CAS#	Parameter	Result	RDL	REG LIMIT	Units
16887-00-6	**Chloride**	**3180**	**100**		**mg/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140901	**E-3 (TR)**	Water	12/13/2012 10:10	12/13/2012 16:35

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/19/2012 02:09	JCK	497201

CAS#	Parameter	Result	RDL	REG LIMIT	Units
71-43-2	Benzene	ND	0.00500		mg/L
100-41-4	Ethylbenzene	ND	0.00500		mg/L
108-88-3	Toluene	ND	0.00500		mg/L
1330-20-7	Xylene (total)	ND	0.015		mg/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	.05	.052	mg/L	104	78 - 130
1868-53-7	Dibromofluoromethane	.05	.051	mg/L	103	77 - 127
2037-26-5	Toluene d8	.05	.052	mg/L	104	76 - 134
17060-07-0	1,2-Dichloroethane-d4	.05	.047	mg/L	95	71 - 127

TX1006/LA 1006

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
12/21/2012 11:00	496985	TX 1006/LA 1006	1	12/23/2012 00:03	SMH	497679

CAS#	Parameter	Result	RDL	REG LIMIT	Units
GCSV-02-11	Aliphatic >C10-C12	ND	0.150		mg/L
GCSV-02-12	Aliphatic >C12-C16	ND	0.150		mg/L
GCSV-02-31	Aliphatic >C16-C35	ND	0.150		mg/L
GCSV-02-10	Aliphatic >C8-C10	ND	0.150		mg/L
GCSV-02-30	Aliphatic C6-C8	ND	0.150		mg/L
GCSV-02-15	Aromatic >C10-C12	ND	0.150		mg/L
GCSV-02-16	Aromatic >C12-C16	ND	0.150		mg/L
GCSV-02-17	Aromatic >C16-C21	ND	0.150		mg/L
GCSV-05-18	Aromatic >C21-C35	ND	0.150		mg/L
GCSV-02-14	Aromatic >C8-C10	ND	0.150		mg/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
84-15-1	o-Terphenyl	17.1	18.6	mg/L	109	60 - 140

SM 2540C TDS

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/14/2012 14:40	DJH	496826

CAS#	Parameter	Result	RDL	REG LIMIT	Units
WET-035	**Total Dissolved Solids(TDS)**	**2530**	**10.0**		**mg/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140901	**E-3 (TR)**	Water	12/13/2012 10:10	12/13/2012 16:35

SM 2510 B Conductivity

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/14/2012 15:40	DJH	496839

CAS#	Parameter	Result	RDL	REG LIMIT	Units
C-011	**Specific Conductance**	**4410**	**10**		**umhos/cm**

SW-846 9056A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1000	12/20/2012 13:32	AEL	497361

CAS#	Parameter	Result	RDL	REG LIMIT	Units
16887-00-6	**Chloride**	**1300**	**100**		**mg/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140902	**N-3 (TR)**	Water	12/13/2012 10:25	12/13/2012 16:35

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/19/2012 02:29	JCK	497201

CAS#	Parameter	Result	RDL	REG LIMIT	Units
71-43-2	Benzene	ND	0.00500		mg/L
100-41-4	Ethylbenzene	ND	0.00500		mg/L
108-88-3	Toluene	ND	0.00500		mg/L
1330-20-7	Xylene (total)	ND	0.015		mg/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	.05	.053	mg/L	105	78 - 130
1868-53-7	Dibromofluoromethane	.05	.052	mg/L	103	77 - 127
2037-26-5	Toluene d8	.05	.051	mg/L	103	76 - 134
17060-07-0	1,2-Dichloroethane-d4	.05	.047	mg/L	95	71 - 127

TX1006/LA 1006

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
12/21/2012 11:00	496985	TX 1006/LA 1006	1	12/23/2012 00:34	SMH	497679

CAS#	Parameter	Result	RDL	REG LIMIT	Units
GCSV-02-11	Aliphatic >C10-C12	ND	0.150		mg/L
GCSV-02-12	**Aliphatic >C12-C16**	**0.200**	**0.150**		**mg/L**
GCSV-02-31	**Aliphatic >C16-C35**	**0.478**	**0.150**		**mg/L**
GCSV-02-10	Aliphatic >C8-C10	ND	0.150		mg/L
GCSV-02-30	Aliphatic C6-C8	ND	0.150		mg/L
GCSV-02-15	Aromatic >C10-C12	ND	0.150		mg/L
GCSV-02-16	Aromatic >C12-C16	ND	0.150		mg/L
GCSV-02-17	Aromatic >C16-C21	ND	0.150		mg/L
GCSV-05-18	Aromatic >C21-C35	ND	0.150		mg/L
GCSV-02-14	Aromatic >C8-C10	ND	0.150		mg/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
84-15-1	o-Terphenyl	17.9	17.9	mg/L	100	60 - 140

SM 2540C TDS

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/14/2012 14:40	DJH	496826

CAS#	Parameter	Result	RDL	REG LIMIT	Units
WET-035	**Total Dissolved Solids(TDS)**	**2830**	**10.0**		**mg/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140902	**N-3 (TR)**	Water	12/13/2012 10:25	12/13/2012 16:35

SM 2510 B Conductivity

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/14/2012 15:40	DJH	496839

CAS#	Parameter	Result	RDL	REG LIMIT	Units
C-011	**Specific Conductance**	**4890**	**10**		**umhos/cm**

SW-846 9056A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			500	12/20/2012 14:25	AEL	497361

CAS#	Parameter	Result	RDL	REG LIMIT	Units
16887-00-6	**Chloride**	**1540**	**50.0**		**mg/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140903	**NW-2 (TR)**	Water	12/13/2012 10:35	12/13/2012 16:35

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/19/2012 02:49	JCK	497201

CAS#	Parameter	Result	RDL	REG LIMIT	Units
71-43-2	Benzene	ND	0.00500		mg/L
100-41-4	Ethylbenzene	ND	0.00500		mg/L
108-88-3	Toluene	ND	0.00500		mg/L
1330-20-7	Xylene (total)	ND	0.015		mg/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	.05	.053	mg/L	105	78 - 130
1868-53-7	Dibromofluoromethane	.05	.051	mg/L	102	77 - 127
2037-26-5	Toluene d8	.05	.052	mg/L	103	76 - 134
17060-07-0	1,2-Dichloroethane-d4	.05	.047	mg/L	94	71 - 127

TX1006/LA 1006

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
12/21/2012 11:00	496985	TX 1006/LA 1006	1	12/23/2012 01:06	SMH	497679

CAS#	Parameter	Result	RDL	REG LIMIT	Units
GCSV-02-11	Aliphatic >C10-C12	ND	0.150		mg/L
GCSV-02-12	Aliphatic >C12-C16	ND	0.150		mg/L
GCSV-02-31	Aliphatic >C16-C35	ND	0.150		mg/L
GCSV-02-10	Aliphatic >C8-C10	ND	0.150		mg/L
GCSV-02-30	Aliphatic C6-C8	ND	0.150		mg/L
GCSV-02-15	Aromatic >C10-C12	ND	0.150		mg/L
GCSV-02-16	Aromatic >C12-C16	ND	0.150		mg/L
GCSV-02-17	Aromatic >C16-C21	ND	0.150		mg/L
GCSV-05-18	Aromatic >C21-C35	ND	0.150		mg/L
GCSV-02-14	Aromatic >C8-C10	ND	0.150		mg/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
84-15-1	o-Terphenyl	17.2	18.7	mg/L	108	60 - 140

SM 2540C TDS

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/14/2012 14:40	DJH	496826

CAS#	Parameter	Result	RDL	REG LIMIT	Units
WET-035	**Total Dissolved Solids(TDS)**	**1840**	**10.0**		**mg/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140903	**NW-2 (TR)**	Water	12/13/2012 10:35	12/13/2012 16:35

SM 2510 B Conductivity

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/14/2012 15:40	DJH	496839

CAS#	Parameter	Result	RDL	REG LIMIT	Units
C-011	**Specific Conductance**	**3330**	**10**		**umhos/cm**

SW-846 9056A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			500	12/20/2012 14:42	AEL	497361

CAS#	Parameter	Result	RDL	REG LIMIT	Units
16887-00-6	**Chloride**	**965**	**50.0**		**mg/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140904	**NW-3 (TR)**	Water	12/13/2012 10:40	12/13/2012 16:35

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/19/2012 03:09	JCK	497201

CAS#	Parameter	Result	RDL	REG LIMIT	Units
71-43-2	Benzene	ND	0.00500		mg/L
100-41-4	Ethylbenzene	ND	0.00500		mg/L
108-88-3	Toluene	ND	0.00500		mg/L
1330-20-7	Xylene (total)	ND	0.015		mg/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	.05	.053	mg/L	106	78 - 130
1868-53-7	Dibromofluoromethane	.05	.051	mg/L	102	77 - 127
2037-26-5	Toluene d8	.05	.053	mg/L	105	76 - 134
17060-07-0	1,2-Dichloroethane-d4	.05	.048	mg/L	95	71 - 127

TX1006/LA 1006

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
12/21/2012 11:00	496985	TX 1006/LA 1006	1	12/23/2012 01:39	SMH	497679

CAS#	Parameter	Result	RDL	REG LIMIT	Units
GCSV-02-11	Aliphatic >C10-C12	ND	0.150		mg/L
GCSV-02-12	Aliphatic >C12-C16	ND	0.150		mg/L
GCSV-02-31	Aliphatic >C16-C35	ND	0.150		mg/L
GCSV-02-10	Aliphatic >C8-C10	ND	0.150		mg/L
GCSV-02-30	Aliphatic C6-C8	ND	0.150		mg/L
GCSV-02-15	Aromatic >C10-C12	ND	0.150		mg/L
GCSV-02-16	Aromatic >C12-C16	ND	0.150		mg/L
GCSV-02-17	Aromatic >C16-C21	ND	0.150		mg/L
GCSV-05-18	Aromatic >C21-C35	ND	0.150		mg/L
GCSV-02-14	Aromatic >C8-C10	ND	0.150		mg/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
84-15-1	o-Terphenyl	17.4	18	mg/L	103	60 - 140

SM 2540C TDS

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/14/2012 14:40	DJH	496826

CAS#	Parameter	Result	RDL	REG LIMIT	Units
WET-035	**Total Dissolved Solids(TDS)**	**2220**	**10.0**		**mg/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140904	**NW-3 (TR)**	Water	12/13/2012 10:40	12/13/2012 16:35

SM 2510 B Conductivity

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/14/2012 15:40	DJH	496839

CAS#	Parameter	Result	RDL	REG LIMIT	Units
C-011	**Specific Conductance**	**3880**	**10**		**umhos/cm**

SW-846 9056A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			500	12/20/2012 15:00	AEL	497361

CAS#	Parameter	Result	RDL	REG LIMIT	Units
16887-00-6	**Chloride**	**1200**	**50.0**		**mg/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140905	**NW-4 (TR)**	Water	12/13/2012 10:45	12/13/2012 16:35

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/19/2012 03:29	JCK	497201

CAS#	Parameter	Result	RDL	REG LIMIT	Units
71-43-2	Benzene	ND	0.00500		mg/L
100-41-4	Ethylbenzene	ND	0.00500		mg/L
108-88-3	Toluene	ND	0.00500		mg/L
1330-20-7	Xylene (total)	ND	0.015		mg/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	.05	.053	mg/L	105	78 - 130
1868-53-7	Dibromofluoromethane	.05	.051	mg/L	102	77 - 127
2037-26-5	Toluene d8	.05	.052	mg/L	104	76 - 134
17060-07-0	1,2-Dichloroethane-d4	.05	.047	mg/L	94	71 - 127

TX1006/LA 1006

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
12/21/2012 11:00	496985	TX 1006/LA 1006	1	12/23/2012 02:11	SMH	497679

CAS#	Parameter	Result	RDL	REG LIMIT	Units
GCSV-02-11	Aliphatic >C10-C12	ND	0.150		mg/L
GCSV-02-12	Aliphatic >C12-C16	ND	0.150		mg/L
GCSV-02-31	Aliphatic >C16-C35	ND	0.150		mg/L
GCSV-02-10	Aliphatic >C8-C10	ND	0.150		mg/L
GCSV-02-30	Aliphatic C6-C8	ND	0.150		mg/L
GCSV-02-15	Aromatic >C10-C12	ND	0.150		mg/L
GCSV-02-16	Aromatic >C12-C16	ND	0.150		mg/L
GCSV-02-17	Aromatic >C16-C21	ND	0.150		mg/L
GCSV-05-18	Aromatic >C21-C35	ND	0.150		mg/L
GCSV-02-14	Aromatic >C8-C10	ND	0.150		mg/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
84-15-1	o-Terphenyl	17.3	14.9	mg/L	86	60 - 140

SM 2540C TDS

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/14/2012 14:40	DJH	496826

CAS#	Parameter	Result	RDL	REG LIMIT	Units
WET-035	**Total Dissolved Solids(TDS)**	**2190**	**10.0**		**mg/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140905	**NW-4 (TR)**	Water	12/13/2012 10:45	12/13/2012 16:35

SM 2510 B Conductivity

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/14/2012 15:40	DJH	496839

CAS#	Parameter	Result	RDL	REG LIMIT	Units
C-011	**Specific Conductance**	**4040**	**10**		**umhos/cm**

SW-846 9056A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			500	12/20/2012 15:17	AEL	497361

CAS#	Parameter	Result	RDL	REG LIMIT	Units
16887-00-6	**Chloride**	**1230**	**50.0**		**mg/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140906	**W-2 (TR)**	Water	12/13/2012 10:55	12/13/2012 16:35

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/19/2012 03:49	JCK	497201

CAS#	Parameter	Result	RDL	REG LIMIT	Units
71-43-2	Benzene	ND	0.00500		mg/L
100-41-4	Ethylbenzene	ND	0.00500		mg/L
108-88-3	Toluene	ND	0.00500		mg/L
1330-20-7	Xylene (total)	ND	0.015		mg/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	.05	.052	mg/L	105	78 - 130
1868-53-7	Dibromofluoromethane	.05	.051	mg/L	102	77 - 127
2037-26-5	Toluene d8	.05	.051	mg/L	103	76 - 134
17060-07-0	1,2-Dichloroethane-d4	.05	.047	mg/L	94	71 - 127

TX1006/LA 1006

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
12/21/2012 11:00	496985	TX 1006/LA 1006	1	12/23/2012 02:43	SMH	497679

CAS#	Parameter	Result	RDL	REG LIMIT	Units
GCSV-02-11	Aliphatic >C10-C12	ND	0.150		mg/L
GCSV-02-12	**Aliphatic >C12-C16**	**0.936**	**0.150**		**mg/L**
GCSV-02-31	**Aliphatic >C16-C35**	**1.46**	**0.150**		**mg/L**
GCSV-02-10	Aliphatic >C8-C10	ND	0.150		mg/L
GCSV-02-30	Aliphatic C6-C8	ND	0.150		mg/L
GCSV-02-15	Aromatic >C10-C12	ND	0.150		mg/L
GCSV-02-16	**Aromatic >C12-C16**	**0.218**	**0.150**		**mg/L**
GCSV-02-17	Aromatic >C16-C21	ND	0.150		mg/L
GCSV-05-18	Aromatic >C21-C35	ND	0.150		mg/L
GCSV-02-14	Aromatic >C8-C10	ND	0.150		mg/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
84-15-1	o-Terphenyl	17.4	18.9	mg/L	109	60 - 140

SM 2540C TDS

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/14/2012 14:40	DJH	496826

CAS#	Parameter	Result	RDL	REG LIMIT	Units
WET-035	**Total Dissolved Solids(TDS)**	**3140**	**10.0**		**mg/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140906	**W-2 (TR)**	Water	12/13/2012 10:55	12/13/2012 16:35

SM 2510 B Conductivity

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/14/2012 15:40	DJH	496839

CAS#	Parameter	Result	RDL	REG LIMIT	Units
C-011	**Specific Conductance**	**5590**	**10**		**umhos/cm**

SW-846 9056A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			500	12/20/2012 15:35	AEL	497361

CAS#	Parameter	Result	RDL	REG LIMIT	Units
16887-00-6	**Chloride**	**1800**	**50.0**		**mg/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140907	**W-3 (TR)**	Water	12/13/2012 11:00	12/13/2012 16:35

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/19/2012 04:29	JCK	497201

CAS#	Parameter	Result	RDL	REG LIMIT	Units
71-43-2	Benzene	ND	0.00500		mg/L
100-41-4	Ethylbenzene	ND	0.00500		mg/L
108-88-3	Toluene	ND	0.00500		mg/L
1330-20-7	Xylene (total)	ND	0.015		mg/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	.05	.053	mg/L	107	78 - 130
1868-53-7	Dibromofluoromethane	.05	.051	mg/L	102	77 - 127
2037-26-5	Toluene d8	.05	.053	mg/L	106	76 - 134
17060-07-0	1,2-Dichloroethane-d4	.05	.048	mg/L	95	71 - 127

TX1006/LA 1006

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
12/21/2012 11:00	496985	TX 1006/LA 1006	1	12/23/2012 03:15	SMH	497679

CAS#	Parameter	Result	RDL	REG LIMIT	Units
GCSV-02-11	Aliphatic >C10-C12	ND	0.150		mg/L
GCSV-02-12	Aliphatic >C12-C16	ND	0.150		mg/L
GCSV-02-31	Aliphatic >C16-C35	ND	0.150		mg/L
GCSV-02-10	Aliphatic >C8-C10	ND	0.150		mg/L
GCSV-02-30	Aliphatic C6-C8	ND	0.150		mg/L
GCSV-02-15	Aromatic >C10-C12	ND	0.150		mg/L
GCSV-02-16	Aromatic >C12-C16	ND	0.150		mg/L
GCSV-02-17	Aromatic >C16-C21	ND	0.150		mg/L
GCSV-05-18	Aromatic >C21-C35	ND	0.150		mg/L
GCSV-02-14	Aromatic >C8-C10	ND	0.150		mg/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
84-15-1	o-Terphenyl	17.2	13.6	mg/L	79	60 - 140

SM 2540C TDS

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/14/2012 14:40	DJH	496826

CAS#	Parameter	Result	RDL	REG LIMIT	Units
WET-035	**Total Dissolved Solids(TDS)**	**1490**	**10.0**		**mg/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140907	**W-3 (TR)**	Water	12/13/2012 11:00	12/13/2012 16:35

SM 2510 B Conductivity

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/14/2012 15:40	DJH	496839

CAS#	Parameter	Result	RDL	REG LIMIT	Units
C-011	**Specific Conductance**	**2680**	**10**		**umhos/cm**

SW-846 9056A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			500	12/20/2012 16:28	AEL	497361

CAS#	Parameter	Result	RDL	REG LIMIT	Units
16887-00-6	**Chloride**	**761**	**50.0**		**mg/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140908	**W-4 (TR)**	Water	12/13/2012 11:05	12/13/2012 16:35

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/19/2012 04:49	JCK	497201

CAS#	Parameter	Result	RDL	REG LIMIT	Units
71-43-2	Benzene	ND	0.00500		mg/L
100-41-4	Ethylbenzene	ND	0.00500		mg/L
108-88-3	Toluene	ND	0.00500		mg/L
1330-20-7	Xylene (total)	ND	0.015		mg/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	.05	.053	mg/L	105	78 - 130
1868-53-7	Dibromofluoromethane	.05	.052	mg/L	103	77 - 127
2037-26-5	Toluene d8	.05	.052	mg/L	104	76 - 134
17060-07-0	1,2-Dichloroethane-d4	.05	.048	mg/L	96	71 - 127

TX1006/LA 1006

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
12/21/2012 11:00	496985	TX 1006/LA 1006	1	12/23/2012 03:48	SMH	497679

CAS#	Parameter	Result	RDL	REG LIMIT	Units
GCSV-02-11	Aliphatic >C10-C12	ND	0.150		mg/L
GCSV-02-12	Aliphatic >C12-C16	ND	0.150		mg/L
GCSV-02-31	Aliphatic >C16-C35	ND	0.150		mg/L
GCSV-02-10	Aliphatic >C8-C10	ND	0.150		mg/L
GCSV-02-30	Aliphatic C6-C8	ND	0.150		mg/L
GCSV-02-15	Aromatic >C10-C12	ND	0.150		mg/L
GCSV-02-16	Aromatic >C12-C16	ND	0.150		mg/L
GCSV-02-17	Aromatic >C16-C21	ND	0.150		mg/L
GCSV-05-18	Aromatic >C21-C35	ND	0.150		mg/L
GCSV-02-14	Aromatic >C8-C10	ND	0.150		mg/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
84-15-1	o-Terphenyl	17.2	13.7	mg/L	80	60 - 140

SM 2540C TDS

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/14/2012 14:40	DJH	496826

CAS#	Parameter	Result	RDL	REG LIMIT	Units
WET-035	**Total Dissolved Solids(TDS)**	**838**	**10.0**		**mg/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140908	**W-4 (TR)**	Water	12/13/2012 11:05	12/13/2012 16:35

SM 2510 B Conductivity

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/14/2012 15:40	DJH	496839

CAS#	Parameter	Result	RDL	REG LIMIT	Units
C-011	**Specific Conductance**	**1530**	**10**		**umhos/cm**

SW-846 9056A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			100	12/20/2012 16:46	AEL	497361

CAS#	Parameter	Result	RDL	REG LIMIT	Units
16887-00-6	**Chloride**	**394**	**10.0**		**mg/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140909	**SW-3 (TR)**	Water	12/13/2012 11:15	12/13/2012 16:35

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/19/2012 05:09	JCK	497201

CAS#	Parameter	Result	RDL	REG LIMIT	Units
71-43-2	Benzene	ND	0.00500		mg/L
100-41-4	Ethylbenzene	ND	0.00500		mg/L
108-88-3	Toluene	ND	0.00500		mg/L
1330-20-7	Xylene (total)	ND	0.015		mg/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	.05	.052	mg/L	105	78 - 130
1868-53-7	Dibromofluoromethane	.05	.052	mg/L	103	77 - 127
2037-26-5	Toluene d8	.05	.052	mg/L	104	76 - 134
17060-07-0	1,2-Dichloroethane-d4	.05	.047	mg/L	94	71 - 127

TX1006/LA 1006

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
12/21/2012 11:00	496985	TX 1006/LA 1006	1	12/23/2012 04:20	SMH	497679

CAS#	Parameter	Result	RDL	REG LIMIT	Units
GCSV-02-11	Aliphatic >C10-C12	ND	0.150		mg/L
GCSV-02-12	Aliphatic >C12-C16	ND	0.150		mg/L
GCSV-02-31	Aliphatic >C16-C35	ND	0.150		mg/L
GCSV-02-10	Aliphatic >C8-C10	ND	0.150		mg/L
GCSV-02-30	Aliphatic C6-C8	ND	0.150		mg/L
GCSV-02-15	Aromatic >C10-C12	ND	0.150		mg/L
GCSV-02-16	Aromatic >C12-C16	ND	0.150		mg/L
GCSV-02-17	Aromatic >C16-C21	ND	0.150		mg/L
GCSV-05-18	Aromatic >C21-C35	ND	0.150		mg/L
GCSV-02-14	Aromatic >C8-C10	ND	0.150		mg/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
84-15-1	o-Terphenyl	17.4	18.5	mg/L	106	60 - 140

SM 2540C TDS

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/14/2012 14:40	DJH	496826

CAS#	Parameter	Result	RDL	REG LIMIT	Units
WET-035	**Total Dissolved Solids(TDS)**	**1730**	**10.0**		**mg/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140909	**SW-3 (TR)**	Water	12/13/2012 11:15	12/13/2012 16:35

SM 2510 B Conductivity

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/14/2012 15:40	DJH	496839

CAS#	Parameter	Result	RDL	REG LIMIT	Units
C-011	**Specific Conductance**	**3010**	**10**		**umhos/cm**

SW-846 9056A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			500	12/20/2012 17:03	AEL	497361

CAS#	Parameter	Result	RDL	REG LIMIT	Units
16887-00-6	**Chloride**	**881**	**50.0**		**mg/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140910	**SW-4 (TR)**	Water	12/13/2012 11:25	12/13/2012 16:35

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/21/2012 16:51	CLH	497488

CAS#	Parameter	Result	RDL	REG LIMIT	Units
71-43-2	Benzene	ND	0.00500		mg/L
100-41-4	Ethylbenzene	ND	0.00500		mg/L
108-88-3	Toluene	ND	0.00500		mg/L
1330-20-7	Xylene (total)	ND	0.015		mg/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	.05	.049	mg/L	98	78 - 130
1868-53-7	Dibromofluoromethane	.05	.052	mg/L	104	77 - 127
2037-26-5	Toluene d8	.05	.051	mg/L	103	76 - 134
17060-07-0	1,2-Dichloroethane-d4	.05	.05	mg/L	100	71 - 127

TX1006/LA 1006

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
12/21/2012 11:00	496985	TX 1006/LA 1006	1	12/23/2012 04:52	SMH	497679

CAS#	Parameter	Result	RDL	REG LIMIT	Units
GCSV-02-11	Aliphatic >C10-C12	ND	0.150		mg/L
GCSV-02-12	Aliphatic >C12-C16	ND	0.150		mg/L
GCSV-02-31	Aliphatic >C16-C35	ND	0.150		mg/L
GCSV-02-10	Aliphatic >C8-C10	ND	0.150		mg/L
GCSV-02-30	Aliphatic C6-C8	ND	0.150		mg/L
GCSV-02-15	Aromatic >C10-C12	ND	0.150		mg/L
GCSV-02-16	Aromatic >C12-C16	ND	0.150		mg/L
GCSV-02-17	Aromatic >C16-C21	ND	0.150		mg/L
GCSV-05-18	Aromatic >C21-C35	ND	0.150		mg/L
GCSV-02-14	Aromatic >C8-C10	ND	0.150		mg/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
84-15-1	o-Terphenyl	17.2	14.7	mg/L	86	60 - 140

SM 2540C TDS

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/14/2012 14:40	DJH	496826

CAS#	Parameter	Result	RDL	REG LIMIT	Units
WET-035	**Total Dissolved Solids(TDS)**	**1150**	**10.0**		**mg/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140910	**SW-4 (TR)**	Water	12/13/2012 11:25	12/13/2012 16:35

SM 2510 B Conductivity

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/14/2012 15:40	DJH	496839

CAS#	Parameter	Result	RDL	REG LIMIT	Units
C-011	**Specific Conductance**	**2160**	**10**		**umhos/cm**

SW-846 9056A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			500	12/20/2012 17:21	AEL	497361

CAS#	Parameter	Result	RDL	REG LIMIT	Units
16887-00-6	**Chloride**	**609**	**50.0**		**mg/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140911	**S-4 (TR)**	Water	12/13/2012 11:30	12/13/2012 16:35

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/21/2012 17:11	CLH	497488

CAS#	Parameter	Result	RDL	REG LIMIT	Units
71-43-2	Benzene	ND	0.00500		mg/L
100-41-4	Ethylbenzene	ND	0.00500		mg/L
108-88-3	Toluene	ND	0.00500		mg/L
1330-20-7	Xylene (total)	ND	0.015		mg/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	.05	.049	mg/L	98	78 - 130
1868-53-7	Dibromofluoromethane	.05	.052	mg/L	103	77 - 127
2037-26-5	Toluene d8	.05	.052	mg/L	105	76 - 134
17060-07-0	1,2-Dichloroethane-d4	.05	.05	mg/L	101	71 - 127

TX1006/LA 1006

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
12/21/2012 11:00	496985	TX 1006/LA 1006	1	12/23/2012 06:29	SMH	497679

CAS#	Parameter	Result	RDL	REG LIMIT	Units
GCSV-02-11	Aliphatic >C10-C12	ND	0.150		mg/L
GCSV-02-12	Aliphatic >C12-C16	ND	0.150		mg/L
GCSV-02-31	Aliphatic >C16-C35	ND	0.150		mg/L
GCSV-02-10	Aliphatic >C8-C10	ND	0.150		mg/L
GCSV-02-30	Aliphatic C6-C8	ND	0.150		mg/L
GCSV-02-15	Aromatic >C10-C12	ND	0.150		mg/L
GCSV-02-16	Aromatic >C12-C16	ND	0.150		mg/L
GCSV-02-17	Aromatic >C16-C21	ND	0.150		mg/L
GCSV-05-18	Aromatic >C21-C35	ND	0.150		mg/L
GCSV-02-14	Aromatic >C8-C10	ND	0.150		mg/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
84-15-1	o-Terphenyl	17.4	18.4	mg/L	106	60 - 140

SM 2540C TDS

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/14/2012 14:40	DJH	496826

CAS#	Parameter	Result	RDL	REG LIMIT	Units
WET-035	**Total Dissolved Solids(TDS)**	**534**	**10.0**		**mg/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140911	**S-4 (TR)**	Water	12/13/2012 11:30	12/13/2012 16:35

SM 2510 B Conductivity

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/14/2012 15:40	DJH	496839

CAS#	Parameter	Result	RDL	REG LIMIT	Units
C-011	**Specific Conductance**	**998**	**10**		**umhos/cm**

SW-846 9056A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			100	12/20/2012 17:38	AEL	497361

CAS#	Parameter	Result	RDL	REG LIMIT	Units
16887-00-6	**Chloride**	**220**	**10.0**		**mg/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140912	**BG-1 (TR)**	Water	12/13/2012 11:45	12/13/2012 16:35

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/21/2012 17:31	CLH	497488

CAS#	Parameter	Result	RDL	REG LIMIT	Units
71-43-2	Benzene	ND	0.00500		mg/L
100-41-4	Ethylbenzene	ND	0.00500		mg/L
108-88-3	Toluene	ND	0.00500		mg/L
1330-20-7	Xylene (total)	ND	0.015		mg/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	.05	.049	mg/L	98	78 - 130
1868-53-7	Dibromofluoromethane	.05	.052	mg/L	104	77 - 127
2037-26-5	Toluene d8	.05	.051	mg/L	102	76 - 134
17060-07-0	1,2-Dichloroethane-d4	.05	.051	mg/L	101	71 - 127

TX1006/LA 1006

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
12/21/2012 11:00	496985	TX 1006/LA 1006	1	12/23/2012 07:00	SMH	497679

CAS#	Parameter	Result	RDL	REG LIMIT	Units
GCSV-02-11	Aliphatic >C10-C12	ND	0.150		mg/L
GCSV-02-12	Aliphatic >C12-C16	ND	0.150		mg/L
GCSV-02-31	Aliphatic >C16-C35	ND	0.150		mg/L
GCSV-02-10	Aliphatic >C8-C10	ND	0.150		mg/L
GCSV-02-30	Aliphatic C6-C8	ND	0.150		mg/L
GCSV-02-15	Aromatic >C10-C12	ND	0.150		mg/L
GCSV-02-16	Aromatic >C12-C16	ND	0.150		mg/L
GCSV-02-17	Aromatic >C16-C21	ND	0.150		mg/L
GCSV-05-18	Aromatic >C21-C35	ND	0.150		mg/L
GCSV-02-14	Aromatic >C8-C10	ND	0.150		mg/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
84-15-1	o-Terphenyl	17.4	15.3	mg/L	88	60 - 140

SM 2540C TDS

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/14/2012 14:40	DJH	496826

CAS#	Parameter	Result	RDL	REG LIMIT	Units
WET-035	**Total Dissolved Solids(TDS)**	**1760**	**10.0**		**mg/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140912	**BG-1 (TR)**	Water	12/13/2012 11:45	12/13/2012 16:35

SM 2510 B Conductivity

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/14/2012 15:40	DJH	496839

CAS#	Parameter	Result	RDL	REG LIMIT	Units
C-011	**Specific Conductance**	**2810**	**10**		**umhos/cm**

SW-846 9056A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			500	12/20/2012 17:56	AEL	497361

CAS#	Parameter	Result	RDL	REG LIMIT	Units
16887-00-6	**Chloride**	**794**	**50.0**		**mg/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140913	**BG-2 (TR)**	Water	12/13/2012 11:55	12/13/2012 16:35

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/21/2012 17:51	CLH	497488

CAS#	Parameter	Result	RDL	REG LIMIT	Units
71-43-2	Benzene	ND	0.00500		mg/L
100-41-4	Ethylbenzene	ND	0.00500		mg/L
108-88-3	Toluene	ND	0.00500		mg/L
1330-20-7	Xylene (total)	ND	0.015		mg/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	.05	.049	mg/L	98	78 - 130
1868-53-7	Dibromofluoromethane	.05	.054	mg/L	107	77 - 127
2037-26-5	Toluene d8	.05	.052	mg/L	104	76 - 134
17060-07-0	1,2-Dichloroethane-d4	.05	.051	mg/L	101	71 - 127

TX1006/LA 1006

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
12/21/2012 11:00	496985	TX 1006/LA 1006	1	12/23/2012 07:33	SMH	497679

CAS#	Parameter	Result	RDL	REG LIMIT	Units
GCSV-02-11	Aliphatic >C10-C12	ND	0.150		mg/L
GCSV-02-12	Aliphatic >C12-C16	ND	0.150		mg/L
GCSV-02-31	Aliphatic >C16-C35	ND	0.150		mg/L
GCSV-02-10	Aliphatic >C8-C10	ND	0.150		mg/L
GCSV-02-30	Aliphatic C6-C8	ND	0.150		mg/L
GCSV-02-15	Aromatic >C10-C12	ND	0.150		mg/L
GCSV-02-16	Aromatic >C12-C16	ND	0.150		mg/L
GCSV-02-17	Aromatic >C16-C21	ND	0.150		mg/L
GCSV-05-18	Aromatic >C21-C35	ND	0.150		mg/L
GCSV-02-14	Aromatic >C8-C10	ND	0.150		mg/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
84-15-1	o-Terphenyl	17.2	14.9	mg/L	86	60 - 140

SM 2540C TDS

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/14/2012 14:40	DJH	496826

CAS#	Parameter	Result	RDL	REG LIMIT	Units
WET-035	**Total Dissolved Solids(TDS)**	**873**	**10.0**		**mg/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140913	**BG-2 (TR)**	Water	12/13/2012 11:55	12/13/2012 16:35

SM 2510 B Conductivity

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/14/2012 15:40	DJH	496839

CAS#	Parameter	Result	RDL	REG LIMIT	Units
C-011	**Specific Conductance**	**1620**	**10**		**umhos/cm**

SW-846 9056A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			500	12/20/2012 18:14	AEL	497361

CAS#	Parameter	Result	RDL	REG LIMIT	Units
16887-00-6	**Chloride**	**436**	**50.0**		**mg/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140914	**OXY 1**	Water	12/11/2012 11:00	12/13/2012 16:35

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/19/2012 05:29	JCK	497201

CAS#	Parameter	Result	RDL	REG LIMIT	Units
71-43-2	Benzene	ND	0.00500		mg/L
100-41-4	Ethylbenzene	ND	0.00500		mg/L
108-88-3	Toluene	ND	0.00500		mg/L
1330-20-7	Xylene (total)	ND	0.015		mg/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	.05	.052	mg/L	104	78 - 130
1868-53-7	Dibromofluoromethane	.05	.051	mg/L	102	77 - 127
2037-26-5	Toluene d8	.05	.053	mg/L	105	76 - 134
17060-07-0	1,2-Dichloroethane-d4	.05	.049	mg/L	97	71 - 127

RSK 175

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/20/2012 12:29	JAR	497360

CAS#	Parameter	Result	RDL	REG LIMIT	Units
106-97-8	**Butane**	**7.73**	**5.50**		**ug/L**
74-85-1	Ethene	ND	1.00		ug/L
74-98-6	**Propane**	**55.8**	**10.0**		**ug/L**

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
115-07-1	Propene	40.5	22.2	ug/L	55	40 - 143

RSK 175

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			100	12/20/2012 12:39	JAR	497360

CAS#	Parameter	Result	RDL	REG LIMIT	Units
74-84-0	**Ethane**	**579**	**100**		**ug/L**

RSK 175

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			900	12/20/2012 12:50	JAR	497360

CAS#	Parameter	Result	RDL	REG LIMIT	Units
74-82-8	**Methane**	**11800**	**4500**		**ug/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140914	**OXY 1**	Water	12/11/2012 11:00	12/13/2012 16:35

TX1006/LA 1006

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
12/21/2012 11:00	496985	TX 1006/LA 1006	1	12/23/2012 08:04	SMH	497679

CAS#	Parameter	Result	RDL	REG LIMIT	Units
GCSV-02-11	Aliphatic >C10-C12	ND	0.150		mg/L
GCSV-02-12	Aliphatic >C12-C16	ND	0.150		mg/L
GCSV-02-31	Aliphatic >C16-C35	ND	0.150		mg/L
GCSV-02-10	Aliphatic >C8-C10	ND	0.150		mg/L
GCSV-02-30	Aliphatic C6-C8	ND	0.150		mg/L
GCSV-02-15	Aromatic >C10-C12	ND	0.150		mg/L
GCSV-02-16	Aromatic >C12-C16	ND	0.150		mg/L
GCSV-02-17	Aromatic >C16-C21	ND	0.150		mg/L
GCSV-05-18	Aromatic >C21-C35	ND	0.150		mg/L
GCSV-02-14	Aromatic >C8-C10	ND	0.150		mg/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
84-15-1	o-Terphenyl	17.2	15.5	mg/L	90	60 - 140

SW-846 6010B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
12/18/2012 15:25	496842	SW-846 3010A	10	01/04/2013 06:54	AWG	498329

CAS#	Parameter	Result	RDL	REG LIMIT	Units
7440-23-5	**Sodium**	**1540**	**10.0**		**mg/L**

SW-846 6010B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
12/18/2012 15:25	496842	SW-846 3010A	1	01/04/2013 08:41	AWG	498329

CAS#	Parameter	Result	RDL	REG LIMIT	Units
7440-70-2	**Calcium**	**204**	**0.10**		**mg/L**
7439-89-6	**Iron**	**6.58**	**0.10**		**mg/L**
7439-95-4	**Magnesium**	**73.9**	**0.10**		**mg/L**
7439-96-5	**Manganese**	**0.43**	**0.015**		**mg/L**
7440-09-7	**Potassium**	**12.5**	**0.50**		**mg/L**

SM 2540C TDS

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/14/2012 14:40	DJH	496826

CAS#	Parameter	Result	RDL	REG LIMIT	Units
WET-035	**Total Dissolved Solids(TDS)**	**5520**	**10.0**		**mg/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140914	**OXY 1**	Water	12/11/2012 11:00	12/13/2012 16:35

SM 2320B Carbonate

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/17/2012 09:08	JEM	497038

CAS#	Parameter	Result	RDL	REG LIMIT	Units
T-005-C	Carbonate Alkalinity	ND	1.0		mg/L CaCO3

SM 2320B Bicarbonate

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/17/2012 09:08	JEM	497038

CAS#	Parameter	Result	RDL	REG LIMIT	Units
T-005-B	**Bicarbonate Alkalinity**	**387**	**1.0**		**mg/L CaCO3**

SM 2510 B Conductivity

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/14/2012 15:40	DJH	496839

CAS#	Parameter	Result	RDL	REG LIMIT	Units
C-011	**Specific Conductance**	**9140**	**10**		**umhos/cm**

SW-846 9056A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1000	12/20/2012 19:06	AEL	497361

CAS#	Parameter	Result	RDL	REG LIMIT	Units
16887-00-6	**Chloride**	**3140**	**100**		**mg/L**

SW-846 9056A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			10	12/20/2012 19:59	AEL	497361

CAS#	Parameter	Result	RDL	REG LIMIT	Units
24959-67-9	Bromide	ND	2.00		mg/L
14808-79-8	Sulfate	ND	2.00		mg/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140915	**OXY 2**	Water	12/11/2012 10:40	12/13/2012 16:35

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/19/2012 05:49	JCK	497201

CAS#	Parameter	Result	RDL	REG LIMIT	Units
71-43-2	Benzene	ND	0.00500		mg/L
100-41-4	Ethylbenzene	ND	0.00500		mg/L
108-88-3	Toluene	ND	0.00500		mg/L
1330-20-7	Xylene (total)	ND	0.015		mg/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	.05	.052	mg/L	104	78 - 130
1868-53-7	Dibromofluoromethane	.05	.052	mg/L	103	77 - 127
2037-26-5	Toluene d8	.05	.052	mg/L	105	76 - 134
17060-07-0	1,2-Dichloroethane-d4	.05	.048	mg/L	96	71 - 127

RSK 175

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/20/2012 13:10	JAR	497360

CAS#	Parameter	Result	RDL	REG LIMIT	Units
106-97-8	**Butane**	**27.0**	**5.50**		**ug/L**
74-85-1	Ethene	ND	1.00		ug/L
74-98-6	**Propane**	**154**	**10.0**		**ug/L**

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
115-07-1	Propene	40.5	25.5	ug/L	63	40 - 143

RSK 175

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			900	12/20/2012 13:21	JAR	497360

CAS#	Parameter	Result	RDL	REG LIMIT	Units
74-84-0	**Ethane**	**1090**	**900**		**ug/L**
74-82-8	**Methane**	**26200**	**4500**		**ug/L**

TX1006/LA 1006

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
12/21/2012 11:00	496985	TX 1006/LA 1006	1	12/23/2012 08:38	SMH	497679

CAS#	Parameter	Result	RDL	REG LIMIT	Units
GCSV-02-11	Aliphatic >C10-C12	ND	0.150		mg/L
GCSV-02-12	Aliphatic >C12-C16	ND	0.150		mg/L
GCSV-02-31	Aliphatic >C16-C35	ND	0.150		mg/L
GCSV-02-10	Aliphatic >C8-C10	ND	0.150		mg/L
GCSV-02-30	Aliphatic C6-C8	ND	0.150		mg/L
GCSV-02-15	Aromatic >C10-C12	ND	0.150		mg/L
GCSV-02-16	Aromatic >C12-C16	ND	0.150		mg/L
GCSV-02-17	Aromatic >C16-C21	ND	0.150		mg/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140915	**OXY 2**	Water	12/11/2012 10:40	12/13/2012 16:35

TX1006/LA 1006

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
12/21/2012 11:00	496985	TX 1006/LA 1006	1	12/23/2012 08:38	SMH	497679

CAS#	Parameter	Result	RDL	REG LIMIT	Units
GCSV-05-18	Aromatic >C21-C35	ND	0.150		mg/L
GCSV-02-14	Aromatic >C8-C10	ND	0.150		mg/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
84-15-1	o-Terphenyl	17.4	15.6	mg/L	90	60 - 140

SW-846 6010B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
12/18/2012 15:25	496842	SW-846 3010A	10	01/04/2013 07:35	AWG	498329

CAS#	Parameter	Result	RDL	REG LIMIT	Units
7440-23-5	**Sodium**	**1190**	**10.0**		**mg/L**

SW-846 6010B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
12/18/2012 15:25	496842	SW-846 3010A	1	01/04/2013 09:24	AWG	498329

CAS#	Parameter	Result	RDL	REG LIMIT	Units
7440-70-2	**Calcium**	**169**	**0.10**		**mg/L**
7439-89-6	**Iron**	**6.40**	**0.10**		**mg/L**
7439-95-4	**Magnesium**	**58.2**	**0.10**		**mg/L**
7439-96-5	**Manganese**	**0.35**	**0.015**		**mg/L**
7440-09-7	**Potassium**	**14.0**	**0.50**		**mg/L**

SM 2540C TDS

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/14/2012 14:40	DJH	496826

CAS#	Parameter	Result	RDL	REG LIMIT	Units
WET-035	**Total Dissolved Solids(TDS)**	**4080**	**10.0**		**mg/L**

SM 2320B Carbonate

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/17/2012 09:08	JEM	497038

CAS#	Parameter	Result	RDL	REG LIMIT	Units
T-005-C	Carbonate Alkalinity	ND	1.0		mg/L CaCO3

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140915	**OXY 2**	Water	12/11/2012 10:40	12/13/2012 16:35

SM 2320B Bicarbonate

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/17/2012 09:08	JEM	497038

CAS#	Parameter	Result	RDL	REG LIMIT	Units
T-005-B	**Bicarbonate Alkalinity**	**556**	**1.0**		**mg/L CaCO3**

SM 2510 B Conductivity

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/14/2012 15:40	DJH	496839

CAS#	Parameter	Result	RDL	REG LIMIT	Units
C-011	**Specific Conductance**	**7140**	**10**		**umhos/cm**

SW-846 9056A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			10	12/20/2012 20:17	AEL	497361

CAS#	Parameter	Result	RDL	REG LIMIT	Units
24959-67-9	**Bromide**	**3.99**	**2.00**		**mg/L**
14808-79-8	Sulfate	ND	2.00		mg/L

SW-846 9056A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1000	12/20/2012 20:35	AEL	497361

CAS#	Parameter	Result	RDL	REG LIMIT	Units
16887-00-6	**Chloride**	**2370**	**100**		**mg/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140916	**OXY 3**	Water	12/13/2012 12:55	12/13/2012 16:35

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/21/2012 18:55	CLH	497488

CAS#	Parameter	Result	RDL	REG LIMIT	Units
71-43-2	Benzene	ND	0.00500		mg/L
100-41-4	Ethylbenzene	ND	0.00500		mg/L
108-88-3	Toluene	ND	0.00500		mg/L
1330-20-7	Xylene (total)	ND	0.015		mg/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	.05	.05	mg/L	99	78 - 130
1868-53-7	Dibromofluoromethane	.05	.053	mg/L	105	77 - 127
2037-26-5	Toluene d8	.05	.052	mg/L	105	76 - 134
17060-07-0	1,2-Dichloroethane-d4	.05	.051	mg/L	101	71 - 127

RSK 175

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/20/2012 13:28	JAR	497360

CAS#	Parameter	Result	RDL	REG LIMIT	Units
106-97-8	**Butane**	**7.22**	**5.50**		**ug/L**
74-85-1	Ethene	ND	1.00		ug/L
74-98-6	**Propane**	**54.8**	**10.0**		**ug/L**

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
115-07-1	Propene	40.5	25.7	ug/L	63	40 - 143

RSK 175

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			300	12/20/2012 13:45	JAR	497360

CAS#	Parameter	Result	RDL	REG LIMIT	Units
74-84-0	**Ethane**	**651**	**300**		**ug/L**

RSK 175

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			600	12/20/2012 14:47	JAR	497360

CAS#	Parameter	Result	RDL	REG LIMIT	Units
74-82-8	**Methane**	**16500**	**3000**		**ug/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140916	**OXY 3**	Water	12/13/2012 12:55	12/13/2012 16:35

TX1006/LA 1006

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
12/21/2012 11:00	496985	TX 1006/LA 1006	1	12/23/2012 09:10	SMH	497679

CAS#	Parameter	Result	RDL	REG LIMIT	Units
GCSV-02-11	Aliphatic >C10-C12	ND	0.150		mg/L
GCSV-02-12	Aliphatic >C12-C16	ND	0.150		mg/L
GCSV-02-31	Aliphatic >C16-C35	ND	0.150		mg/L
GCSV-02-10	Aliphatic >C8-C10	ND	0.150		mg/L
GCSV-02-30	Aliphatic C6-C8	ND	0.150		mg/L
GCSV-02-15	Aromatic >C10-C12	ND	0.150		mg/L
GCSV-02-16	Aromatic >C12-C16	ND	0.150		mg/L
GCSV-02-17	Aromatic >C16-C21	ND	0.150		mg/L
GCSV-05-18	Aromatic >C21-C35	ND	0.150		mg/L
GCSV-02-14	Aromatic >C8-C10	ND	0.150		mg/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
84-15-1	o-Terphenyl	17.4	17	mg/L	98	60 - 140

SW-846 6010B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
12/18/2012 15:25	496842	SW-846 3010A	10	01/04/2013 07:43	AWG	498329

CAS#	Parameter	Result	RDL	REG LIMIT	Units
7440-23-5	**Sodium**	**1540**	**10.0**		**mg/L**

SW-846 6010B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
12/18/2012 15:25	496842	SW-846 3010A	1	01/04/2013 09:48	AWG	498329

CAS#	Parameter	Result	RDL	REG LIMIT	Units
7440-70-2	**Calcium**	**196**	**0.10**		**mg/L**
7439-89-6	**Iron**	**6.60**	**0.10**		**mg/L**
7439-95-4	**Magnesium**	**71.5**	**0.10**		**mg/L**
7439-96-5	**Manganese**	**0.42**	**0.015**		**mg/L**
7440-09-7	**Potassium**	**13.3**	**0.50**		**mg/L**

SM 2540C TDS

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/14/2012 14:40	DJH	496826

CAS#	Parameter	Result	RDL	REG LIMIT	Units
WET-035	**Total Dissolved Solids(TDS)**	**5480**	**10.0**		**mg/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140916	**OXY 3**	Water	12/13/2012 12:55	12/13/2012 16:35

SM 2320B Carbonate

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/17/2012 09:08	JEM	497038

CAS#	Parameter	Result	RDL	REG LIMIT	Units
T-005-C	Carbonate Alkalinity	ND	1.0		mg/L CaCO3

SM 2320B Bicarbonate

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/17/2012 09:08	JEM	497038

CAS#	Parameter	Result	RDL	REG LIMIT	Units
T-005-B	**Bicarbonate Alkalinity**	**431**	**1.0**		**mg/L CaCO3**

SM 2510 B Conductivity

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/14/2012 15:40	DJH	496839

CAS#	Parameter	Result	RDL	REG LIMIT	Units
C-011	**Specific Conductance**	**9340**	**10**		**umhos/cm**

SW-846 9056A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			10	12/20/2012 20:52	AEL	497361

CAS#	Parameter	Result	RDL	REG LIMIT	Units
24959-67-9	Bromide	ND	2.00		mg/L
14808-79-8	Sulfate	ND	2.00		mg/L

SW-846 9056A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1000	12/20/2012 21:10	AEL	497361

CAS#	Parameter	Result	RDL	REG LIMIT	Units
16887-00-6	**Chloride**	**3180**	**100**		**mg/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140917	**OXY 3**	Water	12/13/2012 13:30	12/13/2012 16:35

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/21/2012 22:01	CLH	497488

CAS#	Parameter	Result	RDL	REG LIMIT	Units
71-43-2	Benzene	ND	0.00500		mg/L
100-41-4	Ethylbenzene	ND	0.00500		mg/L
108-88-3	Toluene	ND	0.00500		mg/L
1330-20-7	Xylene (total)	ND	0.015		mg/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	.05	.049	mg/L	97	78 - 130
1868-53-7	Dibromofluoromethane	.05	.053	mg/L	105	77 - 127
2037-26-5	Toluene d8	.05	.052	mg/L	103	76 - 134
17060-07-0	1,2-Dichloroethane-d4	.05	.051	mg/L	102	71 - 127

RSK 175

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/20/2012 14:55	JAR	497360

CAS#	Parameter	Result	RDL	REG LIMIT	Units
106-97-8	**Butane**	**7.42**	**5.50**		**ug/L**
74-85-1	Ethene	ND	1.00		ug/L
74-98-6	**Propane**	**61.9**	**10.0**		**ug/L**

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
115-07-1	Propene	40.5	28.2	ug/L	70	40 - 143

RSK 175

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			900	12/20/2012 15:26	JAR	497360

CAS#	Parameter	Result	RDL	REG LIMIT	Units
74-82-8	**Methane**	**15200**	**4500**		**ug/L**

RSK 175

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			300	12/20/2012 15:33	JAR	497360

CAS#	Parameter	Result	RDL	REG LIMIT	Units
74-84-0	**Ethane**	**505**	**300**		**ug/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140917	**OXY 3**	Water	12/13/2012 13:30	12/13/2012 16:35

TX1006/LA 1006

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
12/21/2012 11:00	496985	TX 1006/LA 1006	1	12/23/2012 09:42	SMH	497679

CAS#	Parameter	Result	RDL	REG LIMIT	Units
GCSV-02-11	Aliphatic >C10-C12	ND	0.150		mg/L
GCSV-02-12	Aliphatic >C12-C16	ND	0.150		mg/L
GCSV-02-31	Aliphatic >C16-C35	ND	0.150		mg/L
GCSV-02-10	Aliphatic >C8-C10	ND	0.150		mg/L
GCSV-02-30	Aliphatic C6-C8	ND	0.150		mg/L
GCSV-02-15	Aromatic >C10-C12	ND	0.150		mg/L
GCSV-02-16	Aromatic >C12-C16	ND	0.150		mg/L
GCSV-02-17	Aromatic >C16-C21	ND	0.150		mg/L
GCSV-05-18	Aromatic >C21-C35	ND	0.150		mg/L
GCSV-02-14	Aromatic >C8-C10	ND	0.150		mg/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
84-15-1	o-Terphenyl	17.2	15.2	mg/L	88	60 - 140

SW-846 6010B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
12/18/2012 15:25	496842	SW-846 3010A	10	01/04/2013 08:07	AWG	498329

CAS#	Parameter	Result	RDL	REG LIMIT	Units
7440-23-5	**Sodium**	**1610**	**10.0**		**mg/L**

SW-846 6010B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
12/18/2012 15:25	496842	SW-846 3010A	1	01/04/2013 09:56	AWG	498329

CAS#	Parameter	Result	RDL	REG LIMIT	Units
7440-70-2	**Calcium**	**204**	**0.10**		**mg/L**
7439-89-6	**Iron**	**5.39**	**0.10**		**mg/L**
7439-95-4	**Magnesium**	**74.3**	**0.10**		**mg/L**
7439-96-5	**Manganese**	**0.43**	**0.015**		**mg/L**
7440-09-7	**Potassium**	**15.1**	**0.50**		**mg/L**

SM 2540C TDS

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/14/2012 14:40	DJH	496826

CAS#	Parameter	Result	RDL	REG LIMIT	Units
WET-035	**Total Dissolved Solids(TDS)**	**5520**	**10.0**		**mg/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140917	**OXY 3**	Water	12/13/2012 13:30	12/13/2012 16:35

SM 2320B Carbonate

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/17/2012 09:08	JEM	497038

CAS#	Parameter	Result	RDL	REG LIMIT	Units
T-005-C	Carbonate Alkalinity	ND	1.0		mg/L CaCO3

SM 2320B Bicarbonate

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/17/2012 09:08	JEM	497038

CAS#	Parameter	Result	RDL	REG LIMIT	Units
T-005-B	**Bicarbonate Alkalinity**	**393**	**1.0**		**mg/L CaCO3**

SM 2510 B Conductivity

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/14/2012 15:40	DJH	496839

CAS#	Parameter	Result	RDL	REG LIMIT	Units
C-011	**Specific Conductance**	**9330**	**10**		**umhos/cm**

SW-846 9056A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			10	12/20/2012 21:27	AEL	497361

CAS#	Parameter	Result	RDL	REG LIMIT	Units
24959-67-9	Bromide	ND	2.00		mg/L
14808-79-8	Sulfate	ND	2.00		mg/L

SW-846 9056A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1000	12/20/2012 21:45	AEL	497361

CAS#	Parameter	Result	RDL	REG LIMIT	Units
16887-00-6	**Chloride**	**3190**	**100**		**mg/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140918	**WW-1**	Water	12/11/2012 13:50	12/13/2012 16:35

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/20/2012 21:57	CGC	497387

CAS#	Parameter	Result	RDL	REG LIMIT	Units
71-43-2	Benzene	ND	0.00500		mg/L
100-41-4	Ethylbenzene	ND	0.00500		mg/L
108-88-3	Toluene	ND	0.00500		mg/L
1330-20-7	Xylene (total)	ND	0.015		mg/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	.05	.051	mg/L	101	78 - 130
1868-53-7	Dibromofluoromethane	.05	.054	mg/L	107	77 - 127
2037-26-5	Toluene d8	.05	.051	mg/L	101	76 - 134
17060-07-0	1,2-Dichloroethane-d4	.05	.05	mg/L	101	71 - 127

RSK 175

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/20/2012 15:42	JAR	497360

CAS#	Parameter	Result	RDL	REG LIMIT	Units
106-97-8	Butane	ND	5.50		ug/L
74-84-0	Ethane	ND	1.00		ug/L
74-85-1	Ethene	ND	1.00		ug/L
74-98-6	Propane	ND	10.0		ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
115-07-1	Propene	40.5	23	ug/L	57	40 - 143

RSK 175

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			600	12/20/2012 15:50	JAR	497360

CAS#	Parameter	Result	RDL	REG LIMIT	Units
74-82-8	**Methane**	**13900**	**3000**		**ug/L**

TX1006/LA 1006

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
12/21/2012 11:00	496985	TX 1006/LA 1006	1	12/23/2012 10:15	SMH	497679

CAS#	Parameter	Result	RDL	REG LIMIT	Units
GCSV-02-11	Aliphatic >C10-C12	ND	0.150		mg/L
GCSV-02-12	Aliphatic >C12-C16	ND	0.150		mg/L
GCSV-02-31	Aliphatic >C16-C35	ND	0.150		mg/L
GCSV-02-10	Aliphatic >C8-C10	ND	0.150		mg/L
GCSV-02-30	Aliphatic C6-C8	ND	0.150		mg/L
GCSV-02-15	Aromatic >C10-C12	ND	0.150		mg/L
GCSV-02-16	Aromatic >C12-C16	ND	0.150		mg/L
GCSV-02-17	Aromatic >C16-C21	ND	0.150		mg/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140918	**WW-1**	Water	12/11/2012 13:50	12/13/2012 16:35

TX1006/LA 1006

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
12/21/2012 11:00	496985	TX 1006/LA 1006	1	12/23/2012 10:15	SMH	497679

CAS#	Parameter	Result	RDL	REG LIMIT	Units
GCSV-05-18	Aromatic >C21-C35	ND	0.150		mg/L
GCSV-02-14	Aromatic >C8-C10	ND	0.150		mg/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
84-15-1	o-Terphenyl	17	15	mg/L	88	60 - 140

SW-846 6010B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
12/18/2012 15:25	496842	SW-846 3010A	10	01/04/2013 08:16	AWG	498329

CAS#	Parameter	Result	RDL	REG LIMIT	Units
7440-23-5	**Sodium**	**1190**	**10.0**		**mg/L**

SW-846 6010B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
12/18/2012 15:25	496842	SW-846 3010A	1	01/04/2013 10:04	AWG	498329

CAS#	Parameter	Result	RDL	REG LIMIT	Units
7440-70-2	**Calcium**	**152**	**0.10**		**mg/L**
7439-89-6	**Iron**	**5.62**	**0.10**		**mg/L**
7439-95-4	**Magnesium**	**54.4**	**0.10**		**mg/L**
7439-96-5	**Manganese**	**0.37**	**0.015**		**mg/L**
7440-09-7	**Potassium**	**11.0**	**0.50**		**mg/L**

SM 2540C TDS

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/14/2012 14:40	DJH	496826

CAS#	Parameter	Result	RDL	REG LIMIT	Units
WET-035	**Total Dissolved Solids(TDS)**	**3780**	**10.0**		**mg/L**

SM 2320B Carbonate

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/17/2012 09:08	JEM	497038

CAS#	Parameter	Result	RDL	REG LIMIT	Units
T-005-C	Carbonate Alkalinity	ND	1.0		mg/L CaCO3

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140918	**WW-1**	Water	12/11/2012 13:50	12/13/2012 16:35

SM 2320B Bicarbonate

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/17/2012 09:08	JEM	497038

CAS#	Parameter	Result	RDL	REG LIMIT	Units
T-005-B	**Bicarbonate Alkalinity**	**436**	**1.0**		**mg/L CaCO3**

SM 2510 B Conductivity

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/14/2012 15:40	DJH	496839

CAS#	Parameter	Result	RDL	REG LIMIT	Units
C-011	**Specific Conductance**	**6590**	**10**		**umhos/cm**

SW-846 9056A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			10	12/20/2012 22:03	AEL	497361

CAS#	Parameter	Result	RDL	REG LIMIT	Units
24959-67-9	**Bromide**	**3.98**	**2.00**		**mg/L**
14808-79-8	Sulfate	ND	2.00		mg/L

SW-846 9056A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1000	12/20/2012 22:20	AEL	497361

CAS#	Parameter	Result	RDL	REG LIMIT	Units
16887-00-6	**Chloride**	**2090**	**100**		**mg/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140919	**WW-2**	Water	12/11/2012 13:20	12/13/2012 16:35

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/20/2012 22:17	CGC	497387

CAS#	Parameter	Result	RDL	REG LIMIT	Units
71-43-2	Benzene	ND	0.00500		mg/L
100-41-4	Ethylbenzene	ND	0.00500		mg/L
108-88-3	Toluene	ND	0.00500		mg/L
1330-20-7	Xylene (total)	ND	0.015		mg/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	.05	.049	mg/L	98	78 - 130
1868-53-7	Dibromofluoromethane	.05	.052	mg/L	104	77 - 127
2037-26-5	Toluene d8	.05	.052	mg/L	105	76 - 134
17060-07-0	1,2-Dichloroethane-d4	.05	.051	mg/L	102	71 - 127

RSK 175

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/20/2012 15:58	JAR	497360

CAS#	Parameter	Result	RDL	REG LIMIT	Units
106-97-8	Butane	ND	5.50		ug/L
74-85-1	Ethene	ND	1.00		ug/L
74-98-6	Propane	ND	10.0		ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
115-07-1	Propene	40.5	21.4	ug/L	53	40 - 143

RSK 175

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			10	12/20/2012 16:08	JAR	497360

CAS#	Parameter	Result	RDL	REG LIMIT	Units
74-84-0	**Ethane**	**57.3**	**10.0**		**ug/L**

RSK 175

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			600	12/20/2012 16:15	JAR	497360

CAS#	Parameter	Result	RDL	REG LIMIT	Units
74-82-8	**Methane**	**16100**	**3000**		**ug/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140919	**WW-2**	Water	12/11/2012 13:20	12/13/2012 16:35

TX1006/LA 1006

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
12/21/2012 11:00	496985	TX 1006/LA 1006	1	12/23/2012 10:45	SMH	497679

CAS#	Parameter	Result	RDL	REG LIMIT	Units
GCSV-02-11	Aliphatic >C10-C12	ND	0.150		mg/L
GCSV-02-12	Aliphatic >C12-C16	ND	0.150		mg/L
GCSV-02-31	Aliphatic >C16-C35	ND	0.150		mg/L
GCSV-02-10	Aliphatic >C8-C10	ND	0.150		mg/L
GCSV-02-30	Aliphatic C6-C8	ND	0.150		mg/L
GCSV-02-15	Aromatic >C10-C12	ND	0.150		mg/L
GCSV-02-16	Aromatic >C12-C16	ND	0.150		mg/L
GCSV-02-17	Aromatic >C16-C21	ND	0.150		mg/L
GCSV-05-18	Aromatic >C21-C35	ND	0.150		mg/L
GCSV-02-14	Aromatic >C8-C10	ND	0.150		mg/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
84-15-1	o-Terphenyl	17.3	15.9	mg/L	92	60 - 140

SW-846 6010B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
12/18/2012 15:25	496842	SW-846 3010A	10	01/04/2013 08:24	AWG	498329

CAS#	Parameter	Result	RDL	REG LIMIT	Units
7440-23-5	**Sodium**	**1120**	**10.0**		**mg/L**

SW-846 6010B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
12/18/2012 15:25	496842	SW-846 3010A	1	01/04/2013 10:12	AWG	498329

CAS#	Parameter	Result	RDL	REG LIMIT	Units
7440-70-2	**Calcium**	**157**	**0.10**		**mg/L**
7439-89-6	**Iron**	**5.56**	**0.10**		**mg/L**
7439-95-4	**Magnesium**	**54.3**	**0.10**		**mg/L**
7439-96-5	**Manganese**	**0.41**	**0.015**		**mg/L**
7440-09-7	**Potassium**	**10.6**	**0.50**		**mg/L**

SM 2540C TDS

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/14/2012 14:40	DJH	496826

CAS#	Parameter	Result	RDL	REG LIMIT	Units
WET-035	**Total Dissolved Solids(TDS)**	**3940**	**10.0**		**mg/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140919	**WW-2**	Water	12/11/2012 13:20	12/13/2012 16:35

SM 2320B Carbonate

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/17/2012 09:08	JEM	497038

CAS#	Parameter	Result	RDL	REG LIMIT	Units
T-005-C	Carbonate Alkalinity	ND	1.0		mg/L CaCO3

SM 2320B Bicarbonate

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/17/2012 09:08	JEM	497038

CAS#	Parameter	Result	RDL	REG LIMIT	Units
T-005-B	**Bicarbonate Alkalinity**	**437**	**1.0**		**mg/L CaCO3**

SM 2510 B Conductivity

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/14/2012 15:40	DJH	496839

CAS#	Parameter	Result	RDL	REG LIMIT	Units
C-011	**Specific Conductance**	**7070**	**10**		**umhos/cm**

SW-846 9056A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1000	12/20/2012 22:38	AEL	497361

CAS#	Parameter	Result	RDL	REG LIMIT	Units
16887-00-6	**Chloride**	**2280**	**100**		**mg/L**

SW-846 9056A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			10	12/20/2012 23:31	AEL	497361

CAS#	Parameter	Result	RDL	REG LIMIT	Units
24959-67-9	**Bromide**	**4.28**	**2.00**		**mg/L**
14808-79-8	Sulfate	ND	2.00		mg/L

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140920	**WW-3**	Water	12/11/2012 11:45	12/13/2012 16:35

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/20/2012 22:37	CGC	497387

CAS#	Parameter	Result	RDL	REG LIMIT	Units
71-43-2	Benzene	ND	0.00500		mg/L
100-41-4	Ethylbenzene	ND	0.00500		mg/L
108-88-3	Toluene	ND	0.00500		mg/L
1330-20-7	Xylene (total)	ND	0.015		mg/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	.05	.05	mg/L	100	78 - 130
1868-53-7	Dibromofluoromethane	.05	.051	mg/L	103	77 - 127
2037-26-5	Toluene d8	.05	.053	mg/L	105	76 - 134
17060-07-0	1,2-Dichloroethane-d4	.05	.051	mg/L	102	71 - 127

RSK 175

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/20/2012 16:22	JAR	497360

CAS#	Parameter	Result	RDL	REG LIMIT	Units
106-97-8	Butane	ND	5.50		ug/L
74-85-1	Ethene	ND	1.00		ug/L
74-98-6	Propane	ND	10.0		ug/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
115-07-1	Propene	40.5	23.4	ug/L	58	40 - 143

RSK 175

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			100	12/20/2012 16:32	JAR	497360

CAS#	Parameter	Result	RDL	REG LIMIT	Units
74-84-0	**Ethane**	**313**	**100**		**ug/L**

RSK 175

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			600	12/20/2012 16:39	JAR	497360

CAS#	Parameter	Result	RDL	REG LIMIT	Units
74-82-8	**Methane**	**22600**	**3000**		**ug/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140920	**WW-3**	Water	12/11/2012 11:45	12/13/2012 16:35

TX1006/LA 1006

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
12/21/2012 11:00	496985	TX 1006/LA 1006	1	12/23/2012 11:17	SMH	497679

CAS#	Parameter	Result	RDL	REG LIMIT	Units
GCSV-02-11	Aliphatic >C10-C12	ND	0.150		mg/L
GCSV-02-12	Aliphatic >C12-C16	ND	0.150		mg/L
GCSV-02-31	Aliphatic >C16-C35	ND	0.150		mg/L
GCSV-02-10	Aliphatic >C8-C10	ND	0.150		mg/L
GCSV-02-30	Aliphatic C6-C8	ND	0.150		mg/L
GCSV-02-15	Aromatic >C10-C12	ND	0.150		mg/L
GCSV-02-16	Aromatic >C12-C16	ND	0.150		mg/L
GCSV-02-17	Aromatic >C16-C21	ND	0.150		mg/L
GCSV-05-18	Aromatic >C21-C35	ND	0.150		mg/L
GCSV-02-14	Aromatic >C8-C10	ND	0.150		mg/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
84-15-1	o-Terphenyl	17.5	17.4	mg/L	99	60 - 140

SW-846 6010B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
12/18/2012 15:25	496842	SW-846 3010A	10	01/04/2013 08:32	AWG	498329

CAS#	Parameter	Result	RDL	REG LIMIT	Units
7440-23-5	**Sodium**	**1450**	**10.0**		**mg/L**

SW-846 6010B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
12/18/2012 15:25	496842	SW-846 3010A	1	01/04/2013 10:21	AWG	498329

CAS#	Parameter	Result	RDL	REG LIMIT	Units
7440-70-2	**Calcium**	**205**	**0.10**		**mg/L**
7439-89-6	**Iron**	**8.35**	**0.10**		**mg/L**
7439-95-4	**Magnesium**	**73.2**	**0.10**		**mg/L**
7439-96-5	**Manganese**	**0.40**	**0.015**		**mg/L**
7440-09-7	**Potassium**	**12.6**	**0.50**		**mg/L**

SM 2540C TDS

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/14/2012 14:40	DJH	496826

CAS#	Parameter	Result	RDL	REG LIMIT	Units
WET-035	**Total Dissolved Solids(TDS)**	**5470**	**10.0**		**mg/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140920	**WW-3**	Water	12/11/2012 11:45	12/13/2012 16:35

SM 2320B Carbonate

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/17/2012 09:08	JEM	497038

CAS#	Parameter	Result	RDL	REG LIMIT	Units
T-005-C	Carbonate Alkalinity	ND	1.0		mg/L CaCO3

SM 2320B Bicarbonate

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/17/2012 09:08	JEM	497038

CAS#	Parameter	Result	RDL	REG LIMIT	Units
T-005-B	**Bicarbonate Alkalinity**	**410**	**1.0**		**mg/L CaCO3**

SM 2510 B Conductivity

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/14/2012 15:40	DJH	496839

CAS#	Parameter	Result	RDL	REG LIMIT	Units
C-011	**Specific Conductance**	**9390**	**10**		**umhos/cm**

SW-846 9056A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			10	12/20/2012 23:48	AEL	497361

CAS#	Parameter	Result	RDL	REG LIMIT	Units
24959-67-9	Bromide	ND	2.00		mg/L
14808-79-8	Sulfate	ND	2.00		mg/L

SW-846 9056A

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1000	12/21/2012 00:06	AEL	497361

CAS#	Parameter	Result	RDL	REG LIMIT	Units
16887-00-6	**Chloride**	**3180**	**100**		**mg/L**

GCAL ID	Client ID	Matrix	Collect Date/Time	Receive Date/Time
21212140921	**TRIP BLANK**	Water	12/11/2012 00:00	12/13/2012 16:35

SW-846 8260B

Prep Date	Prep Batch	Prep Method	Dilution	Analyzed	By	Analytical Batch
			1	12/19/2012 06:09	JCK	497201

CAS#	Parameter	Result	RDL	REG LIMIT	Units
71-43-2	Benzene	ND	0.00500		mg/L
100-41-4	Ethylbenzene	ND	0.00500		mg/L
108-88-3	Toluene	ND	0.00500		mg/L
1330-20-7	Xylene (total)	ND	0.015		mg/L

CAS#	Surrogate	Conc. Spiked	Conc. Rec	Units	% Recovery	Rec Limits
460-00-4	4-Bromofluorobenzene	.05	.052	mg/L	105	78 - 130
1868-53-7	Dibromofluoromethane	.05	.051	mg/L	102	77 - 127
2037-26-5	Toluene d8	.05	.053	mg/L	105	76 - 134
17060-07-0	1,2-Dichloroethane-d4	.05	.047	mg/L	94	71 - 127

GC/MS Volatiles Quality Control Summary

Analytical Batch 497201		**Client ID**	MB497201			LCS497201			LCSD497201		
Prep Batch N/A		**GCAL ID**	1142102			1142103			1142104		
		Sample Type	Method Blank			LCS			LCSD		
		Analytical Date	12/18/2012 23:00			12/18/2012 21:58			12/18/2012 22:18		
		Matrix	Water			Water			Water		
SW-846 8260B		**Units**	mg/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
100-41-4	Ethylbenzene	ND	0.00500	0.050	0.058	117	74 - 126	0.054	108	7	30
1330-20-7	Xylene (total)	ND	0.015	0.150	0.176	117	74 - 127	0.161	107	9	30
75-35-4	1,1-Dichloroethene	ND	0.00500	0.050	0.050	100	69 - 129	0.050	99	0	20
71-43-2	Benzene	ND	0.00500	0.050	0.052	104	70 - 129	0.050	99	4	20
79-01-6	Trichloroethene	ND	0.00500	0.050	0.058	116	76 - 129	0.055	109	5	20
108-88-3	Toluene	ND	0.00500	0.050	0.053	107	72 - 120	0.051	102	4	20
108-90-7	Chlorobenzene	ND	0.00500	0.050	0.056	112	74 - 123	0.052	104	7	20
Surrogate											
460-00-4	4-Bromofluorobenzene	50.6	101	50	56.4	113	78 - 130	53.3	107		
1868-53-7	Dibromofluoromethane	50.8	102	50	49.8	100	77 - 127	51.7	103		
2037-26-5	Toluene d8	51.4	103	50	49.2	98	76 - 134	50.2	100		
17060-07-0	1,2-Dichloroethane-d4	49.1	98	50	48.3	97	71 - 127	48.1	96		

Analytical Batch 497387		**Client ID**	MB497387			LCS497387			LCSD497387		
Prep Batch N/A		**GCAL ID**	1143006			1142888			1143007		
		Sample Type	Method Blank			LCS			LCSD		
		Analytical Date	12/20/2012 13:37			12/20/2012 11:32			12/20/2012 12:38		
		Matrix	Water			Water			Water		
SW-846 8260B		**Units**	mg/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
100-41-4	Ethylbenzene	ND	0.00500	0.050	0.052	105	74 - 126	0.060	119	14	30
1330-20-7	Xylene (total)	ND	0.015	0.150	0.159	106	74 - 127	0.182	121	13	30
75-35-4	1,1-Dichloroethene	ND	0.00500	0.050	0.049	98	69 - 129	0.052	103	6	20
71-43-2	Benzene	ND	0.00500	0.050	0.049	98	70 - 129	0.053	106	8	20
79-01-6	Trichloroethene	ND	0.00500	0.050	0.053	106	76 - 129	0.058	115	9	20
108-88-3	Toluene	ND	0.00500	0.050	0.049	99	72 - 120	0.054	108	10	20
108-90-7	Chlorobenzene	ND	0.00500	0.050	0.051	103	74 - 123	0.057	113	11	20
Surrogate											
460-00-4	4-Bromofluorobenzene	50.9	102	50	55	110	78 - 130	52.5	105		
1868-53-7	Dibromofluoromethane	51.7	103	50	51.6	103	77 - 127	50.7	101		
2037-26-5	Toluene d8	51.9	104	50	50.1	100	76 - 134	49.7	99		
17060-07-0	1,2-Dichloroethane-d4	49	98	50	50.6	101	71 - 127	48.6	97		

GC/MS Volatiles Quality Control Summary

Analytical Batch	497488	**Client ID**	MB497488			LCS497488			LCSD497488		
Prep Batch	N/A	**GCAL ID**	1143431			1143432			1143433		
		Sample Type	Method Blank			LCS			LCSD		
		Analytical Date	12/21/2012 12:58			12/21/2012 11:35			12/21/2012 11:57		
		Matrix	Water			Water			Water		
SW-846 8260B		**Units**		mg/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result		**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
100-41-4	Ethylbenzene	ND		0.00500	0.050	0.053	106	74 - 126	0.044	88	19	30
1330-20-7	Xylene (total)	ND		0.015	0.150	0.160	107	74 - 127	0.131	87	20	30
75-35-4	1,1-Dichloroethene	ND		0.00500	0.050	0.053	106	69 - 129	0.040	80	**28***	20
71-43-2	Benzene	ND		0.00500	0.050	0.051	102	70 - 129	0.044	89	15	20
79-01-6	Trichloroethene	ND		0.00500	0.050	0.055	109	76 - 129	0.046	93	18	20
108-88-3	Toluene	ND		0.00500	0.050	0.051	102	72 - 120	0.043	87	17	20
108-90-7	Chlorobenzene	ND		0.00500	0.050	0.053	105	74 - 123	0.046	91	14	20
Surrogate												
460-00-4	4-Bromofluorobenzene	49.3		99	50	52.5	105	78 - 130	53.2	106		
1868-53-7	Dibromofluoromethane	51.5		103	50	52.3	105	77 - 127	51.9	104		
2037-26-5	Toluene d8	52		104	50	49.9	100	76 - 134	49.7	99		
17060-07-0	1,2-Dichloroethane-d4	49		98	50	50.2	100	71 - 127	47.9	96		

General Chromatography Quality Control Summary

Analytical Batch	497360	**Client ID**	MB497360			LCS497360			LCSD497360		
Prep Batch	N/A	**GCAL ID**	1142793			1142794			1142795		
		Sample Type	Method Blank			LCS			LCSD		
		Analytical Date	12/20/2012 11:53			12/20/2012 11:34			12/20/2012 11:45		
		Matrix	Water			Water			Water		
RSK 175		**Units**	ug/L		**Spike**	**Result**		**Control**	**Result**		**RPD**
		Result	**RDL**		**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
74-82-8	Methane	ND	5.00		17.5	14.8	85	39 - 120	13.4	77	10	27
74-85-1	Ethene	ND	1.00		3.06	2.96	97	45 - 134	2.65	87	11	25
74-84-0	Ethane	ND	1.00		3.28	2.95	90	45 - 128	2.66	81	10	29
74-98-6	Propane	ND	10.0		50.7	37.0	73	30 - 170	33.3	66	11	40
106-97-8	Butane	ND	5.50		81.2	60.5	75	30 - 170	53.8	66	12	40
Surrogate												
115-07-1	Propene	30.7	76		40.5	30.9	76	40 - 143	27.6	68		

General Chromatography Quality Control Summary

Analytical Batch	497679	**Client ID**	MB496985			LCS496985			LCSD496985			
Prep Batch	496985	**GCAL ID**	1141028			1141029			1141030			
Prep Method	TX 1006/LA 1006	**Sample Type**	Method Blank			LCS			LCSD			
		Prep Date	12/21/2012 11:00			12/21/2012 11:00			12/21/2012 11:00			
		Analytical Date	12/22/2012 21:22			12/22/2012 21:54			12/22/2012 22:26			
		Matrix	Water			Water			Water			
TX1006/LA 1006		**Units**	**Result**	mg/L **RDL**	**Spike Added**	**Result**	**% R**	**Control Limits % R**	**Result**	**% R**	**RPD**	**RPD Limit**
GCSV-02-30	Aliphatic C6-C8		ND	0.150								
GCSV-02-10	Aliphatic >C8-C10		ND	0.150								
GCSV-02-11	Aliphatic >C10-C12		ND	0.150								
GCSV-02-12	Aliphatic >C12-C16		ND	0.150								
GCSV-02-31	Aliphatic >C16-C35		ND	0.150								
GCSV-02-14	Aromatic >C8-C10		ND	0.150								
GCSV-02-15	Aromatic >C10-C12		ND	0.150								
GCSV-02-16	Aromatic >C12-C16		ND	0.150								
GCSV-02-17	Aromatic >C16-C21		ND	0.150								
GCSV-05-18	Aromatic >C21-C35		ND	0.150								
GCSV-05-04	Total TPH (C6-C35)		ND	0.150	70.4	63.4	90	60 - 140	70.5	100	11	20
Surrogate												
84-15-1	o-Terphenyl		15300	87	17600	16200	92	60 - 140	17800	101		

Inorganics Quality Control Summary

Analytical Batch	498329	**Client ID**	MB496842	LCS496842
Prep Batch	496842	**GCAL ID**	1140070	1140071
Prep Method	SW-846	**Sample Type**	Method Blank	LCS
	3010A	**Prep Date**	12/18/2012 15:25	12/18/2012 15:25
		Analytical Date	01/04/2013 06:39	01/04/2013 06:47
		Matrix	Water	Water

SW-846 6010B		**Units**	mg/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
7440-70-2	Calcium	ND	0.10	5.00	5.33	107	80 - 120
7439-89-6	Iron	ND	0.10	5.00	5.17	103	80 - 120
7439-95-4	Magnesium	ND	0.10	5.00	5.37	107	80 - 120
7439-96-5	Manganese	ND	0.015	0.50	0.51	102	80 - 120
7440-09-7	Potassium	ND	0.50	10.0	9.98	100	80 - 120
7440-23-5	Sodium	ND	1.00	20.0	20.1	101	80 - 120

Analytical Batch	498329	**Client ID**	OXY 1	1139803MS
Prep Batch	496842	**GCAL ID**	21212140914	1140073
Prep Method	SW-846	**Sample Type**	SAMPLE	MS
	3010A	**Prep Date**	12/18/2012 15:25	12/18/2012 15:25
		Analytical Date	01/04/2013 08:41	01/04/2013 08:56
		Matrix	Water	Water

SW-846 6010B		**Units**	mg/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
7440-70-2	Calcium	204	0.10	5.00	213	**185***	75 - 125
7439-89-6	Iron	6.58	0.10	5.00	11.4	97	75 - 125
7439-95-4	Magnesium	73.9	0.10	5.00	79.8	118	75 - 125
7439-96-5	Manganese	0.43	0.015	0.50	0.92	96	75 - 125
7440-09-7	Potassium	12.5	0.50	10.0	26.5	**139***	75 - 125

Analytical Batch	498329	**Client ID**	OXY 1	1139803MS
Prep Batch	496842	**GCAL ID**	21212140914	1140073
Prep Method	SW-846	**Sample Type**	SAMPLE	MS
	3010A	**Prep Date**	12/18/2012 15:25	12/18/2012 15:25
		Analytical Date	01/04/2013 06:54	01/04/2013 07:11
		Matrix	Water	Water

SW-846 6010B		**Units**	mg/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
7440-23-5	Sodium	1540	10.0	20.0	1620	**413***	75 - 125

Inorganics Quality Control Summary

Analytical Batch	498329	**Client ID**	OXY 1		1139803DUP		
Prep Batch	496842	**GCAL ID**	21212140914		1140072		
Prep Method	SW-846	**Sample Type**	SAMPLE		DUP		
	3010A	**Prep Date**	12/18/2012 15:25		12/18/2012 15:25		
		Analytical Date	01/04/2013 08:41		01/04/2013 08:48		
		Matrix	Water		Water		
SW-846 6010B			**Units**	mg/L	**Result**		**RPD**
			Result	**RDL**		**RPD**	**Limit**
7440-70-2	Calcium		204	0.10	211	3	20
7439-89-6	Iron		6.58	0.10	6.70	2	20
7439-95-4	Magnesium		73.9	0.10	75.4	2	20
7439-96-5	Manganese		0.43	0.015	0.44	2	20
7440-09-7	Potassium		12.5	0.50	14.7	16	20

Analytical Batch	498329	**Client ID**	OXY 1		1139803DUP		
Prep Batch	496842	**GCAL ID**	21212140914		1140072		
Prep Method	SW-846	**Sample Type**	SAMPLE		DUP		
	3010A	**Prep Date**	12/18/2012 15:25		12/18/2012 15:25		
		Analytical Date	01/04/2013 06:54		01/04/2013 07:02		
		Matrix	Water		Water		
SW-846 6010B			**Units**	mg/L	**Result**		**RPD**
			Result	**RDL**		**RPD**	**Limit**
7440-23-5	Sodium		1540	10.0	1610	4	20

General Chemistry Quality Control Summary

Analytical Batch 496826	**Client ID**	MB496826			LCS496826		
Prep Batch N/A	**GCAL ID**	1139995			1139996		
	Sample Type	Method Blank			LCS		
	Analytical Date	12/14/2012 14:40			12/14/2012 14:40		
	Matrix	Water			Water		
SM 2540C TDS		**Units**	mg/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
WET-035	Total Dissolved Solids(TDS)	ND	10.0	1000	984	98.4	80 - 120

Analytical Batch 496826	**Client ID**	WW-1		1139813DUP		
Prep Batch N/A	**GCAL ID**	21212140918		1139997		
	Sample Type	SAMPLE		DUP		
	Analytical Date	12/14/2012 14:40		12/14/2012 14:40		
	Matrix	Water		Water		
SM 2540C TDS		**Units**	mg/L	**Result**		**RPD**
		Result	**RDL**		**RPD**	**Limit**
WET-035	Total Dissolved Solids(TDS)	3780	10.0	3700	2.1	5

General Chemistry Quality Control Summary

Analytical Batch 496839	**Client ID**	E-3 (TR)		1139782DUP		
Prep Batch N/A	**GCAL ID**	21212140901		1140051		
	Sample Type	SAMPLE		DUP		
	Analytical Date	12/14/2012 15:40		12/14/2012 15:40		
	Matrix	Water		Water		
SM 2510 B Conductivity		**Units**	umhos/cm	**Result**		**RPD**
		Result	**RDL**		**RPD**	**Limit**
C-011	Specific Conductance	4410	10	4420	0.2	10

General Chemistry Quality Control Summary

Analytical Batch 497361	**Client ID**	MB497361			LCS497361		
Prep Batch N/A	**GCAL ID**	1142799			1142800		
	Sample Type	Method Blank			LCS		
	Analytical Date	12/20/2012 12:57			12/20/2012 13:14		
	Matrix	Water			Water		
SW-846 9056A		**Units**	mg/L	**Spike**	**Result**		**Control**
		Result	**RDL**	**Added**		**% R**	**Limits % R**
24959-67-9	Bromide	ND	0.200	5.00	4.47	89.4	80 - 120
16887-00-6	Chloride	ND	0.100	2.50	2.41	96.4	80 - 120
14808-79-8	Sulfate	ND	0.200	5.00	4.83	96.6	80 - 120

Analytical Batch 497361	**Client ID**	E-3 (TR)			1139782MS			1139782MSD			
Prep Batch N/A	**GCAL ID**	21212140901			1142801			1142802			
	Sample Type	SAMPLE			MS			MSD			
	Analytical Date	12/20/2012 13:32			12/20/2012 13:49			12/20/2012 14:07			
	Matrix	Water			Water			Water			
SW-846 9056A		**Units**	mg/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
16887-00-6	Chloride	1300	100	2500	3760	98.3	75 - 125	3790	99.4	0.79	15

Analytical Batch 497361	**Client ID**	BG-2 (TR)			1139794MS			1139794MSD			
Prep Batch N/A	**GCAL ID**	21212140913			1142803			1142804			
	Sample Type	SAMPLE			MS			MSD			
	Analytical Date	12/20/2012 18:14			12/20/2012 18:31			12/20/2012 18:49			
	Matrix	Water			Water			Water			
SW-846 9056A		**Units**	mg/L	**Spike**	**Result**		**Control**	**Result**			**RPD**
		Result	**RDL**	**Added**		**% R**	**Limits % R**		**% R**	**RPD**	**Limit**
16887-00-6	Chloride	436	50.0	1250	1690	100	75 - 125	1660	97.9	1.8	15

GCAL

GULF COAST ANALYTICAL LABORATORIES, INC
7979 GSRI Avenue, Baton Rouge, Louisiana 70820-7402
Phone 225.769.4900 • Fax 225.767.5717

CHAIN OF CUSTODY RECORD

Lab use only

Client Name	Client #	Workorder #	Due Date
Michael Pisani	4271	B2121409	12/24/12

Report to:
Client: Michael Pisani + Assoc
Address: 1100 Poydras St Suite 1430
NOLA 70163
Contact: Dave Angle
Phone: 504-582-2468
Fax:

Bill to:
Client:
Address:
Contact:
Phone:
Fax:

P.O. Number: 80-05
Project Name/Number: Assumption Parish Sinkhole
Sampled By: PMR

Analytical Requests & Method

Lab use only:
Custody Seal used ☐ yes ☐ no
intact ☐ yes ☐ no
Temperature °C 1.7, 5.3

Matrix[1]	Date	Time (2400)	Comp	Grab	Sample Description	Preservatives	No Containers	~~Cl~~ Chloride, TDS, SC	TPH 1006 Fractions	BTEX 8260	Remarks:	Lab ID 12/14
Water	12-13-12	1010		x	E-3 (TR)	HCL	5	x	x	x		1
Water	12/13/12	1025		x	N-3 (TR)	HCL	5	x	x	x		2
Water	12/13/12	1035		x	NW-2 (TR)	HCL	5	x	x	x		3
Water	" "	1040		x	NW-3 (TR)	HCL	5	x	x	x		4
Water	" "	1045		x	NW-4 (TR)	HCL	5	x	x	x		5
Water	" "	1055		x	W-2 (TR)	HCL	5	x	x	x		6
Water	" "	1100		x	W-3 (TR)	HCL	5	x	x	x		7
Water	" "	1105		x	W-4 (TR)	HCL	5	x	x	x		8
Water	" "	1115		x	SW-3 (TR)	HCL	5	x	x	x		9
Water	" "	1125		x	SW-4 (TR)	HCL	5	x	x	x		10
Water	" "	1130		x	S-4 (TR)	HCL	5	x	x	x		11
Water	" "	1145		x	BG-1 (TR)	HCL	5	x	x	x		12
Water	" "	1155		x	BG-2 (TR)	HCL	5	x	x	x		13
~~Water~~												

Turn Around Time: ☐ 24-48 hrs. ☐ 3 days ☐ 1 week ☒ Standard ☐ Other

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
[signature]	[signature]	12.13.12	16:35
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

Note:

By submitting these samples, you agree to the terms and conditions contained in our most recent schedule of services.

Matrix[1]: W = water, S = soil, SD = solid, L = liquid, SL = sludge, o = oil, CT = charcoal tube, A = air bag

We cannot accept verbal changes. Please fax written changes to (225) 767-5717

WHITE: CLIENT FINAL REPORT — CANARY: LABORATORY — PINK: CLIENT

GCAL-06 11/98

GCAL

GULF COAST ANALYTICAL LABORATORIES, INC
7979 GSRI Avenue, Baton Rouge, Louisiana 70820-7402
Phone 225.769.4900 • Fax 225.767.5717

CHAIN OF CUSTODY RECORD

Lab use only

Client Name	Client #	Workorder #	Due Date
Michael Pisani	4271	12121409	12/24/12

Report to:
Client: Michael Pisani + Assoc.
Address: 1100 Poydras St, Suite 1430
New Orleans, LA 70163
Contact: 504-582-2468
Phone:
Fax:

Bill to:
Client:
Address:
Contact:
Phone:
Fax:

P.O. Number: 80-05
Project Name/Number: Assumption Parish Sinkhole
Sampled By: PMR

Analytical Requests & Method

Lab use only:
Custody Seal
used ☐ yes ☑ no
intact ☐ yes ☐ no
Temperature °C 1.7, 5.3

Matrix[1]	Date	Time (2400)	Comp	Grab	Sample Description	Preservatives	No Containers	Chloride, TOC, SC	Ca, Mg, Na, K, Fe, Mn	Sulfate	Carb. + Bicarb Alkalinity	Bromide	Dissolved Gases RSK-175	BTEX (8260)	TRPH 1006 Fraction				Remarks:	Lab ID 12/14
water	12/13/12	1120		X	OXY #1	HNO3, HCL	11	X	X	X	X	X	X	X	X					14
" "	12/13/12	1040		X	OXY #2	" "	11	X	X	X	X	X	X	X	X					15
" "	12/13/12	1255		X	OXY #3	" "	11	X	X	X	X	X	X	X	X					16
" "	12/13/12	1330		X	OXY #3	" "	11	X	X	X	X	X	X	X	X					17
" "	12/11/12	1350		X	WW #1	" "	11	X	X	X	X	X	X	X	X					18
" "	" "	1320		X	WW #2	" "	11	X	X	X	X	X	X	X	X					19
" "	" "	1145		X	WW #3	" "	11	X	X	X	X	X	X	X	X					20
					Trip Blank	SMG 12/17/12 per client														21

Turn Around Time: ☐ 24-48 hrs. ☐ 3 days ☐ 1 week ☒ Standard ☐ Other

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
[signature]	[signature]	12.13.12	16:35
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

Note:

By submitting these samples, you agree to the terms and conditions contained in our most recent schedule of services.

Matrix[1]: W = water, S = soil, SD = solid, L = liquid, SL = sludge, o = oil, CT = charcoal tube, A = air bag

We cannot accept verbal changes. Please fax written changes to (225) 767-5717

WHITE: CLIENT FINAL REPORT — CANARY: LABORATORY — PINK: CLIENT

GCAL-06 11/98

GCAL
GULF COAST ANALYTICAL LABORATORIES, INC

SAMPLE RECEIVING CHECKLIST

SAMPLE DELIVERY GROUP	212121409
Client 4271 - Michael Pisani & Associates	**Transport Method** COURIER
Profile 233926 - 80-05 Assumption Parish Sinkhole	**Received By** Law, Brittany P.
Line Item(s) 2 - Waters - BTEX 3 - Waters Std Cat/Anions	**Receive Date(s)** 12/13/12

CHECKLIST

	Yes	No	NA
Were all samples received using proper thermal preservation?	☑	☐	☐
When used, were all custody seals intact?	☐	☐	☑
Were all samples received in proper containers?	☑	☐	☐
Were all samples received using proper chemical preservation?	☑	☐	☐
Was preservative added to any container at the lab?	☐	☑	☐
Were all containers received in good condition?	☐	☑	☐
Were all VOA vials received with no head space?	☑	☐	☐
Do all sample labels match the Chain of Custody?	☑	☐	☐
Did the Chain of Custody list the sampling technician?	☑	☐	☐
Was the COC maintained i.e. all signatures, dates and time of receipt included?	☑	☐	☐

COOLERS

Airbill	Temp(oC)
	1.7
	5.3

DISCREPANCIES

21212140917 - OXY 3
- Broken Container

LABORATORY PRESERVATIONS

None

NOTES	40 ML VIAL FOR SAMPLE 'OXY 3' RECEIVED AT LAB EMPTY. 2 40 ML VIALS REMAIN.

January 14, 2013

Mr. Bruce Martin
Vice President of Operations
Texas Brine Company, LLC
4800 San Felipe
Houston, TX 77056

Dear Mr. Martin:

RE: In-Place Inclinometer, Tiltmeter, and Water-Level Monitoring System, Napoleonville Dome Weekly Report: January 5 Through January 11, 2013

RESPEC is pleased to submit this weekly report on the in-place inclinometer (IPI), tiltmeter, and water-level monitoring system installed around the sinkhole located near the western flank of the Napoleonville Dome, Assumption Parish, Louisiana. Water-level data in this report and the attached Excel file are submitted in response to Directive #5 contained in the October 11, 2012, Third Amendment to Declaration of Emergency and Directive from the Department of Natural Resources Office of Conservation.

Monitoring locations are shown in Figure 1. Graphs illustrating the tilt data, as recorded by each instrument, are provided in Figures 2–4. The IPI data for the *X*-directions and *Y*-directions are plotted separately in Figures 2 and 3, respectively. The tiltmeter data for both the *X*- and *Y*-directions are plotted in Figure 4. A condition reflecting no changes in ground movement plots as a horizontal line on these graphs. Note that the instruments installed are very sensitive; they can measure ground tilt to less than 1/100 of a degree. Alarm levels are set at ± 1.0 degree for all inclinometers and ± 0.5 degree for all tiltmeters. Water levels measured at IPI-2 and southwest of Pad 3 are shown in Figure 5, and an Excel file with this data is attached.

The positive spike in the *X*-direction (toward the sinkhole) at the Pad 3 tiltmeter on January 10 is cultural noise—a large tanker truck momentarily parked adjacent to the tiltmeter while turning around. No evidence of tilt was apparent in the tiltmeter and IPI data this week.

Sincerely,

Eric L. Krantz, P.E.
Engineer

ELK:llf

cc: Mr. Mark Cartwright, Texas Brine Company, LLC
Mr. Scott Borne, Texas Brine Company, LLC

3824 Jet Drive, PO Box 725, Rapid City, South Dakota 57709-0725 Phone: 605.394.6400 Fax: 605.394.6456 www.respec.com

Figure 1. Monitoring Locations.

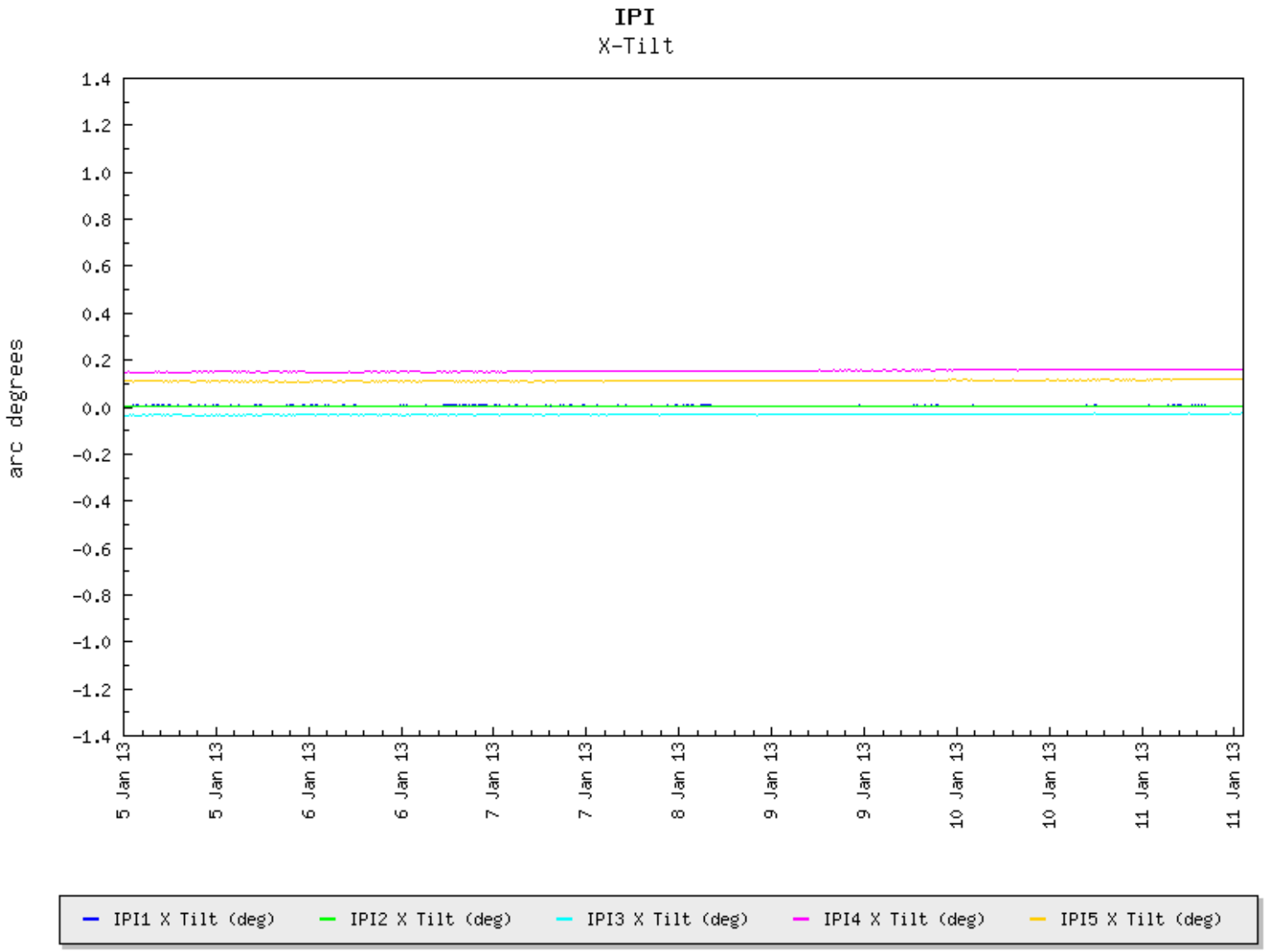


Figure 2. Inclinometer *X*-Direction Temporal Trends.

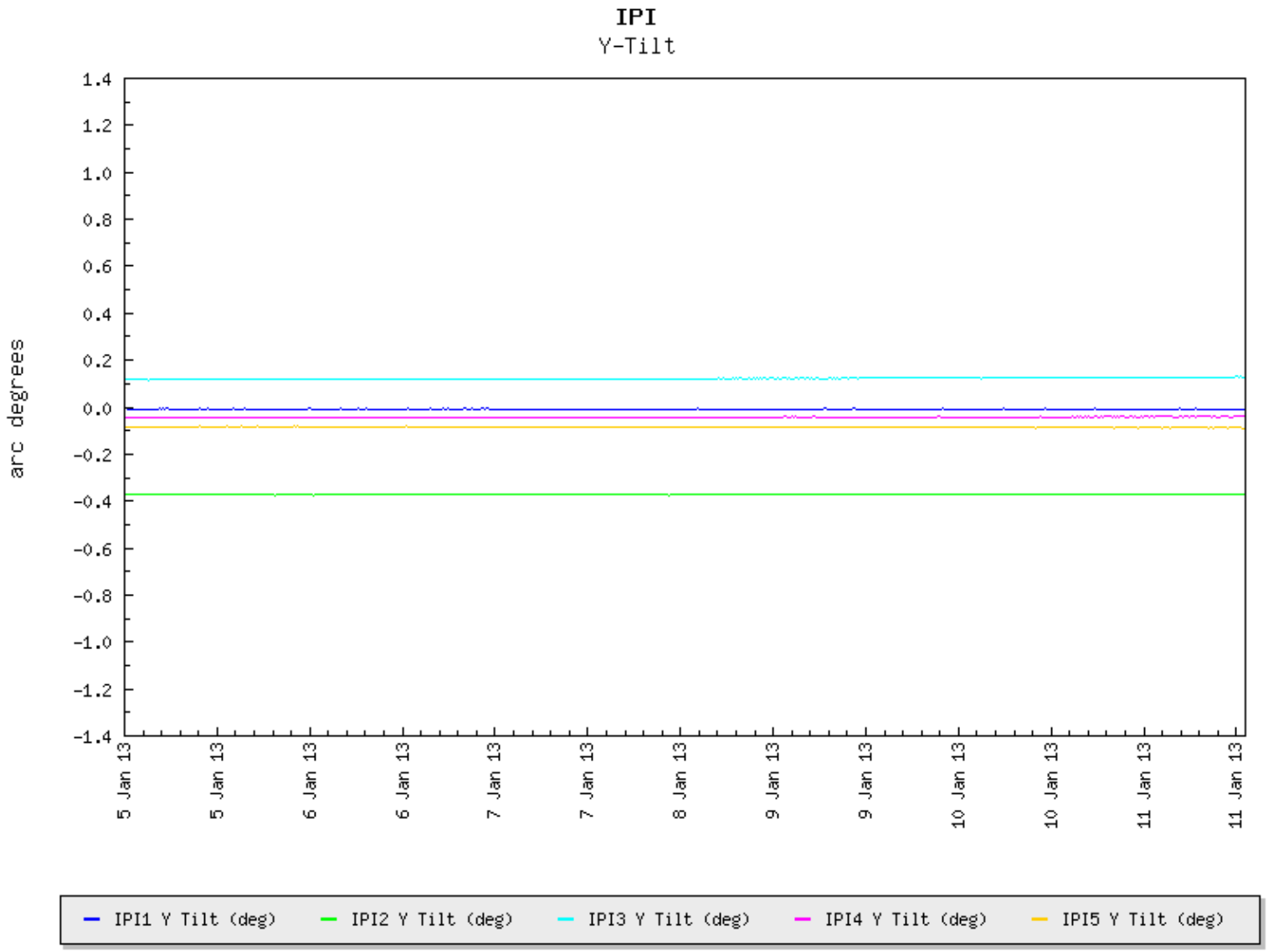


Figure 3. Inclinometer Y-Direction Temporal Trends.

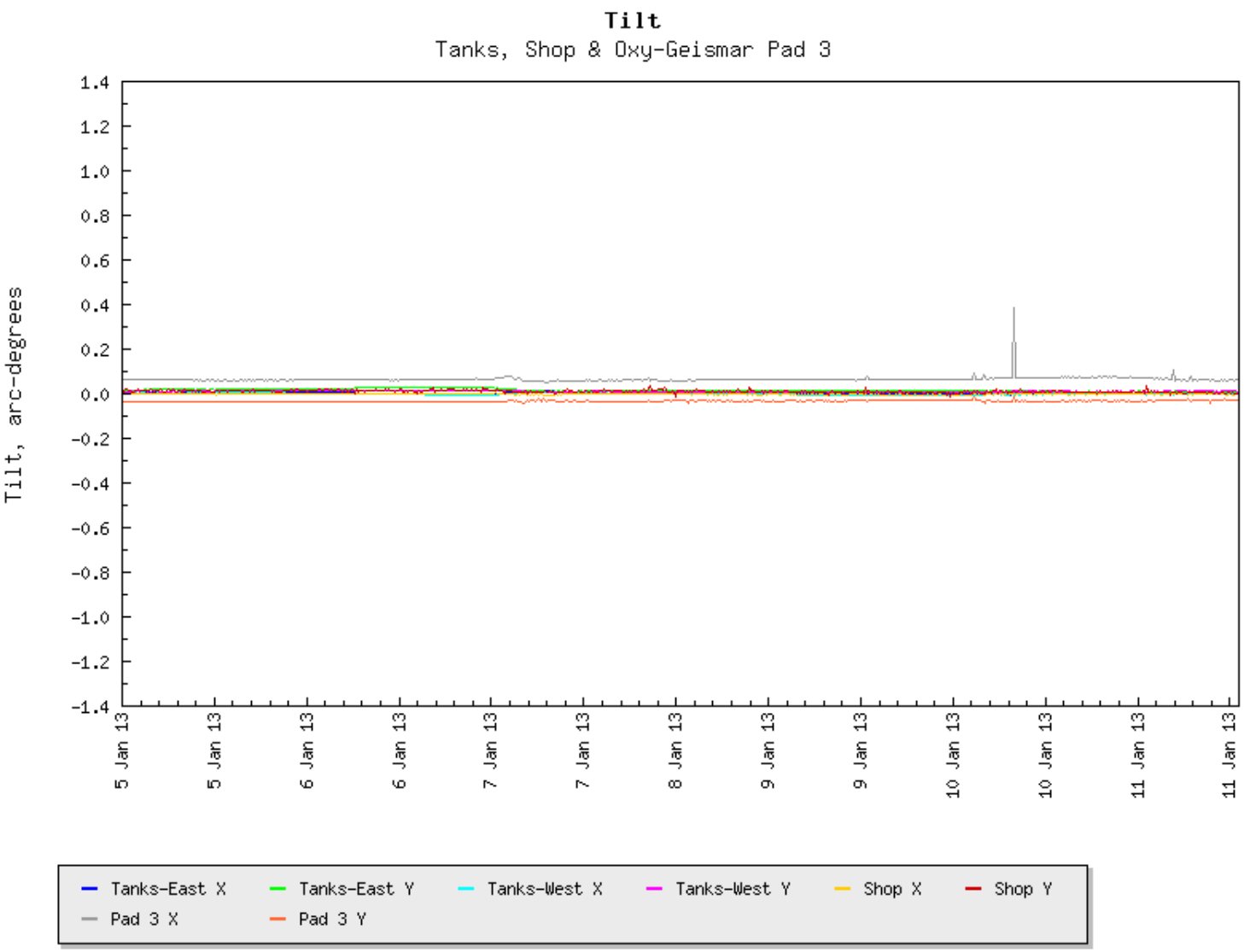


Figure 4. Tiltmeter Temporal Trends.

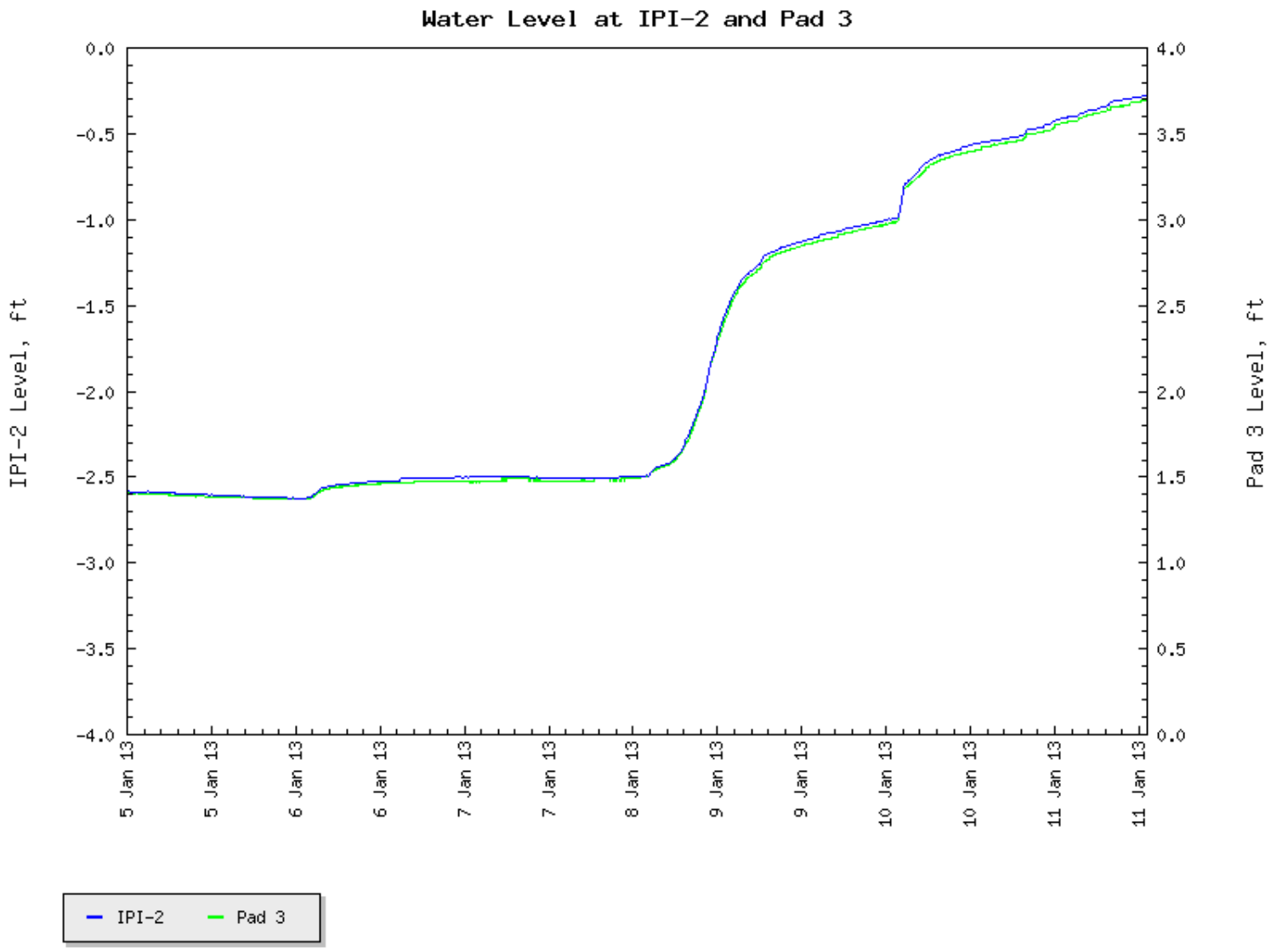
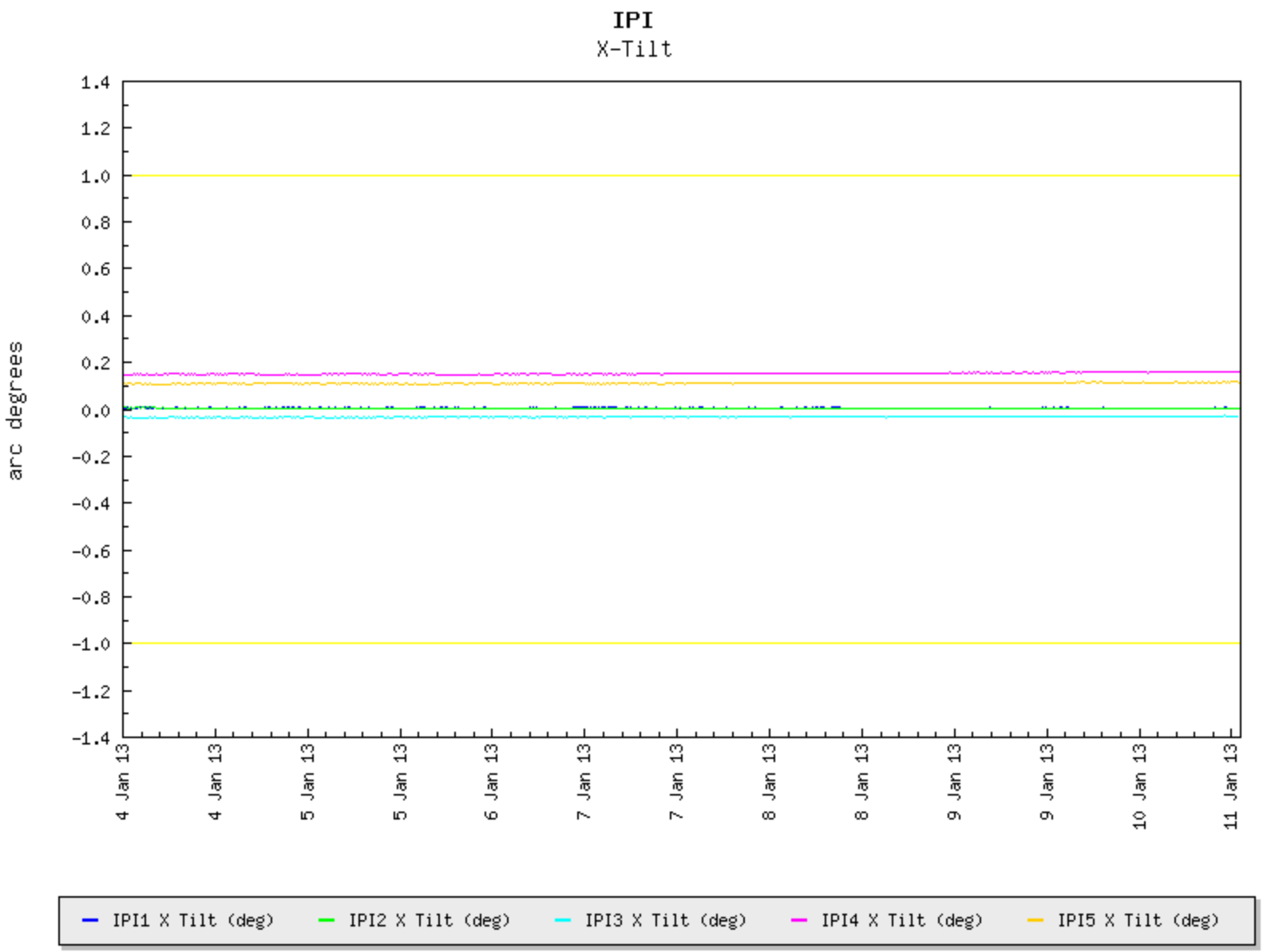
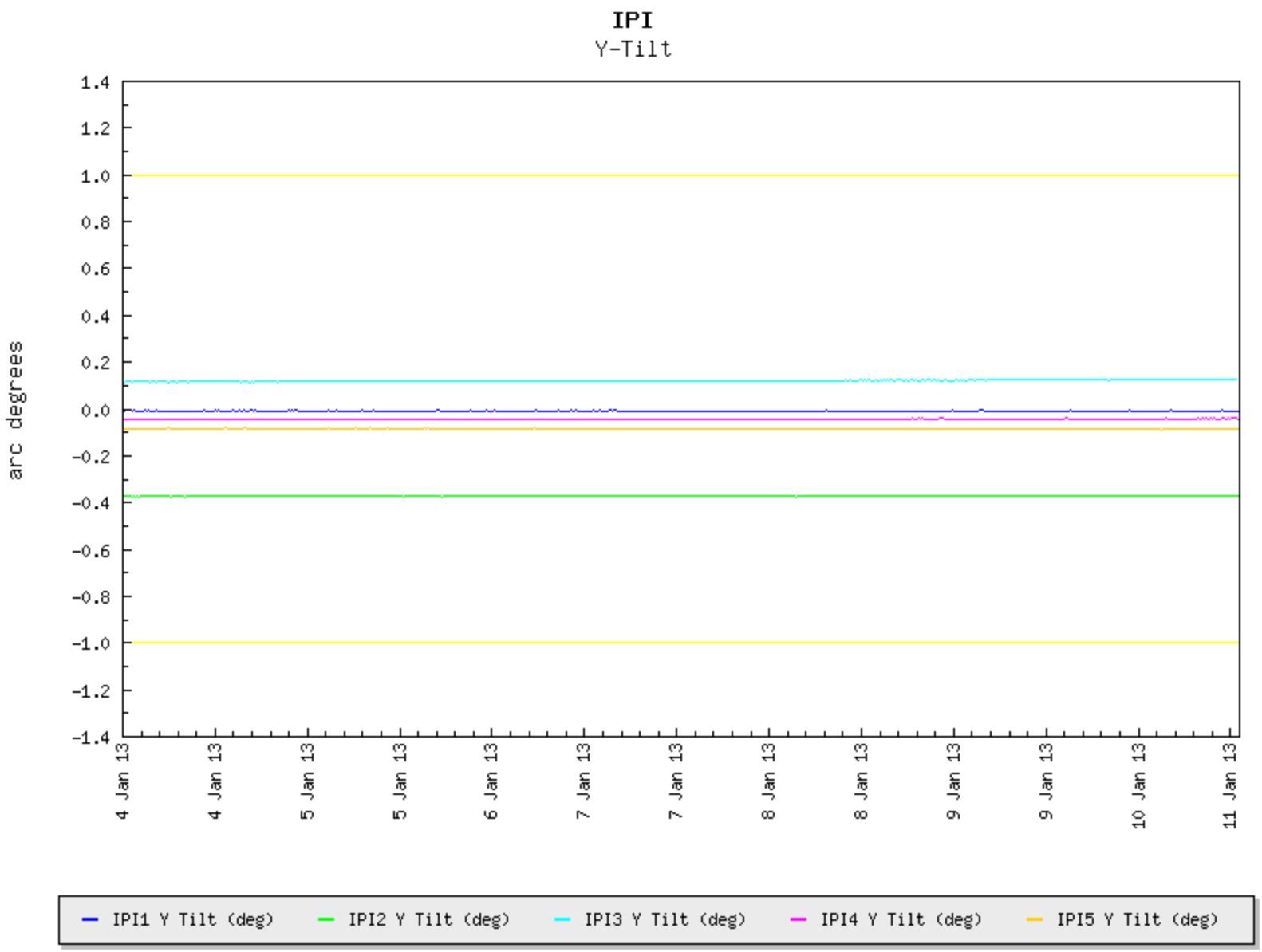
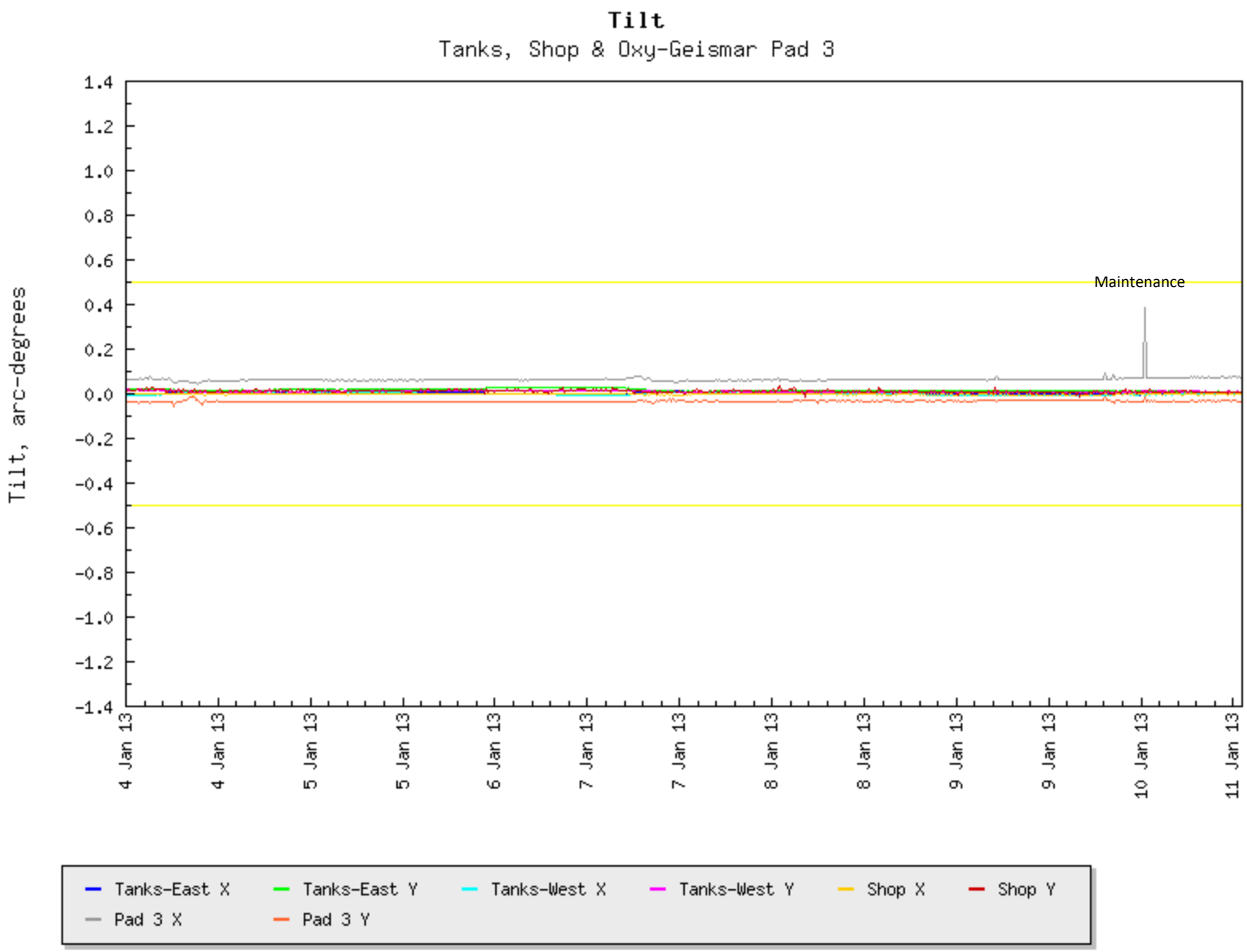


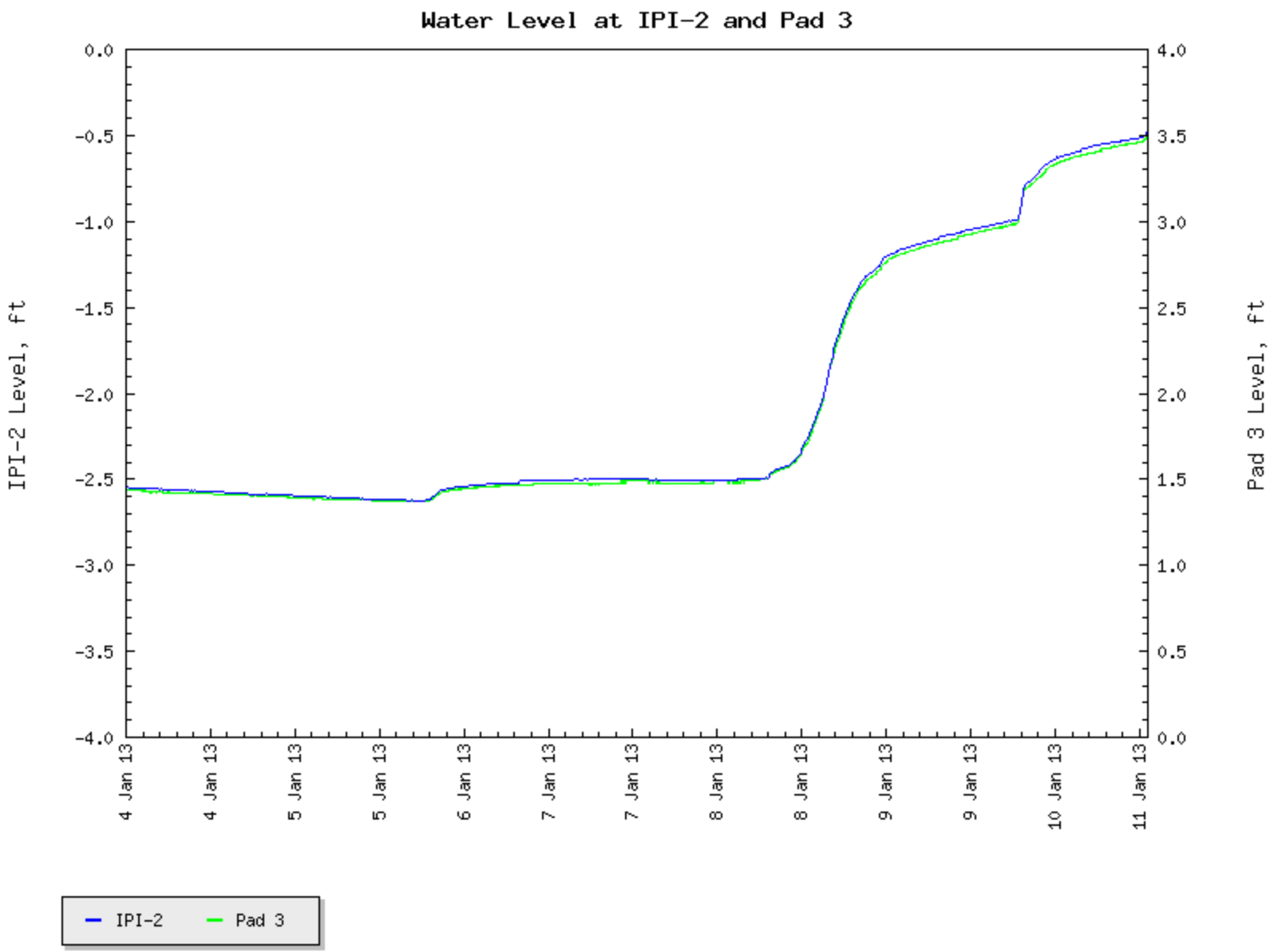
Figure 5. Water Level Temporal Trends.

Sinkhole survey data provided by Joel Miller & Associates. Survey date 10/30/12.


IPI
X-Tilt
arc degrees
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
-0.2
-0.4
-0.6
-0.8
-1.0
-1.2
-1.4
4 Jan 13
4 Jan 13
5 Jan 13
5 Jan 13
6 Jan 13
7 Jan 13
7 Jan 13
8 Jan 13
8 Jan 13
9 Jan 13
9 Jan 13
10 Jan 13
11 Jan 13
IPI1 X Tilt (deg)
IPI2 X Tilt (deg)
IPI3 X Tilt (deg)
IPI4 X Tilt (deg)
IPI5 X Tilt (deg)


IPI
Y-Tilt
arc degrees
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
-0.2
-0.4
-0.6
-0.8
-1.0
-1.2
-1.4
4 Jan 13
4 Jan 13
5 Jan 13
5 Jan 13
6 Jan 13
7 Jan 13
7 Jan 13
8 Jan 13
8 Jan 13
9 Jan 13
9 Jan 13
10 Jan 13
11 Jan 13
IPI1 Y Tilt (deg)
IPI2 Y Tilt (deg)
IPI3 Y Tilt (deg)
IPI4 Y Tilt (deg)
IPI5 Y Tilt (deg)


Tilt
Tanks, Shop & Oxy-Geismar Pad 3
Tilt, arc-degrees
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
-0.2
-0.4
-0.6
-0.8
-1.0
-1.2
-1.4
Maintenance
4 Jan 13
4 Jan 13
5 Jan 13
5 Jan 13
6 Jan 13
7 Jan 13
7 Jan 13
8 Jan 13
8 Jan 13
9 Jan 13
9 Jan 13
10 Jan 13
11 Jan 13
Tanks-East X
Tanks-East Y
Tanks-West X
Tanks-West Y
Shop X
Shop Y
Pad 3 X
Pad 3 Y


Water Level at IPI-2 and Pad 3
IPI-2 Level, ft
Pad 3 Level, ft
0.0
-0.5
-1.0
-1.5
-2.0
-2.5
-3.0
-3.5
-4.0
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
4 Jan 13
4 Jan 13
5 Jan 13
5 Jan 13
6 Jan 13
7 Jan 13
7 Jan 13
8 Jan 13
8 Jan 13
9 Jan 13
9 Jan 13
10 Jan 13
11 Jan 13
IPI-2
Pad 3

ISOTECH

Isotech Laboratories, Inc.
1308 Parkland Court
Champaign, IL 61821
Phone: 217-398-3490
Fax: 217-398-3493
www.isotechlabs.com
mail@isotechlabs.com

Send Data and Invoice to

Name: Dave Upthegrove
Company: Michael Pisani & Assoc.
Address: 13313 Southwest Freeway Ste 221 Sugarland, TX
Phone: 281-242-5700
Fax:
Email: dupthegrove@mpisani.com

Project: 80-05
Location: Assumption Parish
Sampled by:

Circle one:
Standard
Priority
Rush

Analysis Package Codes on Back

Sample Description

Container Number	Sample Identification	Date Sampled	Time	Stable Isotopes: hydrogen	Oxygen	tritium	Comments
	SW-5 (100)	10/11/12	1445.	X	X	X	
	SW-5 (50)	10/11/12	1400	↓	↓	↓	
	SW-5 (25)	10/11/12	1520	↓	↓	↓	
	SW-5 (10)	10/11/12	1545	↓	↓	↓	
	SW-5 (2)	10/11/12	1615	↓	↓	↓	

Chain-of-Custody Record

	Signature	Company	Date	Time
Relinquished by	[illegible]	LCAL	~~10/5/12~~	~~1700~~ @ 11/26/12
Received by	FedEx		~~10/5/12~~	~~1700~~ @ 11/26/12 1700
Relinquished by				
Received by	Peter Caleb	Isotech	11/27/12	0800
Relinquished by				
Received by				

Time-stamp	IPI-2 Water Level, ft	Pad 3, ft
1/5/2013 0:00	-2.58	1.41
1/5/2013 0:05		1.41
1/5/2013 0:10		1.41
1/5/2013 0:15	-2.58	1.41
1/5/2013 0:20		1.41
1/5/2013 0:25		1.41
1/5/2013 0:30	-2.59	1.41
1/5/2013 0:35		1.41
1/5/2013 0:40		1.41
1/5/2013 0:45	-2.59	1.41
1/5/2013 0:50		1.41
1/5/2013 0:55		1.4
1/5/2013 1:00	-2.59	1.41
1/5/2013 1:05		1.4
1/5/2013 1:10		1.41
1/5/2013 1:15	-2.59	1.4
1/5/2013 1:20		1.4
1/5/2013 1:25		1.4
1/5/2013 1:30	-2.59	1.41
1/5/2013 1:35		1.41
1/5/2013 1:40		1.41
1/5/2013 1:45	-2.59	1.4
1/5/2013 1:50		1.4
1/5/2013 1:55		1.4
1/5/2013 2:00	-2.59	1.4
1/5/2013 2:05		1.4
1/5/2013 2:10		1.4
1/5/2013 2:15	-2.59	1.4
1/5/2013 2:20		1.4
1/5/2013 2:25		1.4
1/5/2013 2:30	-2.59	1.4
1/5/2013 2:35		1.4
1/5/2013 2:40		1.4
1/5/2013 2:45	-2.59	1.4
1/5/2013 2:50		1.4
1/5/2013 2:55		1.4
1/5/2013 3:00	-2.59	1.4
1/5/2013 3:05		1.4
1/5/2013 3:10		1.4
1/5/2013 3:15	-2.59	1.41
1/5/2013 3:20		1.4
1/5/2013 3:25		1.4
1/5/2013 3:30	-2.58	1.4
1/5/2013 3:35		1.4
1/5/2013 3:40		1.4
1/5/2013 3:45	-2.59	1.4
1/5/2013 3:50		1.4
1/5/2013 3:55		1.4
1/5/2013 4:00	-2.59	1.4
1/5/2013 4:05		1.4
1/5/2013 4:10		1.4
1/5/2013 4:15	-2.59	1.4
1/5/2013 4:20		1.4
1/5/2013 4:25		1.4
1/5/2013 4:30	-2.59	1.4
1/5/2013 4:35		1.4
1/5/2013 4:40		1.4
1/5/2013 4:45	-2.59	1.4
1/5/2013 4:50		1.4
1/5/2013 4:55		1.4
1/5/2013 5:00	-2.59	1.4
1/5/2013 5:05		1.4
1/5/2013 5:10		1.4
1/5/2013 5:15	-2.59	1.4
1/5/2013 5:20		1.4
1/5/2013 5:25		1.4
1/5/2013 5:30	-2.59	1.4
1/5/2013 5:35		1.4
1/5/2013 5:40		1.4
1/5/2013 5:45	-2.59	1.4
1/5/2013 5:50		1.4
1/5/2013 5:55		1.4
1/5/2013 6:00	-2.59	1.4
1/5/2013 6:05		1.4
1/5/2013 6:10		1.4
1/5/2013 6:15	-2.59	1.4
1/5/2013 6:20		1.4
1/5/2013 6:25		1.4
1/5/2013 6:30	-2.59	1.4
1/5/2013 6:35		1.4
1/5/2013 6:40		1.4
1/5/2013 6:45	-2.59	1.4
1/5/2013 6:50		1.39
1/5/2013 6:55		1.4
1/5/2013 7:00	-2.59	1.4
1/5/2013 7:05		1.39
1/5/2013 7:10		1.4
1/5/2013 7:15	-2.59	1.39
1/5/2013 7:20		1.39
1/5/2013 7:25		1.39
1/5/2013 7:30	-2.59	1.39
1/5/2013 7:35		1.39
1/5/2013 7:40		1.39
1/5/2013 7:45	-2.59	1.39
1/5/2013 7:50		1.39
1/5/2013 7:55		1.39
1/5/2013 8:00	-2.6	1.39
1/5/2013 8:05		1.39
1/5/2013 8:10		1.39
1/5/2013 8:15	-2.6	1.39
1/5/2013 8:20		1.39
1/5/2013 8:25		1.39
1/5/2013 8:30	-2.6	1.39
1/5/2013 8:35		1.39
1/5/2013 8:40		1.39
1/5/2013 8:45	-2.6	1.39
1/5/2013 8:50		1.39
1/5/2013 8:55		1.39
1/5/2013 9:00	-2.6	1.39
1/5/2013 9:05		1.39
1/5/2013 9:10		1.39
1/5/2013 9:15	-2.6	1.39
1/5/2013 9:20		1.39
1/5/2013 9:25		1.39
1/5/2013 9:30	-2.6	1.39
1/5/2013 9:35		1.39
1/5/2013 9:40		1.39
1/5/2013 9:45	-2.6	1.39
1/5/2013 9:50		1.39
1/5/2013 9:55		1.39
1/5/2013 10:00	-2.6	1.39
1/5/2013 10:05		1.39
1/5/2013 10:10		1.39
1/5/2013 10:15	-2.6	1.39
1/5/2013 10:20		1.39
1/5/2013 10:25		1.39
1/5/2013 10:30	-2.6	1.39
1/5/2013 10:35		1.39
1/5/2013 10:40		1.39
1/5/2013 10:45	-2.6	1.39
1/5/2013 10:50		1.39
1/5/2013 10:55		1.39
1/5/2013 11:00	-2.6	1.39
1/5/2013 11:05		1.39
1/5/2013 11:10		1.38
1/5/2013 11:15	-2.6	1.38
1/5/2013 11:20		1.39
1/5/2013 11:25		1.38
1/5/2013 11:30	-2.6	1.39
1/5/2013 11:35		1.39
1/5/2013 11:40		1.39
1/5/2013 11:45	-2.6	1.39
1/5/2013 11:50		1.39
1/5/2013 11:55		1.39
1/5/2013 12:00	-2.6	1.39
1/5/2013 12:05		1.39
1/5/2013 12:10		1.39
1/5/2013 12:15	-2.6	1.39
1/5/2013 12:20		1.39
1/5/2013 12:25		1.39
1/5/2013 12:30	-2.6	1.39
1/5/2013 12:35		1.39
1/5/2013 12:40		1.39
1/5/2013 12:45	-2.6	1.38
1/5/2013 12:50		1.38
1/5/2013 12:55		1.38
1/5/2013 13:00	-2.6	1.38
1/5/2013 13:05		1.38
1/5/2013 13:10		1.38
1/5/2013 13:15	-2.6	1.38
1/5/2013 13:20		1.38
1/5/2013 13:25		1.38
1/5/2013 13:30	-2.61	1.38
1/5/2013 13:35		1.38
1/5/2013 13:40		1.38
1/5/2013 13:45	-2.61	1.38
1/5/2013 13:50		1.38
1/5/2013 13:55		1.38
1/5/2013 14:00	-2.6	1.38
1/5/2013 14:05		1.38
1/5/2013 14:10		1.38
1/5/2013 14:15	-2.61	1.38
1/5/2013 14:20		1.38
1/5/2013 14:25		1.38
1/5/2013 14:30	-2.61	1.38
1/5/2013 14:35		1.38
1/5/2013 14:40		1.38
1/5/2013 14:45	-2.61	1.38
1/5/2013 14:50		1.38
1/5/2013 14:55		1.38
1/5/2013 15:00	-2.61	1.38
1/5/2013 15:05		1.38
1/5/2013 15:10		1.38
1/5/2013 15:15	-2.61	1.38
1/5/2013 15:20		1.38
1/5/2013 15:25		1.38
1/5/2013 15:30	-2.61	1.38
1/5/2013 15:35		1.38
1/5/2013 15:40		1.38
1/5/2013 15:45	-2.61	1.38
1/5/2013 15:50		1.38
1/5/2013 15:55		1.38
1/5/2013 16:00	-2.61	1.38
1/5/2013 16:05		1.38
1/5/2013 16:10		1.38
1/5/2013 16:15	-2.61	1.38
1/5/2013 16:20		1.38
1/5/2013 16:25		1.38
1/5/2013 16:30	-2.61	1.38
1/5/2013 16:35		1.38
1/5/2013 16:40		1.38
1/5/2013 16:45	-2.61	1.38
1/5/2013 16:50		1.38
1/5/2013 16:55		1.38
1/5/2013 17:00	-2.61	1.38
1/5/2013 17:05		1.38
1/5/2013 17:10		1.38
1/5/2013 17:15	-2.61	1.38
1/5/2013 17:20		1.38
1/5/2013 17:25		1.38
1/5/2013 17:30	-2.61	1.38
1/5/2013 17:35		1.38
1/5/2013 17:40		1.38
1/5/2013 17:45	-2.61	1.38
1/5/2013 17:50		1.38
1/5/2013 17:55		1.38
1/5/2013 18:00	-2.61	1.38
1/5/2013 18:05		1.38
1/5/2013 18:10		1.38
1/5/2013 18:15	-2.61	1.38
1/5/2013 18:20		1.38
1/5/2013 18:25		1.38
1/5/2013 18:30	-2.61	1.38
1/5/2013 18:35		1.38
1/5/2013 18:40		1.38
1/5/2013 18:45	-2.61	1.38
1/5/2013 18:50		1.38
1/5/2013 18:55		1.38
1/5/2013 19:00	-2.62	1.38
1/5/2013 19:05		1.38
1/5/2013 19:10		1.38
1/5/2013 19:15	-2.61	1.38
1/5/2013 19:20		1.38
1/5/2013 19:25		1.38
1/5/2013 19:30	-2.62	1.38
1/5/2013 19:35		1.38
1/5/2013 19:40		1.38
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1/10/2013 21:15	-0.55	3.42
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1/10/2013 21:30	-0.55	3.42
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1/10/2013 21:45	-0.55	3.42
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1/10/2013 23:30	-0.54	3.44
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1/10/2013 23:45	-0.54	3.44
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1/11/2013 0:40		3.45
1/11/2013 0:45	-0.53	3.45
1/11/2013 0:50		3.45
1/11/2013 0:55		3.45
1/11/2013 1:00	-0.53	3.45
1/11/2013 1:05		3.45
1/11/2013 1:10		3.45
1/11/2013 1:15	-0.53	3.45
1/11/2013 1:20		3.45
1/11/2013 1:25		3.45
1/11/2013 1:30	-0.52	3.45
1/11/2013 1:35		3.45
1/11/2013 1:40		3.45
1/11/2013 1:45	-0.52	3.45
1/11/2013 1:50		3.45
1/11/2013 1:55		3.45
1/11/2013 2:00	-0.52	3.45
1/11/2013 2:05		3.45
1/11/2013 2:10		3.45
1/11/2013 2:15	-0.52	3.45
1/11/2013 2:20		3.45
1/11/2013 2:25		3.45
1/11/2013 2:30	-0.52	3.46
1/11/2013 2:35		3.46
1/11/2013 2:40		3.46
1/11/2013 2:45	-0.52	3.46
1/11/2013 2:50		3.46
1/11/2013 2:55		3.46
1/11/2013 3:00	-0.51	3.46
1/11/2013 3:05		3.46
1/11/2013 3:10		3.46
1/11/2013 3:15	-0.51	3.46
1/11/2013 3:20		3.46
1/11/2013 3:25		3.46
1/11/2013 3:30	-0.51	3.46
1/11/2013 3:35		3.46
1/11/2013 3:40		3.46
1/11/2013 3:45	-0.51	3.47
1/11/2013 3:50		3.47
1/11/2013 3:55		3.47
1/11/2013 4:00	-0.49	3.48
1/11/2013 4:05		3.48
1/11/2013 4:10		3.48
1/11/2013 4:15	-0.47	3.5
1/11/2013 4:20		3.5
1/11/2013 4:25		3.5
1/11/2013 4:30	-0.47	3.5
1/11/2013 4:35		3.5
1/11/2013 4:40		3.5
1/11/2013 4:45	-0.47	3.5
1/11/2013 4:50		3.51
1/11/2013 4:55		3.51
1/11/2013 5:00	-0.47	3.51
1/11/2013 5:05		3.51
1/11/2013 5:10		3.51
1/11/2013 5:15	-0.47	3.51
1/11/2013 5:20		3.51
1/11/2013 5:25		3.51
1/11/2013 5:30	-0.47	3.51
1/11/2013 5:35		3.51
1/11/2013 5:40		3.51
1/11/2013 5:45	-0.47	3.51
1/11/2013 5:50		3.51
1/11/2013 5:55		3.51
1/11/2013 6:00	-0.46	3.51
1/11/2013 6:05		3.51
1/11/2013 6:10		3.51
1/11/2013 6:15	-0.46	3.51
1/11/2013 6:20		3.51
1/11/2013 6:25		3.51
1/11/2013 6:30	-0.46	3.51

1/11/2013 6:35		3.51
1/11/2013 6:40		3.51
1/11/2013 6:45	-0.46	3.51
1/11/2013 6:50		3.51
1/11/2013 6:55		3.51
1/11/2013 7:00	-0.46	3.52
1/11/2013 7:05		3.52
1/11/2013 7:10		3.52
1/11/2013 7:15	-0.45	3.52
1/11/2013 7:20		3.52
1/11/2013 7:25		3.52
1/11/2013 7:30	-0.45	3.52
1/11/2013 7:35		3.52
1/11/2013 7:40		3.52
1/11/2013 7:45	-0.45	3.52
1/11/2013 7:50		3.52
1/11/2013 7:55		3.52
1/11/2013 8:00	-0.45	3.52
1/11/2013 8:05		3.52
1/11/2013 8:10		3.53
1/11/2013 8:15	-0.44	3.53
1/11/2013 8:20		3.53
1/11/2013 8:25		3.53
1/11/2013 8:30	-0.43	3.54
1/11/2013 8:35		3.54
1/11/2013 8:40		3.54
1/11/2013 8:45	-0.43	3.54
1/11/2013 8:50		3.55
1/11/2013 8:55		3.55
1/11/2013 9:00	-0.42	3.55
1/11/2013 9:05		3.55
1/11/2013 9:10		3.55
1/11/2013 9:15	-0.42	3.55
1/11/2013 9:20		3.55
1/11/2013 9:25		3.55
1/11/2013 9:30	-0.42	3.55
1/11/2013 9:35		3.55
1/11/2013 9:40		3.55
1/11/2013 9:45	-0.41	3.56
1/11/2013 9:50		3.56
1/11/2013 9:55		3.56
1/11/2013 10:00	-0.41	3.56
1/11/2013 10:05		3.56
1/11/2013 10:10		3.56
1/11/2013 10:15	-0.41	3.56
1/11/2013 10:20		3.56
1/11/2013 10:25		3.56
1/11/2013 10:30	-0.41	3.56
1/11/2013 10:35		3.56
1/11/2013 10:40		3.56
1/11/2013 10:45	-0.41	3.56
1/11/2013 10:50		3.56
1/11/2013 10:55		3.57
1/11/2013 11:00	-0.4	3.57
1/11/2013 11:05		3.57
1/11/2013 11:10		3.57
1/11/2013 11:15	-0.4	3.57
1/11/2013 11:20		3.57
1/11/2013 11:25		3.57
1/11/2013 11:30	-0.4	3.57
1/11/2013 11:35		3.57
1/11/2013 11:40		3.57
1/11/2013 11:45	-0.4	3.57
1/11/2013 11:50		3.57
1/11/2013 11:55		3.57
1/11/2013 12:00	-0.4	3.57
1/11/2013 12:05		3.57
1/11/2013 12:10		3.57
1/11/2013 12:15	-0.4	3.57
1/11/2013 12:20		3.57
1/11/2013 12:25		3.57
1/11/2013 12:30	-0.4	3.57
1/11/2013 12:35		3.58
1/11/2013 12:40		3.58
1/11/2013 12:45	-0.39	3.58
1/11/2013 12:50		3.59
1/11/2013 12:55		3.59
1/11/2013 13:00	-0.38	3.59
1/11/2013 13:05		3.59
1/11/2013 13:10		3.59
1/11/2013 13:15	-0.38	3.59
1/11/2013 13:20		3.59
1/11/2013 13:25		3.6
1/11/2013 13:30	-0.38	3.6
1/11/2013 13:35		3.6
1/11/2013 13:40		3.6
1/11/2013 13:45	-0.37	3.6
1/11/2013 13:50		3.6
1/11/2013 13:55		3.6
1/11/2013 14:00	-0.37	3.6
1/11/2013 14:05		3.61
1/11/2013 14:10		3.61
1/11/2013 14:15	-0.36	3.61
1/11/2013 14:20		3.61
1/11/2013 14:25		3.61
1/11/2013 14:30	-0.36	3.61
1/11/2013 14:35		3.61
1/11/2013 14:40		3.61
1/11/2013 14:45	-0.36	3.61
1/11/2013 14:50		3.61
1/11/2013 14:55		3.61
1/11/2013 15:00	-0.36	3.61
1/11/2013 15:05		3.61
1/11/2013 15:10		3.62
1/11/2013 15:15	-0.36	3.62
1/11/2013 15:20		3.62
1/11/2013 15:25		3.62
1/11/2013 15:30	-0.36	3.62
1/11/2013 15:35		3.62
1/11/2013 15:40		3.62
1/11/2013 15:45	-0.35	3.62
1/11/2013 15:50		3.62
1/11/2013 15:55		3.62
1/11/2013 16:00	-0.35	3.62
1/11/2013 16:05		3.62
1/11/2013 16:10		3.62
1/11/2013 16:15	-0.35	3.62
1/11/2013 16:20		3.63
1/11/2013 16:25		3.63
1/11/2013 16:30	-0.34	3.63
1/11/2013 16:35		3.63
1/11/2013 16:40		3.63
1/11/2013 16:45	-0.34	3.63
1/11/2013 16:50		3.63
1/11/2013 16:55		3.63
1/11/2013 17:00	-0.34	3.63
1/11/2013 17:05		3.63
1/11/2013 17:10		3.63
1/11/2013 17:15	-0.34	3.63
1/11/2013 17:20		3.64
1/11/2013 17:25		3.64
1/11/2013 17:30	-0.33	3.65
1/11/2013 17:35		3.64
1/11/2013 17:40		3.64
1/11/2013 17:45	-0.33	3.64
1/11/2013 17:50		3.64
1/11/2013 17:55		3.64
1/11/2013 18:00	-0.32	3.65
1/11/2013 18:05		3.66
1/11/2013 18:10		3.66
1/11/2013 18:15	-0.32	3.66
1/11/2013 18:20		3.66
1/11/2013 18:25		3.66
1/11/2013 18:30	-0.31	3.66
1/11/2013 18:35		3.66
1/11/2013 18:40		3.66
1/11/2013 18:45	-0.31	3.66
1/11/2013 18:50		3.66
1/11/2013 18:55		3.66
1/11/2013 19:00	-0.31	3.66
1/11/2013 19:05		3.66
1/11/2013 19:10		3.66
1/11/2013 19:15	-0.31	3.66
1/11/2013 19:20		3.66
1/11/2013 19:25		3.66
1/11/2013 19:30	-0.31	3.67
1/11/2013 19:35		3.66
1/11/2013 19:40		3.66
1/11/2013 19:45	-0.31	3.66
1/11/2013 19:50		3.67
1/11/2013 19:55		3.67
1/11/2013 20:00	-0.3	3.67
1/11/2013 20:05		3.66
1/11/2013 20:10		3.67
1/11/2013 20:15	-0.3	3.67
1/11/2013 20:20		3.67
1/11/2013 20:25		3.67
1/11/2013 20:30	-0.3	3.67
1/11/2013 20:35		3.67
1/11/2013 20:40		3.67
1/11/2013 20:45	-0.3	3.67
1/11/2013 20:50		3.67
1/11/2013 20:55		3.67
1/11/2013 21:00	-0.3	3.67
1/11/2013 21:05		3.67
1/11/2013 21:10		3.67
1/11/2013 21:15	-0.3	3.68
1/11/2013 21:20		3.68
1/11/2013 21:25		3.68
1/11/2013 21:30	-0.3	3.68
1/11/2013 21:35		3.68
1/11/2013 21:40		3.68
1/11/2013 21:45	-0.29	3.68
1/11/2013 21:50		3.68
1/11/2013 21:55		3.68
1/11/2013 22:00	-0.29	3.68
1/11/2013 22:05		3.68
1/11/2013 22:10		3.68
1/11/2013 22:15	-0.29	3.68
1/11/2013 22:20		3.68
1/11/2013 22:25		3.68
1/11/2013 22:30	-0.29	3.68
1/11/2013 22:35		3.68
1/11/2013 22:40		3.68
1/11/2013 22:45	-0.29	3.68
1/11/2013 22:50		3.69
1/11/2013 22:55		3.69
1/11/2013 23:00	-0.29	3.68
1/11/2013 23:05		3.69
1/11/2013 23:10		3.69
1/11/2013 23:15	-0.28	3.69
1/11/2013 23:20		3.69
1/11/2013 23:25		3.69
1/11/2013 23:30	-0.28	3.69
1/11/2013 23:35		3.69
1/11/2013 23:40		3.69
1/11/2013 23:45	-0.28	3.69
1/11/2013 23:50		3.69
1/11/2013 23:55		3.69
1/12/2013 0:00	-0.28	3.69

Ardaman & Associates, Inc.

Geotechnical, Environmental and
Materials Consultants

11 January 2013

Tetra Tech BAS
Methane Gas Group
3822 E. University Drive
Phoenix, Arizona 85034

Attention: Keith A. Johnson, P. E.

Geotechnical Laboratory Tests on
Furnished Soil Samples
Texas Brine Sinkhole Containment
Bayou Corne
Assumption Parish, Louisiana
AAI Project No. 12-2910

Gentlemen:

This letter report contains the results of geotechnical laboratory tests performed on soil samples furnished to our laboratory in moisture proof, plastic bags (8) and 5 gallon buckets (2). The samples were labeled as follows:

BORING NO.	TBC-2	TBC-3
DEPTH IN FEET	109-110	12-16
	110-115*	24-28
	114-115	40-44
	125-130*	56-58
	129-130	76-80

*5 Gallon Bucket

It was requested that the following tests be performed and the results of these laboratory tests are given on the attachment to this letter.

- Moisture Content (ASTM D-2216-05-10)
- Hydrometer (ASTM D-4221.99)
- Unified Soil Classification System (ASTM D-2487)

1305 Distributors Row, Suite I, Jefferson, Louisiana 70123 Phone (504) 835-2593 Fax (504) 835-2982
Louisiana: Alexandria, Baton Rouge, Monroe, New Orleans, Shreveport
Florida: Bartow, Cocoa, Fort Myers, Miami, Orlando, Port Charlotte, Port St. Lucie, Sarasota, Tallahassee, Tampa, West Palm Beach

- Atterberg Limits – LL, PL & PI (ASTM D-4318
- Particle Size Analyses (ASTM D-422)
- Hydraulic Conductivity (ASTM D-5084)

It is hoped that the results of the laboratory tests are self-explanatory. If there are any questions or if further information is needed, please advise.

Yours very truly,

ARDAMAN & ASSOCIATES, INC.

REDA M. BAKEER, Ph.D., P.E.
Vice President/Chief Engineer

Texas Brine
LABORATORY TEST RESULTS
TABLE 1

			ASTM D2216			ASTM D854	ASTM D5084	ASTM D4972	ASTM D2974	ASTM D4318			ASTM D1140	ASTM D2487
Date Tested	Sample ID	Depth (ft.)	Moisture Content (%)	Dry Density (lbs./cu.ft.)	Total Porosity (decimal)	Specific Gravity	Permeability (cm/sec)	Soil pH	Organic Content (%)	Atterberg Limits			Material finer than No. 200 Sieve	Classification
										LL	PL	PI		
1/9/2013	TBC-2	109-110	24.9										41.5	Gray CLAYEY SAND (SC)
1/9/2013	TBC-2	110-115	29.7										26.8	Gray CLAYEY SAND (SC)
1/9/2013	TBC-2	110.1	22.6	97.0			$2.8x10^{-5}$							Perm 1 -- Gray SAND (SP)
1/9/2013	TBC-2	110.2	22.6	128.0			$4.5x10^{-5}$							Perm 2 -- Gray SAND (SP)
1/9/2013	TBC-2	110.3	22.6	85.4			$5.0x10^{-5}$							Perm 3 -- Gray SAND (SP)
1/9/2013	TBC-2	114-115	16.2										4.2	Gray SAND (SP)
1/9/2013	TBC-2	125-130	26.5							49	20	29	88.1	Gray SANDY or SILTY CLAY (CL)
1/9/2013	TBC-2	125.1	28.6	95.8			$6.7x10^{-8}$							Perm 1 -- Gray SILTY CLAY (CL)
1/9/2013	TBC-2	125.2	28.6	97.9			$6.8x10^{-8}$							Perm 2 -- Gray SILTY CLAY (CL)
1/9/2013	TBC-2	129-130	25.1										91.0	Gray CLAYEY SILT (ML)
1/9/2013	TBC-3	12-16	86.5							124	35	89	97.8	Gray CLAY w/trace sand (CH)
1/9/2013	TBC-3	24-28	36.8										26.2	Gray CLAYEY SAND (SC)

NOTE:
(1) FOC = Organic Content divided by 174.

Ardaman & Associates, Inc.

Project: Texas Brine

Client: Ardaman & Associates, Inc. Jefferson, Louisiana

File No.: 12-84-2910

Date: 1/11/2013

Texas Brine
LABORATORY TEST RESULTS
TABLE 1

			ASTM D2216			ASTM D854	ASTM D5084	ASTM D4972	ASTM D2974	ASTM D4318			ASTM D1140	ASTM D2487
Date Tested	Sample ID	Depth (ft.)	Moisture Content (%)	Dry Density (lbs./cu.ft.)	Total Porosity (decimal)	Specific Gravity	Permeability (cm/sec)	Soil pH	Organic Content (%)	Atterberg Limits			Material finer than No. 200 Sieve	Classification
										LL	PL	PI		
1/9/2013	TBC-3	40-44	47.4							81	26	55	97.4	Gray CLAY w/trace sand (CH)
1/9/2013	TBC-3	56-58	71.9							90	21	69	99.0	Gray CLAY (CH)
1/9/2013	TBC-3	76-80	65.3							96	29	67	100.0	Gray CLAY (CH)

NOTE:
(1) FOC = Organic Content divided by 174.

Ardaman & Associates, Inc.

Project: Texas Brine

Client: Ardaman & Associates, Inc. Jefferson, Louisiana

File No.: 12-84-2910

Date: 1/11/2013

ISOTECH
ISOTECH LABORATORIES INC

ANALYSIS REPORT

Water Analysis

Lab Number: 318580 Job Number: 19947

Submitter Sample Name: SW-5 (100 ft)

Submitter Sample ID:

Submitter Job #:

Company: Texas Brine Company, LLC

Field or Site: 80-05 / Assumption Parish

Location:

Depth/Formation:

Container Type: Amber Bottle

Sample Collected: 10/11/2012 Results Reported: 12/28/2012

δD of water	----------	-22.2 ‰ relative to VSMOW
$\delta^{18}O$ of water	----------	-3.81 ‰ relative to VSMOW
Tritium content of water	----------	1.86 ± 0.19 TU
$\delta^{13}C$ of DIC	----------	na
^{14}C content of DIC	----------	na
$\delta^{15}N$ of nitrate	----------	na
$\delta^{18}O$ of nitrate	----------	na
$\delta^{34}S$ of sulfate	----------	na
$\delta^{18}O$ of sulfate	----------	na

Remarks:

ISOTECH
ISOTECH LABORATORIES INC

ANALYSIS REPORT

Water Analysis

Lab Number: 318581 Job Number: 19947

Submitter Sample Name: SW-5 (50 ft)

Submitter Sample ID:

Submitter Job #:

Company: Texas Brine Company, LLC

Field or Site: 80-05 / Assumption Parish

Location:

Depth/Formation:

Container Type: Amber Bottle

Sample Collected: 10/11/2012 Results Reported: 12/28/2012

δD of water	----------	-20.7 ‰ relative to VSMOW
$\delta^{18}O$ of water	----------	-3.59 ‰ relative to VSMOW
Tritium content of water	----------	2.69 ± 0.20 TU
$\delta^{13}C$ of DIC	----------	na
^{14}C content of DIC	----------	na
$\delta^{15}N$ of nitrate	----------	na
$\delta^{18}O$ of nitrate	----------	na
$\delta^{34}S$ of sulfate	----------	na
$\delta^{18}O$ of sulfate	----------	na

Remarks:

ISOTECH
ISOTECH LABORATORIES INC

ANALYSIS REPORT

Water Analysis

Lab Number: 318582 Job Number: 19947

Submitter Sample Name: SW-5 (25 ft)

Submitter Sample ID:

Submitter Job #:

Company: Texas Brine Company, LLC

Field or Site: 80-05 / Assumption Parish

Location:

Depth/Formation:

Container Type: Amber Bottle

Sample Collected: 10/11/2012 Results Reported: 12/28/2012

δD of water	----------	-23.2 ‰ relative to VSMOW
$\delta^{18}O$ of water	----------	-3.69 ‰ relative to VSMOW
Tritium content of water	----------	2.68 ± 0.20 TU
$\delta^{13}C$ of DIC	----------	na
^{14}C content of DIC	----------	na
$\delta^{15}N$ of nitrate	----------	na
$\delta^{18}O$ of nitrate	----------	na
$\delta^{34}S$ of sulfate	----------	na
$\delta^{18}O$ of sulfate	----------	na

Remarks:

ISOTECH
ISOTECH LABORATORIES INC

ANALYSIS REPORT

Water Analysis

Lab Number: 318583 Job Number: 19947

Submitter Sample Name: SW-5 (10 ft)

Submitter Sample ID:

Submitter Job #:

Company: Texas Brine Company, LLC

Field or Site: 80-05 / Assumption Parish

Location:

Depth/Formation:

Container Type: Amber Bottle

Sample Collected: 10/11/2012 Results Reported: 12/28/2012

δD of water	----------	-21.9 ‰ relative to VSMOW
$\delta^{18}O$ of water	----------	-3.61 ‰ relative to VSMOW
Tritium content of water	----------	2.30 ± 0.23 TU
$\delta^{13}C$ of DIC	----------	na
^{14}C content of DIC	----------	na
$\delta^{15}N$ of nitrate	----------	na
$\delta^{18}O$ of nitrate	----------	na
$\delta^{34}S$ of sulfate	----------	na
$\delta^{18}O$ of sulfate	----------	na

Remarks:

ISOTECH
ISOTECH LABORATORIES INC

ANALYSIS REPORT

Water Analysis

Lab Number: 318584 Job Number: 19947

Submitter Sample Name: SW-5 (2 ft)

Submitter Sample ID:

Submitter Job #:

Company: Texas Brine Company, LLC

Field or Site: 80-05 / Assumption Parish

Location:

Depth/Formation:

Container Type: Amber Bottle

Sample Collected: 10/11/2012 Results Reported: 12/28/2012

δD of water	----------	-21.3 ‰ relative to VSMOW
$\delta^{18}O$ of water	----------	-3.62 ‰ relative to VSMOW
Tritium content of water	----------	2.37 ± 0.20 TU
$\delta^{13}C$ of DIC	----------	na
^{14}C content of DIC	----------	na
$\delta^{15}N$ of nitrate	----------	na
$\delta^{18}O$ of nitrate	----------	na
$\delta^{34}S$ of sulfate	----------	na
$\delta^{18}O$ of sulfate	----------	na

Remarks:

Ardaman & Associates, Inc.

Geotechnical, Environmental and
Materials Consultants

11 January 2013

Tetra Tech BAS
Methane Gas Group
3822 E. University Drive
Phoenix, Arizona 85034

Attention: Keith A. Johnson, P. E.

Geotechnical Laboratory Tests on
Furnished Soil Samples
Texas Brine Sinkhole Containment
Bayou Corne
Assumption Parish, Louisiana
AAI Project No. 12-2910

Gentlemen:

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*5 Gallon Bucket

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- Hydrometer (ASTM D-4221.99)
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- Atterberg Limits – LL, PL & PI (ASTM D-4318
- Particle Size Analyses (ASTM D-422)
- Hydraulic Conductivity (ASTM D-5084)

It is hoped that the results of the laboratory tests are self-explanatory. If there are any questions or if further information is needed, please advise.

Yours very truly,

ARDAMAN & ASSOCIATES, INC.

REDA M. BAKEER, Ph.D., P.E.
Vice President/Chief Engineer

Texas Brine
LABORATORY TEST RESULTS
TABLE 1

			ASTM D2216			ASTM D854	ASTM D5084	ASTM D4972	ASTM D2974	ASTM D4318			ASTM D1140	ASTM D2487
Date Tested	Sample ID	Depth (ft.)	Moisture Content (%)	Dry Density (lbs./cu.ft.)	Total Porosity (decimal)	Specific Gravity	Permeability (cm/sec)	Soil pH	Organic Content (%)	Atterberg Limits			Material finer than No. 200 Sieve	Classification
										LL	PL	PI		
1/9/2013	TBC-2	109-110	24.9										41.5	Gray CLAYEY SAND (SC)
1/9/2013	TBC-2	110-115	29.7										26.8	Gray CLAYEY SAND (SC)
1/9/2013	TBC-2	110.1	22.6	97.0			$2.8x10^{-5}$							Perm 1 -- Gray SAND (SP)
1/9/2013	TBC-2	110.2	22.6	128.0			$4.5x10^{-5}$							Perm 2 -- Gray SAND (SP)
1/9/2013	TBC-2	110.3	22.6	85.4			$5.0x10^{-5}$							Perm 3 -- Gray SAND (SP)
1/9/2013	TBC-2	114-115	16.2										4.2	Gray SAND (SP)
1/9/2013	TBC-2	125-130	26.5							49	20	29	88.1	Gray SANDY or SILTY CLAY (CL)
1/9/2013	TBC-2	125.1	28.6	95.8			$6.7x10^{-8}$							Perm 1 -- Gray SILTY CLAY (CL)
1/9/2013	TBC-2	125.2	28.6	97.9			$6.8x10^{-8}$							Perm 2 -- Gray SILTY CLAY (CL)
1/9/2013	TBC-2	129-130	25.1										91.0	Gray CLAYEY SILT (ML)
1/9/2013	TBC-3	12-16	86.5							124	35	89	97.8	Gray CLAY w/trace sand (CH)
1/9/2013	TBC-3	24-28	36.8										26.2	Gray CLAYEY SAND (SC)

NOTE:
(1) FOC = Organic Content divided by 174.

Ardaman & Associates, Inc.

Project: Texas Brine

Client: Ardaman & Associates, Inc. Jefferson, Louisiana

File No.: 12-84-2910

Date: 1/11/2013

Texas Brine
LABORATORY TEST RESULTS
TABLE 1

			ASTM D2216			ASTM D854	ASTM D5084	ASTM D4972	ASTM D2974	ASTM D4318			ASTM D1140	ASTM D2487
Date Tested	Sample ID	Depth (ft.)	Moisture Content (%)	Dry Density (lbs./cu.ft.)	Total Porosity (decimal)	Specific Gravity	Permeability (cm/sec)	Soil pH	Organic Content (%)	Atterberg Limits			Material finer than No. 200 Sieve	Classification
										LL	PL	PI		
1/9/2013	TBC-3	40-44	47.4							81	26	55	97.4	Gray CLAY w/trace sand (CH)
1/9/2013	TBC-3	56-58	71.9							90	21	69	99.0	Gray CLAY (CH)
1/9/2013	TBC-3	76-80	65.3							96	29	67	100.0	Gray CLAY (CH)

NOTE:
(1) FOC = Organic Content divided by 174.

Ardaman & Associates, Inc.

Project: Texas Brine

Client: Ardaman & Associates, Inc. Jefferson, Louisiana

File No.: 12-84-2910

Date: 1/11/2013

ME&A Daily Action Summary

January 11, 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

ME&A Daily Action Summary

January 12, 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

ME&A Daily Action Summary

January 13, 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: 1/11/2013
Work Order # 80-05

Health and Safety Meeting ☐ YES ☐ NO

Weather: 65 F Raining Overcast

Personnel	Company	Job Title
Patrick Ritchie	MP&A	Environmental Scientist

Site Activities: Start Time 10:00 End Time 12:00

Equipment On-site: None

Daily Activity:
Measure water level for the industrial water wells
Gary Hill demonstrated reading well pressure on TBC-3 and BC-2

Estimated time of completion:
On-going

Proposed schedule:
Conduct in-situ monitoring surface water transect and industrial water well locations 1/15/2013
Measure water level for the industrial water wells 1/15/2013
Collect groundwater laboratory samples from TBC Geoprobe location #3 when accessible
Measure pressure and water level at TBC Geoprobe locations 1/14/2013
Collect laboratory samples from the surface water transect location 1/15/2013

Estimated time of completion:
On-going

Initials: PMR

Michael Pisani & Associates

Texas Brine, L.L.C.
Assumption Parish, Louisiana
Daily Field Report

Report By: Patrick Ritchie
Company: MP&A

Date: 1/13/2013
Work Order # 80-05

Health and Safety Meeting ☐ YES ☐ NO

Weather: _____

Personnel	Company	Job Title

Site Activities: Start Time _____ End Time _____

Equipment On-site: None

Daily Activity:
NO FIELD ACTIVITIES 1/12/2013
NO FIELD ACTIVITIES 1/13/2013

Estimated time of completion:
On-going

Proposed schedule:
Conduct in-situ monitoring surface water transect and industrial water well locations 1/15/2013
Measure water level for the industrial water wells 1/15/2013
Collect groundwater laboratory samples from TBC Geoprobe location #3 when accessible
Measure pressure and water level at TBC Geoprobe locations 1/14/2013
Collect laboratory samples from the surface water transect location 1/15/2013

Estimated time of completion:
On-going

Initials: PMR