2014 ANNUAL GROUNDWATER REPORT

James F. Bell #1E
Meter Code: 94715
T30N, R13W, Sec10, Unit P

SITE DETAILS

Site Location: Latitude: 36.822568 N, Longitude: -108.187110 W
Land Type: Federal
Operator: XTO Energy, Inc.

SITE BACKGROUND

- **Site Assessment:** 3/94
- **Excavation:** 4/94

James F. Bell #1E (Site) is being managed pursuant to the procedures set forth in the document entitled, "Remediation Plan for Groundwater Encountered during Pit Closure Activities" (Remediation Plan, El Paso Natural Gas Company / El Paso Field Services Company, 1995). This Remediation Plan was conditionally approved by the New Mexico Oil Conservation Division (OCD) in correspondence dated November 30, 1995; and the OCD approval conditions were adopted into El Paso CGP Company, LLC's (EPCGP's) program methods. Currently, the Site is operated by XTO Energy, Inc. and is active.

The Site is located on Federal land. Various site investigations have occurred from 1994 through 1999. Monitoring wells were installed in 1995 (MW-1 through MW-4), borings were also advanced in 1995 and 1999 to install monitoring wells but were refused. In 1997 (temporary monitoring wells PZ-01 through PZ-05) were installed and removed. Free product recovery has been periodically conducted since 1997. Currently, groundwater sampling is conducted on a semi-annual basis and free product was observed in 2014.

SUMMARY OF 2014 ACTIVITIES

On April 5 and October 21, 2014, water levels were gauged at MW-1, MW-2, MW-3, and MW-4 and groundwater samples were collected from each well that did not contain free product using HydraSleeve™ (HydraSleeve) no-purge passive groundwater sampling devices. The HydraSleeves were set during the previous sampling event approximately 0.5 foot above termination depth of the monitoring wells using a suspension tether and stainless steel weights to collect a sample from the screened interval. Groundwater samples were placed into laboratory-supplied sample containers, packed on ice, and shipped under standard chain-of-custody protocols to TestAmerica Laboratories, Inc. in Corpus Christi, Texas where they were analyzed for benzene, toluene, ethylbenzene, and total xylenes (BTEX). Additional field parameters were collected including dissolved oxygen, temperature, conductivity, pH, and oxidation-reduction potential (ORP) using a YSI multi-parameter instrument, if free product was not present. The water remaining in the HydraSleeves was combined in a waste container and taken to Basin Disposal, Inc. for disposal.

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SUMMARY TABLES

Historic analytical and water level data are summarized in Table 1. When free product was present, static water level elevations were corrected for measurable thicknesses of free product (specific gravity of 0.75).

SITE MAPS

Groundwater analytical maps (Figures 1 and 3) and groundwater elevation contour maps (Figures 2 and 4) summarize the results of the 2014 groundwater sampling and gauging events.

ANALYTICAL LAB REPORTS

The groundwater analytical lab reports are included as Appendix A.

RESULTS

- The groundwater flow direction is generally to the north-northeast at the Site (see Figures 2 and 4).

- Approximately 1.56 feet of free product was detected in MW-1 during the April 5, 2014 sampling event. Approximately 1.10 feet of free product was measured on October 21, 2014. Groundwater samples were not collected during the sampling events due to the presence of free product.

- BTEX constituents were not detected in groundwater samples collected from MW-2 during the 2014 sampling events.

- The benzene and total xylene concentrations in groundwater samples collected from MW-3 remained above the New Mexico Water Quality Control Commission (NMWQCC) standards during the 2014 sampling events. Ethylbenzene concentrations remained below the NMWQCC standard and toluene was not detected in 2014.

- BTEX constituents were not detected or were at concentrations below the reporting limit (J-flagged) in groundwater samples collected from MW-4 during the 2014 sampling events.

PLANNED FUTURE ACTIVITIES

Installation of additional monitoring wells is planned, after establishment of a right-of-way with the United States Bureau of Land Management. The wells will be installed to further assess the extent of dissolved-phase hydrocarbons and to confirm and/or further define the groundwater gradient at the Site. MW-1, MW-2, MW-3, MW-4, and the newly-installed monitoring wells will be sampled on a semi-annual basis.

TABLE

TABLE 1 – GROUNDWATER ANALYTICAL AND WATER LEVEL RESULTS

TABLE 1 - GROUNDWATER ANALYTICAL RESULTS

James F. Bell #1E								
Location	**Date**	**Benzene (µg/L)**	**Toluene (µg/L)**	**Ethylbenzene (µg/L)**	**Total Xylenes (µg/L)**	**Depth to Water (ft.)**	**Depth to LNAPL (ft.)**	**LNAPL Thickness (ft.)**
NMWQCC Standards:		10	750	750	620	NA	NA	NA
MW-1	10/17/95	11200	26400	1540	16500	26.67	-	-
MW-1	12/11/95	10800	15400	1870	18400	26.23	-	-
MW-1	12/04/96	10300	33200	1400	15200	28.00	26.16	1.84
MW-1	03/05/97	9850	33400	1370	15200	28.47	26.47	2.00
MW-1	09/29/00					29.09	27.29	1.80
MW-1	02/26/01					29.06	27.61	1.45
MW-1	03/14/01					29.60	27.49	2.11
MW-1	04/06/01					29.08	27.67	1.41
MW-1	06/22/01					29.57	28.10	1.47
MW-1	07/11/01					28.95	27.95	1.00
MW-1	07/26/01					29.51	28.21	1.30
MW-1	08/16/01					28.49	28.40	0.09
MW-1	09/06/01					28.46	28.41	0.05
MW-1	09/17/01					28.46	28.19	0.27
MW-1	12/13/01					28.50	28.20	0.30
MW-1	01/08/02					28.54	28.25	0.29
MW-1	02/28/02					28.62	28.31	0.31
MW-1	03/28/02					28.64	28.51	0.13
MW-1	09/13/02					31.17	29.20	1.97
MW-1	09/19/02					30.82	28.45	2.37
MW-1	12/04/02					29.07	28.37	0.70
MW-1	04/18/03					29.29	28.44	0.85
MW-1	06/19/03					29.41	29.19	0.22
MW-1	09/22/03					28.64	28.31	0.33
MW-1	12/15/03					28.24	28.04	0.20
MW-1	02/27/04					28.21	28.19	0.02
MW-1	03/16/04					28.13	28.08	0.05
MW-1	06/09/04					28.27	28.03	0.24
MW-1	07/26/04					28.48	27.95	0.53
MW-1	09/10/04					27.89	27.82	0.07
MW-1	12/14/04					27.68	27.68	0.00
MW-1	12/18/04					27.71	27.67	0.04
MW-1	03/17/05					27.83	27.65	0.18
MW-1	04/15/05					28.03	27.72	0.31
MW-1	05/17/05					27.78	27.35	0.43
MW-1	06/23/05					27.23	27.21	0.02
MW-1	09/12/05					26.56	26.52	0.04
MW-1	09/13/05					26.56	-	-
MW-1	10/28/05					26.27	-	-
MW-1	11/18/05					26.26	-	-
MW-1	12/22/05					26.09	-	-
MW-1	01/18/06					26.02	-	-
MW-1	02/21/06					26.14	-	-
MW-1	03/25/06					26.20	-	-
MW-1	04/28/06					26.34	-	-
MW-1	05/23/06					26.39	-	-
MW-1	06/14/06					26.33	-	-
MW-1	07/21/06					26.38	-	-
MW-1	08/24/06					26.29	-	-
MW-1	09/25/06					26.30	-	-
MW-1	12/27/06					26.08	-	-
MW-1	03/26/07					27.28	-	-
MW-1	06/11/07	<1	<1	1360	<2	26.47	-	-
MW-1	09/18/07					26.38	-	-
MW-1	03/04/08					26.66	-	-
MW-1	06/12/08	10000	29700	1550	16800	26.60	-	-
MW-1	09/08/08					26.29	-	-

TABLE 1 - GROUNDWATER ANALYTICAL RESULTS

James F. Bell #1E								
Location	**Date**	**Benzene (µg/L)**	**Toluene (µg/L)**	**Ethylbenzene (µg/L)**	**Total Xylenes (µg/L)**	**Depth to Water (ft.)**	**Depth to LNAPL (ft.)**	**LNAPL Thickness (ft.)**
NMWQCC Standards:		10	750	750	620	NA	NA	NA
MW-1	12/03/08					26.31	-	-
MW-1	03/02/09					26.58	-	-
MW-1	06/03/09	7120	25200	1270	13800	26.86	-	-
MW-1	08/27/09					27.03	-	-
MW-1	11/02/09					26.92	-	-
MW-1	02/11/10					27.15	-	-
MW-1	05/26/10	8100	26100	1300	14300	27.07	26.95	0.12
MW-1	09/30/10					26.40	-	-
MW-1	11/01/10					26.14	-	-
MW-1	02/02/11					26.18	-	-
MW-1	05/10/11	5630	22600	1630	17600	26.22	-	-
MW-1	09/26/11					25.39	-	-
MW-1	11/01/11					26.26	-	-
MW-1	02/16/12					26.70	-	-
MW-1	05/08/12	7490	25400	1390	15000	26.80	-	-
MW-1	06/07/13	8200	31000	1100	15000	28.77	27.36	1.41
MW-1	09/12/13					28.95	27.41	1.54
MW-1	12/13/13					28.62	27.29	1.33
MW-1	04/05/14					28.98	27.42	1.56
MW-1	10/21/14					28.50	27.40	1.10

TABLE 1 - GROUNDWATER ANALYTICAL RESULTS

James F. Bell #1E								
Location	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Depth to Water (ft.)	Depth to LNAPL (ft.)	LNAPL Thickness (ft.)
NMWQCC Standards:		10	750	750	620	NA	NA	NA
MW-2	12/11/95	94.7	1.4	11.3	31.1	25.32	-	-
MW-2	12/04/96	2.52	<1	<1	<3	26.09	-	-
MW-2	03/05/97	1.49	<1	<1	<3	26.30	-	-
MW-2	10/11/00	200	<0.5	81	28	26.41	-	-
MW-2	04/06/01					26.64	-	-
MW-2	06/05/01					26.81	-	-
MW-2	06/25/01	160	<0.5	77	22	26.79	-	-
MW-2	12/21/01					26.79	-	-
MW-2	05/15/02					27.02	-	-
MW-2	06/05/02	53	<0.5	50	9.7	27.06	-	-
MW-2	09/06/02					27.09	-	-
MW-2	09/13/02					27.07	-	-
MW-2	12/18/02					27.09	-	-
MW-2	06/19/03	6.5	<1	17.8	1.7	27.04	-	-
MW-2	09/22/03					26.82	-	-
MW-2	12/15/03					26.42	-	-
MW-2	03/16/04					26.33	-	-
MW-2	06/09/04	<0.5	<0.5	<0.5	<1	26.34	-	-
MW-2	09/10/04					26.17	-	-
MW-2	12/14/04					26.13	-	-
MW-2	03/17/05					26.14	-	-
MW-2	06/23/05	<1	<1	<1	<2	25.81	-	-
MW-2	09/13/05					25.54	-	-
MW-2	10/28/05					26.43	-	-
MW-2	12/22/05					25.35	-	-
MW-2	03/25/06					25.53	-	-
MW-2	06/14/06	<1	<1	<1	<2	25.66	-	-
MW-2	09/25/06					25.59	-	-
MW-2	12/27/06					25.17	-	-
MW-2	03/26/07					25.40	-	-
MW-2	06/11/07	<1	<1	<1	<2	25.48	-	-
MW-2	09/18/07					25.47	-	-
MW-2	03/04/08					26.72	-	-
MW-2	06/12/08	<1	<1	<1	<2	25.62	-	-
MW-2	09/08/08					26.35	-	-
MW-2	12/03/08					25.45	-	-
MW-2	03/02/09					25.70	-	-
MW-2	06/03/09	0.3 J	2.1	<1	0.84 J	25.95	-	-
MW-2	08/27/09					25.97	-	-
MW-2	11/02/09					25.99	-	-
MW-2	02/11/10					26.17	-	-
MW-2	05/26/10					26.07	-	-
MW-2	09/30/10					25.42	-	-
MW-2	11/01/10					25.28	-	-
MW-2	02/02/11					24.32	-	-
MW-2	05/10/11					25.43	-	-
MW-2	09/26/11					25.52	-	-
MW-2	11/01/11					25.56	-	-
MW-2	02/16/12					25.82	-	-
MW-2	05/08/12					26.02	-	-
MW-2	06/07/13	<0.14	<0.30	<0.20	<0.23	26.53	-	-
MW-2	09/12/13	<0.14	<0.30	<0.20	<0.23	26.68	-	-
MW-2	12/13/13	<0.20	<0.38	<0.20	<0.65	26.38	-	-
MW-2	04/05/14	<0.20	<0.38	<0.20	<0.65	26.37	-	-
MW-2	10/21/14	<0.38	<0.70	<0.50	<1.6	26.45	-	-

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Location	**Date**	**Benzene (µg/L)**	**Toluene (µg/L)**	**Ethylbenzene (µg/L)**	**Total Xylenes (µg/L)**	**Depth to Water (ft.)**	**Depth to LNAPL (ft.)**	**LNAPL Thickness (ft.)**
NMWQCC Standards:		10	750	750	620	NA	NA	NA
MW-3	12/11/95	1790	10400	1010	8070	26.52	-	-
MW-3	12/04/96	4210	19200	1140	11700	27.72	27.16	0.56
MW-3	03/05/97	4000	19200	1280	13600	28.87	27.09	1.78
MW-3	03/12/01					29.18	27.84	1.34
MW-3	04/06/01					29.27	27.86	1.41
MW-3	06/05/01					29.48	28.06	1.42
MW-3	06/14/01					29.41	27.98	1.43
MW-3	06/28/01					29.57	28.15	1.42
MW-3	07/06/01					29.41	28.06	1.35
MW-3	07/11/01					29.61	28.26	1.35
MW-3	07/20/01					29.43	28.13	1.30
MW-3	08/02/01					29.50	28.22	1.28
MW-3	08/08/01					29.40	28.16	1.24
MW-3	08/16/01					29.46	28.21	1.25
MW-3	08/20/01					29.61	28.31	1.30
MW-3	08/31/01					29.47	28.17	1.30
MW-3	09/06/01					29.62	28.31	1.31
MW-3	09/17/01					29.62	28.34	1.28
MW-3	09/25/01					29.48	28.22	1.26
MW-3	10/03/01					29.47	28.25	1.22
MW-3	10/11/01					29.50	28.23	1.27
MW-3	12/04/01					29.89	28.55	1.34
MW-3	12/13/01					29.89	28.54	1.35
MW-3	12/21/01					29.63	28.36	1.27
MW-3	12/28/01					29.68	28.43	1.25
MW-3	01/04/02					29.63	28.39	1.24
MW-3	01/08/02					29.59	28.41	1.18
MW-3	01/17/02					30.00	28.70	1.30
MW-3	01/23/02					28.71	28.70	0.01
MW-3	01/31/02					28.70	28.68	0.02
MW-3	02/07/02					30.00	28.70	1.30
MW-3	02/14/02					28.80	27.80	1.00
MW-3	02/20/02					28.76	28.74	0.02
MW-3	02/28/02					29.82	28.64	1.18
MW-3	03/06/02					29.72	28.55	1.17
MW-3	03/11/02					29.90	28.72	1.18
MW-3	03/21/02					29.82	28.61	1.21
MW-3	03/28/02					29.74	28.57	1.17
MW-3	04/04/02					29.84	28.66	1.18
MW-3	04/12/02					30.28	28.93	1.35
MW-3	04/19/02					30.25	28.93	1.32
MW-3	04/25/02					30.24	28.93	1.31
MW-3	05/03/02					28.96	-	-
MW-3	05/15/02					29.86	28.69	1.17
MW-3	05/24/02					29.53	28.53	1.00
MW-3	05/31/02					29.96	28.72	1.24
MW-3	06/07/02					29.91	28.72	1.19
MW-3	06/14/02					30.31	28.97	1.34
MW-3	06/21/02					30.54	29.32	1.22
MW-3	06/27/02					30.65	29.30	1.35
MW-3	07/02/02					30.56	29.25	1.31
MW-3	07/11/02					30.66	29.31	1.35
MW-3	07/22/02					30.54	29.17	1.37
MW-3	07/25/02					30.40	29.25	1.15
MW-3	07/31/02					30.38	29.04	1.34

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James F. Bell #1E								
Location	**Date**	**Benzene (µg/L)**	**Toluene (µg/L)**	**Ethylbenzene (µg/L)**	**Total Xylenes (µg/L)**	**Depth to Water (ft.)**	**Depth to LNAPL (ft.)**	**LNAPL Thickness (ft.)**
NMWQCC Standards:		10	750	750	620	NA	NA	NA
MW-3	08/08/02					30.15	29.13	1.03
MW-3	08/16/02					35.25	29.30	5.95
MW-3	08/22/02					30.07	28.74	1.33
MW-3	08/28/02					29.75	28.78	0.97
MW-3	09/06/02					30.03	28.98	1.06
MW-3	09/13/02					29.29	28.63	0.66
MW-3	09/19/02					30.43	29.42	1.02
MW-3	09/25/02					30.28	29.40	0.88
MW-3	10/04/02					30.19	29.35	0.85
MW-3	10/10/02					30.32	29.46	0.86
MW-3	10/15/02					30.29	29.50	0.79
MW-3	10/23/02					30.32	29.66	0.66
MW-3	10/30/02					30.58	29.32	1.26
MW-3	11/08/02					30.58	29.36	1.22
MW-3	11/21/02					30.45	29.45	1.00
MW-3	12/04/02					30.47	29.48	0.99
MW-3	12/10/02					30.23	29.48	0.75
MW-3	12/18/02					30.28	29.38	0.90
MW-3	12/27/02					30.21	29.45	0.76
MW-3	01/07/03					30.26	29.45	0.81
MW-3	01/22/03					29.46	28.75	0.71
MW-3	01/29/03					29.34	28.76	0.58
MW-3	02/05/03					28.77	28.29	0.48
MW-3	02/12/03					29.33	28.78	0.55
MW-3	02/20/03					29.33	28.77	0.56
MW-3	02/28/03					29.31	28.80	0.51
MW-3	03/02/03					29.27	28.81	0.46
MW-3	03/06/03					29.31	28.79	0.52
MW-3	03/19/03					29.30	28.82	0.48
MW-3	03/26/03					29.33	28.82	0.51
MW-3	04/02/03					29.33	28.80	0.53
MW-3	04/10/03					29.32	28.84	0.48
MW-3	04/18/03					29.29	28.85	0.44
MW-3	04/28/03					29.19	28.86	0.33
MW-3	05/07/03					29.25	28.83	0.42
MW-3	05/13/03					29.27	28.85	0.42
MW-3	05/21/03					29.29	28.86	0.43
MW-3	05/27/03					29.21	28.85	0.36
MW-3	06/03/03					29.23	28.84	0.39
MW-3	06/09/03					29.20	28.84	0.36
MW-3	06/16/03					29.20	28.82	0.38
MW-3	06/19/03					29.16	28.86	0.30
MW-3	06/23/03					29.23	28.83	0.40
MW-3	07/01/03					29.85	29.78	0.07
MW-3	07/10/03					30.39	29.96	0.43
MW-3	07/15/03					30.29	30.12	0.17
MW-3	07/21/03					30.24	30.11	0.13
MW-3	07/29/03					30.14	29.89	0.25
MW-3	08/04/03					29.94	29.62	0.32
MW-3	08/11/03					30.09	30.02	0.07
MW-3	08/18/03					30.09	30.01	0.08
MW-3	08/25/03					30.09	30.00	0.09
MW-3	09/02/03					30.12	30.03	0.09
MW-3	09/08/03					30.15	30.05	0.10
MW-3	09/15/03					30.05	29.97	0.08

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Location	**Date**	**Benzene (µg/L)**	**Toluene (µg/L)**	**Ethylbenzene (µg/L)**	**Total Xylenes (µg/L)**	**Depth to Water (ft.)**	**Depth to LNAPL (ft.)**	**LNAPL Thickness (ft.)**
NMWQCC Standards:		10	750	750	620	NA	NA	NA
MW-3	09/22/03					29.14	28.70	0.44
MW-3	09/29/03					29.98	29.95	0.03
MW-3	10/06/03					30.00	29.94	0.06
MW-3	10/13/03					29.95	29.89	0.06
MW-3	10/20/03					29.86	29.80	0.06
MW-3	10/27/03					29.85	29.80	0.05
MW-3	11/03/03					29.83	29.80	0.03
MW-3	11/10/03					29.66	29.65	0.01
MW-3	11/17/03					29.32	29.31	0.01
MW-3	11/26/03					29.32	29.31	0.01
MW-3	12/04/03					29.23	-	-
MW-3	12/09/03					29.24	-	-
MW-3	12/15/03					28.40	-	-
MW-3	01/02/04					28.42	-	-
MW-3	01/11/04					28.37	28.36	0.01
MW-3	01/16/04					28.25	28.25	0.00
MW-3	01/23/04					28.22	-	-
MW-3	01/30/04					28.22	28.22	0.00
MW-3	02/06/04					28.23	-	-
MW-3	02/12/04					28.20	-	-
MW-3	02/18/04					28.17	-	-
MW-3	02/27/04					28.20	-	-
MW-3	03/16/04					28.21	-	-
MW-3	04/13/04					28.19	-	-
MW-3	05/10/04					28.22	-	-
MW-3	06/02/04					28.19	-	-
MW-3	06/09/04	1590	4520	966	1830	28.21	-	-
MW-3	07/26/04					28.08	-	-
MW-3	08/16/04					28.08	-	-
MW-3	09/09/04					28.02	-	-
MW-3	09/10/04					28.03	-	-
MW-3	10/11/04					27.96	-	-
MW-3	11/17/04					27.87	-	-
MW-3	12/13/04					27.87	-	-
MW-3	12/14/04					27.83	-	-
MW-3	01/17/05					27.78	-	-
MW-3	02/15/05					27.74	-	-
MW-3	03/16/05					27.72	-	-
MW-3	03/17/05					27.69	-	-
MW-3	04/15/05					27.69	-	-
MW-3	05/17/05					27.38	-	-
MW-3	06/23/05	2260	1090	1920	24800	27.19	-	-
MW-3	07/19/05					27.07	-	-
MW-3	08/22/05					26.87	-	-
MW-3	09/13/05					26.78	-	-
MW-3	10/28/05					26.43	-	-
MW-3	11/18/05					26.44	-	-
MW-3	12/22/05					26.36	-	-
MW-3	01/18/06					23.36	-	-
MW-3	02/21/06					26.52	-	-
MW-3	03/25/06					26.60	-	-
MW-3	04/28/06					26.73	-	-
MW-3	05/23/06					26.78	-	-
MW-3	06/14/06	795	<50	818	10900	26.71	-	-
MW-3	09/25/06					26.34	-	-

TABLE 1 - GROUNDWATER ANALYTICAL RESULTS

James F. Bell #1E								
Location	**Date**	**Benzene (µg/L)**	**Toluene (µg/L)**	**Ethylbenzene (µg/L)**	**Total Xylenes (µg/L)**	**Depth to Water (ft.)**	**Depth to LNAPL (ft.)**	**LNAPL Thickness (ft.)**
NMWQCC Standards:		10	750	750	620	NA	NA	NA
MW-3	12/27/06					26.96	-	-
MW-3	03/26/07					26.40	-	-
MW-3	06/11/07	868	<10	1490	13900	26.42	-	-
MW-3	09/18/07					26.50	-	-
MW-3	03/04/08					26.65	-	-
MW-3	06/12/08	876	<50	1030	10700	26.42	-	-
MW-3	09/08/08					26.32	-	-
MW-3	12/03/08					26.53	-	-
MW-3	03/02/09					26.75	-	-
MW-3	06/03/09	549	<25	750	7320	26.97	-	-
MW-3	08/27/09					26.99	-	-
MW-3	11/02/09					27.04	-	-
MW-3	02/11/10					26.23	-	-
MW-3	05/26/10	517	<50	971	9680	26.87	-	-
MW-3	09/30/10					26.25	-	-
MW-3	11/01/10					26.15	-	-
MW-3	02/02/11					26.38	-	-
MW-3	05/10/11	402	<10	922	11100	26.45	-	-
MW-3	09/26/11					26.55	-	-
MW-3	11/01/11					26.57	-	-
MW-3	02/16/12					26.88	-	-
MW-3	05/08/12	482	10.2 J	1200	9060	27.97	-	-
MW-3	06/07/13	99	<6.0	250	3900	27.61	-	-
MW-3	09/12/13	90	<6.0	380	3400	27.69	-	-
MW-3	12/13/13	89	<6.0	460	4500	27.26	-	-
MW-3	04/05/14	79	<3.8	400	2900	27.39	-	-
MW-3	10/21/14	93	<3.5	650	1400	27.51	-	-

TABLE 1 - GROUNDWATER ANALYTICAL RESULTS

James F. Bell #1E								
Location	**Date**	**Benzene (µg/L)**	**Toluene (µg/L)**	**Ethylbenzene (µg/L)**	**Total Xylenes (µg/L)**	**Depth to Water (ft.)**	**Depth to LNAPL (ft.)**	**LNAPL Thickness (ft.)**
NMWQCC Standards:		10	750	750	620	NA	NA	NA
MW-4	12/11/95	<2.5	<2.5	<2.5	<7.5	25.55	-	-
MW-4	12/04/96	<1	<1	<1	<3	26.27	-	-
MW-4	03/05/97	<1	<1	<1	<3	26.44	-	-
MW-4	10/11/00	<0.5	<0.5	<0.5	<0.5	26.56	-	-
MW-4	04/06/01					26.82	-	-
MW-4	06/05/01					26.94	-	-
MW-4	06/25/01	<0.5	<0.5	<0.5	<0.5	26.93	-	-
MW-4	12/21/01					26.92	-	-
MW-4	05/15/02					27.14	-	-
MW-4	06/05/02	<0.5	<0.5	<0.5	<1	27.16	-	-
MW-4	09/06/02					27.19	-	-
MW-4	12/18/02					27.02	-	-
MW-4	06/19/03					26.92	-	-
MW-4	09/22/03					26.83	-	-
MW-4	12/15/03					26.37	-	-
MW-4	03/16/04					26.40	-	-
MW-4	06/09/04					26.41	-	-
MW-4	09/10/04					26.29	-	-
MW-4	12/14/04					26.19	-	-
MW-4	03/17/05					26.23	-	-
MW-4	06/23/05					25.90	-	-
MW-4	09/13/05					25.69	-	-
MW-4	12/22/05					25.49	-	-
MW-4	03/25/06					25.68	-	-
MW-4	06/14/06					25.83	-	-
MW-4	09/25/06					25.67	-	-
MW-4	12/27/06					25.22	-	-
MW-4	03/26/07					25.53	-	-
MW-4	06/11/07					25.60	-	-
MW-4	09/18/07					25.62	-	-
MW-4	03/04/08					25.88	-	-
MW-4	06/12/08					25.64	-	-
MW-4	09/08/08					25.46	-	-
MW-4	12/03/08					25.60	-	-
MW-4	03/02/09					25.85	-	-
MW-4	06/03/09					26.13	-	-
MW-4	08/27/09					26.09	-	-
MW-4	11/02/09					26.13	-	-
MW-4	02/11/10					26.28	-	-
MW-4	05/26/10					26.10	-	-
MW-4	09/30/10					25.47	-	-
MW-4	11/01/10					25.35	-	-
MW-4	02/02/11					24.50	-	-
MW-4	05/10/11					25.57	-	-
MW-4	09/26/11					25.66	-	-
MW-4	11/01/11					25.72	-	-
MW-4	02/16/12					25.95	-	-
MW-4	05/08/12					26.16	-	-

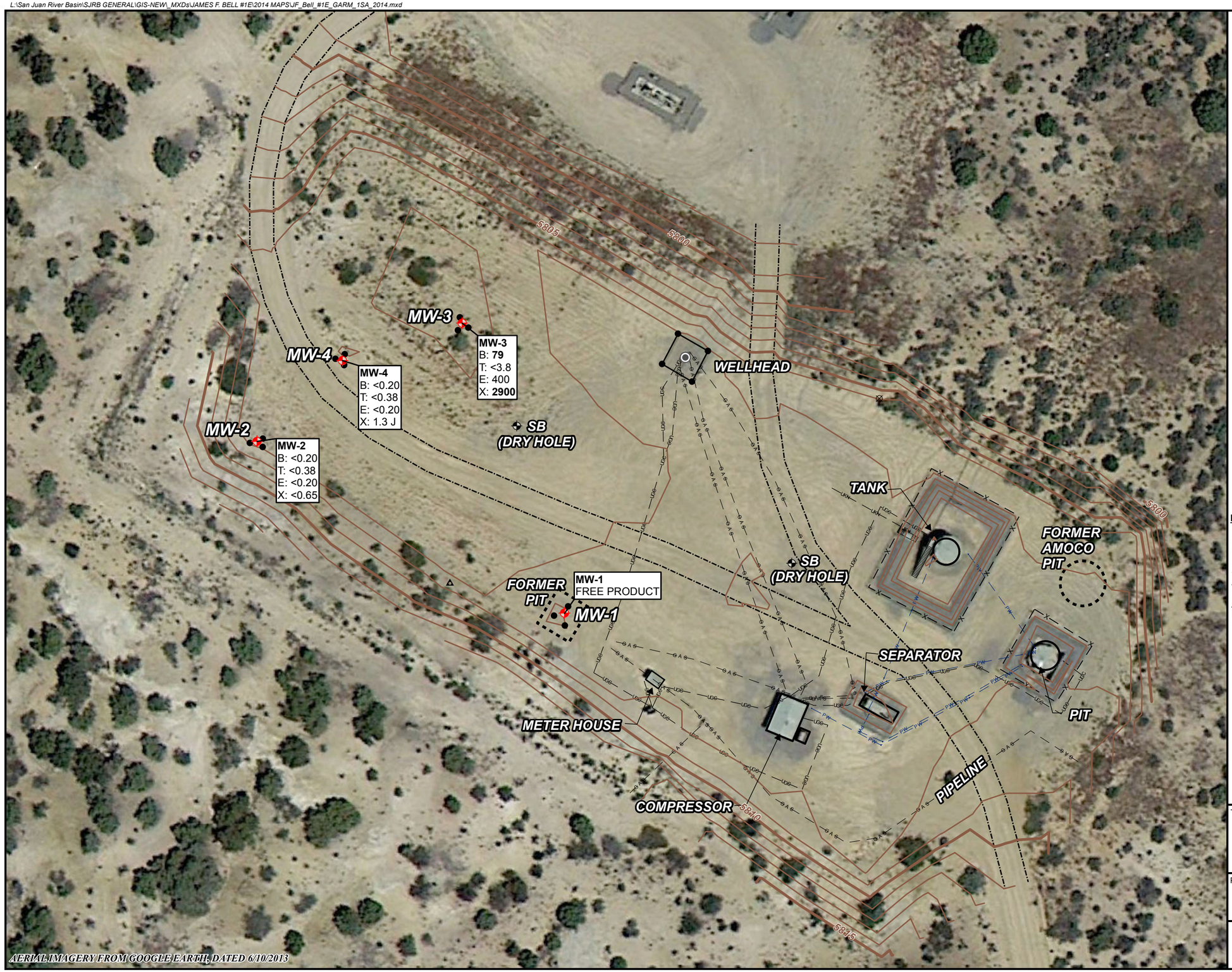
TABLE 1 - GROUNDWATER ANALYTICAL RESULTS

James F. Bell #1E								
Location	**Date**	**Benzene (µg/L)**	**Toluene (µg/L)**	**Ethylbenzene (µg/L)**	**Total Xylenes (µg/L)**	**Depth to Water (ft.)**	**Depth to LNAPL (ft.)**	**LNAPL Thickness (ft.)**
NMWQCC Standards:		10	750	750	620	NA	NA	NA
MW-4	06/07/13	<0.14	<0.30	<0.20	0.24 J	26.68	-	-
MW-4	09/12/13	<0.14	<0.30	<0.20	<0.23	26.78	-	-
MW-4	12/13/13	<0.14	<0.30	<0.20	0.36 J	26.35	-	-
MW-4	04/05/14	<0.20	<0.38	<0.20	1.3 J	26.44	-	-
MW-4	10/21/14	<0.38	<0.70	<0.50	<1.6	26.56	-	-

Notes:
Results highlighted yellow exceed their respective New Mexico Water Quality Control Comission standards.
"J" = Result is less than the reporting limit but greater than or equal to the method detection limit and the result in an approximate value.
"<" = analyte was not detected at the indicated reporting limit (some historic data were reported at the detection limit).

FIGURES

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\JAMES F. BELL #1E\2014 MAPS\JF_Bell_#1E_GARM_1SA_2014.mxd



LEGEND:

- APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET (6503)
- ACCESS ROAD
- NATURAL GAS LINE
- PRODUCED WATER LINE
- UNDERGROUND CABLE
- UNKNOWN BURIED LINE
- MONITORING WELL
- RIG ANCHOR
- SMA BENCHMARK

EXPLANATION OF ANALYTES AND APPLICABLE STANDARDS:

RESULTS IN **BOLDFACE** TYPE INDICATE CONCENTRATION IN EXCESS OF THE STANDARD FOR THAT ANALYTE.
NS = NOT SAMPLED
µg/L = MICROGRAMS PER LITER
<0.30 = BELOW METHOD DETECTION LIMIT
J = RESULT IS LESS THAN THE RL, BUT GREATER THAN OR EQUAL TO THE MDL AND THE CONCENTRATION IS AN APPROXIMATE VALUE.
MDL = METHOD DETECTION LIMIT
RL = REPORTING LIMIT OR REQUESTED LIMIT (RADIOCHEMISTRY)

ANALYTE	NMWQCC STANDARDS
B = Benzene	10 µg/L
T = Toluene	750 µg/L
E = Ethylbenzene	750 µg/L
X = Total Xylenes	620 µg/L

N

SCALE IN FEET
0 40 80

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
A	10/14/2014	CCL	CCL	DAW

TITLE:

JAMES F. BELL #1E
GROUNDWATER ANALYTICAL RESULTS
SAMPLED APRIL 5, 2014

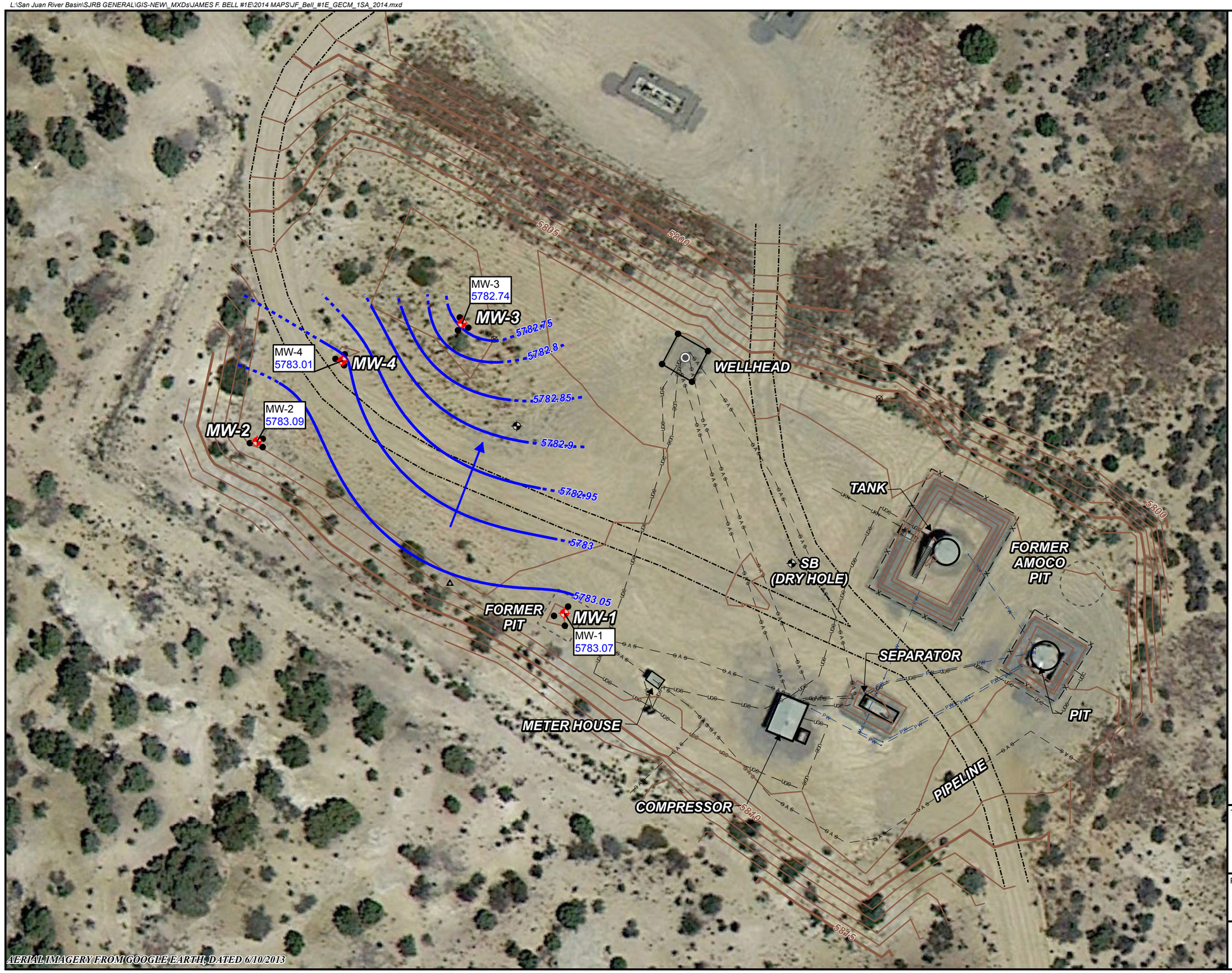
PROJECT:

SAN JUAN RIVER BASIN
MONITORING AND REMEDIATION
SAN JUAN COUNTY, NEW MEXICO

MWH

Figure No.: **1**

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\JAMES F. BELL #1E\2014 MAPS\JF_Bell_#1E_GECM_1SA_2014.mxd



LEGEND:

- 6503 — APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- GAS — NATURAL GAS LINE
- PW — PRODUCED WATER LINE
- UGC — UNDERGROUND CABLE
- UKN — UNKNOWN BURIED LINE
- MONITORING WELL
- RIG ANCHOR
- SMA BENCHMARK

NOTES:

5318.24 GROUNDWATER ELEVATION CORRECTED FOR PRODUCT THICKNESS. FEET ABOVE MEAN SEA LEVEL

5317 CORRECTED WATER LEVEL ELEVATION CONTOUR DASHED WHERE INFERRED (FEET ABOVE MEAN SEA LEVEL, 0.5 FOOT CONTOUR INTERVAL)

DIRECTION OF GROUNDWATER FLOW

N

SCALE IN FEET

0 40 80

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
A	10/15/2014	CCL	CCL	DCW

TITLE:

JAMES F. BELL #1E
GROUNDWATER ELEVATION MAP
GAUGED APRIL 5, 2014

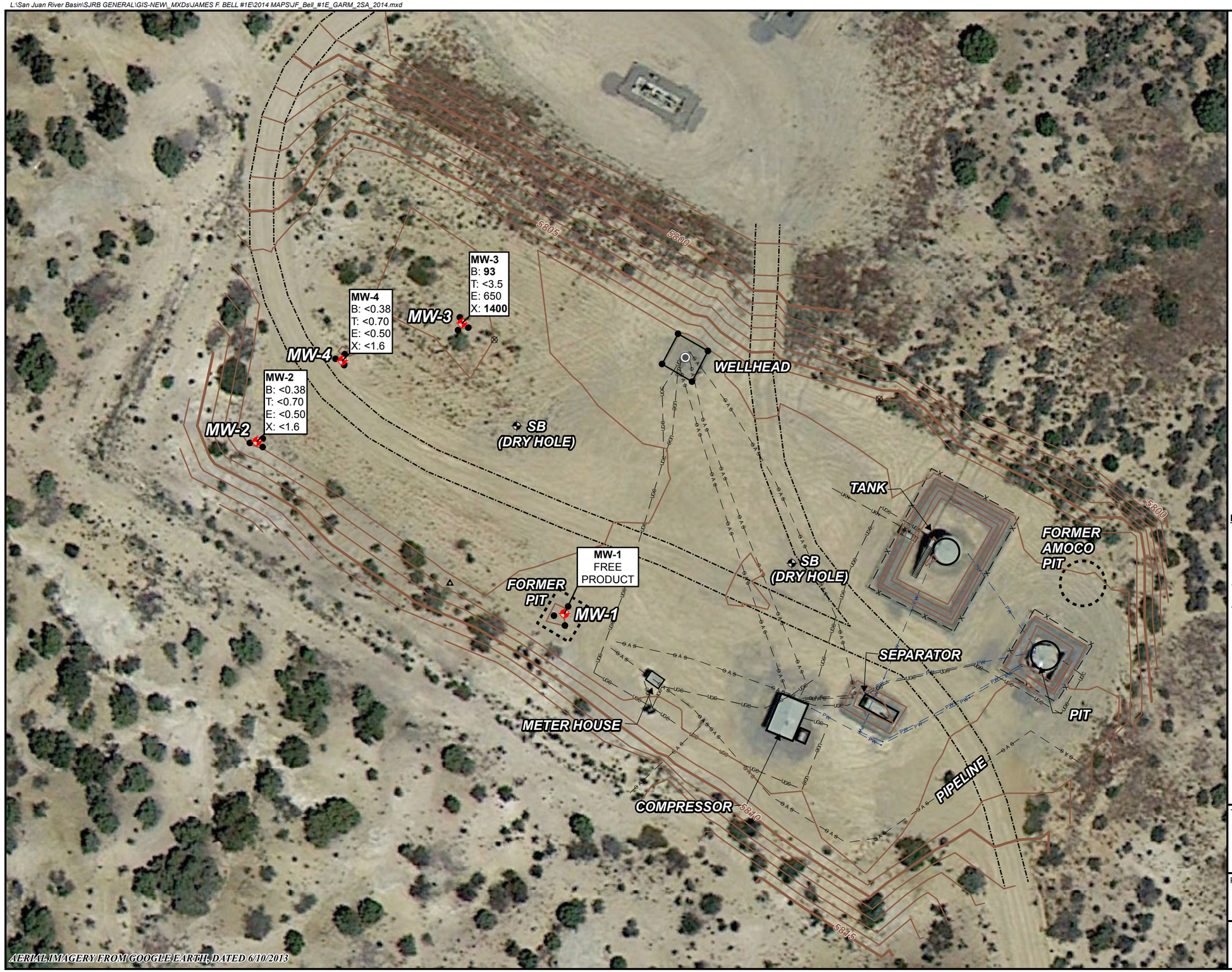
PROJECT:

SAN JUAN RIVER BASIN
MONITORING AND REMEDIATION
SAN JUAN COUNTY, NEW MEXICO

MWH

Figure No.: 2

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\JAMES F. BELL #1E\2014 MAPS\JF_Bell_#1E_GARM_2SA_2014.mxd



LEGEND:

- 6503 — APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- NATURAL GAS LINE
- PRODUCED WATER LINE
- UNDERGROUND CABLE
- UNKNOWN BURIED LINE
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EXPLANATION OF ANALYTES AND APPLICABLE STANDARDS:

RESULTS IN **BOLDFACE** TYPE INDICATE CONCENTRATION IN EXCESS OF THE STANDARD FOR THAT ANALYTE.
NS = NOT SAMPLED
µg/L = MICROGRAMS PER LITER
<0.30 = BELOW METHOD DETECTION LIMIT
J = RESULT IS LESS THAN THE RL, BUT GREATER THAN OR EQUAL TO THE MDL AND THE CONCENTRATION IS AN APPROXIMATE VALUE.
MDL = METHOD DETECTION LIMIT
RL = REPORTING LIMIT OR REQUESTED LIMIT (RADIOCHEMISTRY)

ANALYTE	NMWQCC STANDARDS
B = Benzene	10 µg/L
T = Toluene	750 µg/L
E = Ethylbenzene	750 µg/L
X = Total Xylenes	620 µg/L

N

SCALE IN FEET
0 40 80

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
A	11/17/2014	CCL	CCL	DAW

TITLE:

JAMES F. BELL #1E
GROUNDWATER ANALYTICAL RESULTS
SAMPLED OCTOBER 21, 2014

PROJECT:

SAN JUAN RIVER BASIN
MONITORING AND REMEDIATION
SAN JUAN COUNTY, NEW MEXICO

MWH

Figure No.: **3**

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\JAMES F. BELL #1E\2014 MAPS\JF_Bell_#1E_GECM_2SA_2014.mxd

MW-3
MW-3
5782.62
MW-4
5782.98
MW-4
MW-2
MW-2
5783.01
MW-1
5783.20
MW-1
FORMER PIT
WELLHEAD
TANK
SB (DRY HOLE)
FORMER AMOCO PIT
SEPARATOR
PIT
METER HOUSE
COMPRESSOR
PIPELINE
5782.65
5782.7
5782.75
5782.8
5782.85
5782.9
5782.95
5783
5783.05
5783.1
5783.15
5783.2
5805
5800
5810
5815

AERIAL IMAGERY FROM GOOGLE EARTH, DATED 6/10/2013

LEGEND:

- 6503 — APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- GAS — NATURAL GAS LINE
- PW — PRODUCED WATER LINE
- UGC — UNDERGROUND CABLE
- UKN — UNKNOWN BURIED LINE
- MONITORING WELL
- RIG ANCHOR
- SMA BENCHMARK

NOTES:

5318.24 GROUNDWATER ELEVATION CORRECTED FOR PRODUCT THICKNESS. FEET ABOVE MEAN SEA LEVEL

5317 CORRECTED WATER LEVEL ELEVATION CONTOUR DASHED WHERE INFERRED (FEET ABOVE MEAN SEA LEVEL, 0.5 FOOT CONTOUR INTERVAL)

DIRECTION OF GROUNDWATER FLOW

N

SCALE IN FEET

0 40 80

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
A	11/17/2014	CCL	CCL	DCW

TITLE:

JAMES F. BELL #1E
GROUNDWATER ELEVATION MAP
GAUGED OCTOBER 21, 2014

PROJECT:

SAN JUAN RIVER BASIN
MONITORING AND REMEDIATION
SAN JUAN COUNTY, NEW MEXICO

MWH

Figure No.: 4

APPENDIX A

APRIL 5, 2014 GROUNDWATER SAMPLING ANALYTICAL REPORT
OCTOBER 21, 2014 GROUNDWATER SAMPLING ANALYTICAL REPORT

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Corpus Christi
1733 N. Padre Island Drive
Corpus Christi, TX 78408
Tel: (361)289-2673

TestAmerica Job ID: 560-46609-1
Client Project/Site: James F. Bell #1E, 4/5/14 BTEX

For:
MWH Americas Inc
1801 California Street
Suite 2900
Denver, Colorado 80202

Attn: Ms. Sarah Gardner

Authorized for release by:
4/21/2014 2:59:34 PM

Neal Salcher, Senior Project Manager
neal.salcher@testamericainc.com

Qualifiers

GC VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 560-46609-1

Laboratory: TestAmerica Corpus Christi

Narrative

Job Narrative
560-46609-1

Comments
No additional comments.

Receipt
The samples were received on 4/8/2014 9:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice.
The temperature of the cooler at receipt was 1.8º C.

GC VOA
Method(s) 8021B: LCS and MB are also designated as ICV and ICB for calibration...batch 100781

No other analytical or quality issues were noted.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: MWH Americas Inc
Project/Site: James F. Bell #1E, 4/5/14 BTEX

TestAmerica Job ID: 560-46609-1

Client Sample ID: MW-2 — Lab Sample ID: 560-46609-1

No Detections.

Client Sample ID: MW-3 — Lab Sample ID: 560-46609-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	79		20	2.0	ug/L	10		8021B	Total/NA
Ethylbenzene	400		20	2.0	ug/L	10		8021B	Total/NA
Xylenes, Total	2900		20	6.5	ug/L	10		8021B	Total/NA

Client Sample ID: MW-4 — Lab Sample ID: 560-46609-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Xylenes, Total	1.3	J	2.0	0.65	ug/L	1		8021B	Total/NA

This Detection Summary does not include radiochemical test results.

Client: MWH Americas Inc
Project/Site: James F. Bell #1E, 4/5/14 BTEX

TestAmerica Job ID: 560-46609-1

Client Sample ID: MW-2

Lab Sample ID: 560-46609-1

Date Collected: 04/05/14 13:50
Matrix: Water
Date Received: 04/08/14 09:45

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.20		2.0	0.20	ug/L			04/15/14 00:21	1
Toluene	<0.38		2.0	0.38	ug/L			04/15/14 00:21	1
Ethylbenzene	<0.20		2.0	0.20	ug/L			04/15/14 00:21	1
Xylenes, Total	<0.65		2.0	0.65	ug/L			04/15/14 00:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*58 - 129*		*04/15/14 00:21*	*1*
Trifluorotoluene (Surr)	*105*		*54 - 130*		*04/15/14 00:21*	*1*

Client Sample ID: MW-3

Lab Sample ID: 560-46609-2

Date Collected: 04/05/14 14:00
Matrix: Water
Date Received: 04/08/14 09:45

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**79**		20	2.0	ug/L			04/15/14 00:49	10
Toluene	<3.8		20	3.8	ug/L			04/15/14 00:49	10
Ethylbenzene	**400**		20	2.0	ug/L			04/15/14 00:49	10
Xylenes, Total	**2900**		20	6.5	ug/L			04/15/14 00:49	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*58 - 129*		*04/15/14 00:49*	*10*
Trifluorotoluene (Surr)	*102*		*54 - 130*		*04/15/14 00:49*	*10*

Client Sample ID: MW-4

Lab Sample ID: 560-46609-3

Date Collected: 04/05/14 13:55
Matrix: Water
Date Received: 04/08/14 09:45

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.20		2.0	0.20	ug/L			04/15/14 01:16	1
Toluene	<0.38		2.0	0.38	ug/L			04/15/14 01:16	1
Ethylbenzene	<0.20		2.0	0.20	ug/L			04/15/14 01:16	1
Xylenes, Total	**1.3**	**J**	2.0	0.65	ug/L			04/15/14 01:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*58 - 129*		*04/15/14 01:16*	*1*
Trifluorotoluene (Surr)	*96*		*54 - 130*		*04/15/14 01:16*	*1*

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 560-100789/7
Matrix: Water
Analysis Batch: 100789

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.20		2.0	0.20	ug/L			04/14/14 16:55	1
Toluene	<0.38		2.0	0.38	ug/L			04/14/14 16:55	1
Ethylbenzene	<0.20		2.0	0.20	ug/L			04/14/14 16:55	1
Xylenes, Total	<0.65		2.0	0.65	ug/L			04/14/14 16:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*58 - 129*		*04/14/14 16:55*	*1*
Trifluorotoluene (Surr)	*100*		*54 - 130*		*04/14/14 16:55*	*1*

Lab Sample ID: LCS 560-100789/6
Matrix: Water
Analysis Batch: 100789

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			40.0	38.5		ug/L		96	70 - 130		
Toluene			40.0	40.6		ug/L		101	70 - 130		
Ethylbenzene			40.0	39.6		ug/L		99	70 - 130		
Xylenes, Total			120	114		ug/L		95	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*58 - 129*
Trifluorotoluene (Surr)	*106*		*54 - 130*

Lab Sample ID: 560-46609-2 MS
Matrix: Water
Analysis Batch: 100789

Client Sample ID: MW-3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	79		400	469		ug/L		97	64 - 130		
Toluene	<3.8		400	412		ug/L		103	59 - 130		
Ethylbenzene	400		400	764		ug/L		92	63 - 133		
Xylenes, Total	2900		1200	3730		ug/L		67	53 - 147		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*111*		*58 - 129*
Trifluorotoluene (Surr)	*104*		*54 - 130*

Lab Sample ID: 560-46609-2 MSD
Matrix: Water
Analysis Batch: 100789

Client Sample ID: MW-3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	79		400	481		ug/L		100	64 - 130	2	20
Toluene	<3.8		400	429		ug/L		107	59 - 130	4	20
Ethylbenzene	400		400	764		ug/L		92	63 - 133	0	20
Xylenes, Total	2900		1200	3690		ug/L		63	53 - 147	1	20

Client: MWH Americas Inc
Project/Site: James F. Bell #1E, 4/5/14 BTEX

TestAmerica Job ID: 560-46609-1

Method: 8021B - Volatile Organic Compounds (GC) (Continued)

Lab Sample ID: 560-46609-2 MSD
Matrix: Water
Analysis Batch: 100789

Client Sample ID: MW-3
Prep Type: Total/NA

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	*110*		*58 - 129*
Trifluorotoluene (Surr)	*100*		*54 - 130*

Certification Summary

Client: MWH Americas Inc
Project/Site: James F. Bell #1E, 4/5/14 BTEX

TestAmerica Job ID: 560-46609-1

Laboratory: TestAmerica Corpus Christi

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Kansas	NELAP	7	E-10362	10-31-14
Oklahoma	State Program	6	9968	08-31-14
Texas	NELAP	6	T104704210	03-31-15

Method Summary

Client: MWH Americas Inc
Project/Site: James F. Bell #1E, 4/5/14 BTEX

TestAmerica Job ID: 560-46609-1

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	SW846	TAL CC

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CC = TestAmerica Corpus Christi, 1733 N. Padre Island Drive, Corpus Christi, TX 78408, TEL (361)289-2673

Sample Summary

Client: MWH Americas Inc
Project/Site: James F. Bell #1E, 4/5/14 BTEX

TestAmerica Job ID: 560-46609-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
560-46609-1	MW-2	Water	04/05/14 13:50	04/08/14 09:45
560-46609-2	MW-3	Water	04/05/14 14:00	04/08/14 09:45
560-46609-3	MW-4	Water	04/05/14 13:55	04/08/14 09:45

TestAmerica Corpus Christi
1733 N Padre Island Drive
Corpus Christi, TX 78408
Phone (361) 289-2673 Fax (361) 289-2471

Chain of Custody Record

Client Information	Sampler: Sarah Gardner / Chris Lee	Lab PM: Kellogg, Timothy L.	Carrier Tracking No(s): Fedex 8945277577342	COC No: 560-13131-1157
Client Contact: ~~Mr. Daniel Wade~~ Sarah Gardner	Phone: 303 291 2239	E-Mail: tim.kellogg@testamericainc.com		Page: Page1
Company: MWH Americas Inc				Job #: 46609 Loc: 560
Address: 1801 California Street Suite 2900	Due Date Requested:			
City: Denver	TAT Requested (days):			
State, Zip: CO, 80202				
Phone: ~~713-420-3414(Tel)~~ 303 291 2239	PO #: Purchase Order not required			
Email: Sarah.gardner ~~Daniel.A.Wade~~@us.mwhglobal.com	WO #: TWO # C-STLI-			
Project Name: San Juan River Basin Pit Sites	Project #: 56000058			
Site: James F. Bell #1E	SSOW#:			

Analysis Requested

Preservation Code: A

Preservation Codes: A - HC; B - Na; C - Zn; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; P - Na2O4S; Q - Na2SO3; R - Na2S2SO3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - ph 4-5; Z - other (specify); Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260B - BTEX	Total Number of containers	Special Instructions/Note:
MW-1	4/5/14			Water					Not Sampled
MW-2	4/5/14	1350		Water			X	3	
MW-3	4/5/14	1400		Water			X	3	
MW-4	4/5/14	1355		Water			X	3	
				Water					
				Water					
				Water					
				Water					
				Water					
				Water					
				Water					

560-46609 Chain of Custody

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Sarah Gardner	4/7/14 900	MWH	[illegible]	4/8/14 9:45	TACC
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time	Company

Custody Seals Intact: △ Yes △ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 1.6°C Cor 1.8°C IR4

Login Sample Receipt Checklist

Client: MWH Americas Inc

Job Number: 560-46609-1

Login Number: 46609

List Source: TestAmerica Corpus Christi

List Number: 1

Creator: Rood, Vivian R

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Tel: (850)474-1001

TestAmerica Job ID: 400-97688-1
Client Project/Site: KM James F. Bell #1E

For:
MWH Americas Inc
1801 California Street
Suite 2900
Denver, Colorado 80202

Attn: Ms. Sarah Gardner

Authorized for release by:
11/6/2014 1:49:30 PM
Bernard Kirkland, Manager of Project Management
(912)354-7858 e.3238
bernard.kirkland@testamericainc.com

Designee for

Neal Salcher, Senior Project Manager
(713)690-4444
neal.salcher@testamericainc.com

Table of Contents

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 400-97688-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-97688-1

Comments
No additional comments.

Receipt
The samples were received on 10/28/2014 9:39 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.8º C.

GC/MS VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: MWH Americas Inc
Project/Site: KM James F. Bell #1E

TestAmerica Job ID: 400-97688-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-97688-1	MW-2	Water	10/21/14 12:30	10/28/14 09:39
400-97688-2	MW-3	Water	10/21/14 12:35	10/28/14 09:39
400-97688-3	MW-4	Water	10/21/14 12:40	10/28/14 09:39
400-97688-4	TRIP BLANK	Water	10/21/14 12:50	10/28/14 09:39

Client Sample ID: MW-2

Lab Sample ID: 400-97688-1

Date Collected: 10/21/14 12:30
Matrix: Water
Date Received: 10/28/14 09:39

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.38		1.0	0.38	ug/L			10/31/14 15:47	1
Ethylbenzene	<0.50		1.0	0.50	ug/L			10/31/14 15:47	1
Toluene	<0.70		1.0	0.70	ug/L			10/31/14 15:47	1
Xylenes, Total	<1.6		10	1.6	ug/L			10/31/14 15:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*90*		*78 - 118*		*10/31/14 15:47*	*1*
Dibromofluoromethane	*104*		*81 - 121*		*10/31/14 15:47*	*1*
Toluene-d8 (Surr)	*93*		*80 - 120*		*10/31/14 15:47*	*1*

Client Sample ID: MW-3

Lab Sample ID: 400-97688-2

Date Collected: 10/21/14 12:35
Matrix: Water
Date Received: 10/28/14 09:39

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**93**		5.0	1.9	ug/L			10/31/14 17:47	5
Ethylbenzene	**650**		5.0	2.5	ug/L			10/31/14 17:47	5
Toluene	<3.5		5.0	3.5	ug/L			10/31/14 17:47	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*96*		*78 - 118*		*10/31/14 17:47*	*5*
Dibromofluoromethane	*99*		*81 - 121*		*10/31/14 17:47*	*5*
Toluene-d8 (Surr)	*98*		*80 - 120*		*10/31/14 17:47*	*5*

Method: 8260B - Volatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Xylenes, Total	**1400**		100	16	ug/L			11/01/14 20:32	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*92*		*78 - 118*		*11/01/14 20:32*	*10*
Dibromofluoromethane	*105*		*81 - 121*		*11/01/14 20:32*	*10*
Toluene-d8 (Surr)	*94*		*80 - 120*		*11/01/14 20:32*	*10*

Client Sample ID: MW-4

Lab Sample ID: 400-97688-3

Date Collected: 10/21/14 12:40
Matrix: Water
Date Received: 10/28/14 09:39

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.38		1.0	0.38	ug/L			10/31/14 16:11	1
Ethylbenzene	<0.50		1.0	0.50	ug/L			10/31/14 16:11	1
Toluene	<0.70		1.0	0.70	ug/L			10/31/14 16:11	1
Xylenes, Total	<1.6		10	1.6	ug/L			10/31/14 16:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*93*		*78 - 118*		*10/31/14 16:11*	*1*
Dibromofluoromethane	*106*		*81 - 121*		*10/31/14 16:11*	*1*
Toluene-d8 (Surr)	*92*		*80 - 120*		*10/31/14 16:11*	*1*

Client: MWH Americas Inc
Project/Site: KM James F. Bell #1E

TestAmerica Job ID: 400-97688-1

Client Sample ID: TRIP BLANK
Date Collected: 10/21/14 12:50
Date Received: 10/28/14 09:39

Lab Sample ID: 400-97688-4
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.38		1.0	0.38	ug/L			10/31/14 16:35	1
Ethylbenzene	<0.50		1.0	0.50	ug/L			10/31/14 16:35	1
Toluene	<0.70		1.0	0.70	ug/L			10/31/14 16:35	1
Xylenes, Total	<1.6		10	1.6	ug/L			10/31/14 16:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*92*		*78 - 118*		*10/31/14 16:35*	*1*
Dibromofluoromethane	*106*		*81 - 121*		*10/31/14 16:35*	*1*
Toluene-d8 (Surr)	*92*		*80 - 120*		*10/31/14 16:35*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 400-235011/4
Matrix: Water
Analysis Batch: 235011

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.38		1.0	0.38	ug/L			10/31/14 09:45	1
Ethylbenzene	<0.50		1.0	0.50	ug/L			10/31/14 09:45	1
Toluene	<0.70		1.0	0.70	ug/L			10/31/14 09:45	1
Xylenes, Total	<1.6		10	1.6	ug/L			10/31/14 09:45	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*91*		*78 - 118*		*10/31/14 09:45*	*1*
Dibromofluoromethane	*106*		*81 - 121*		*10/31/14 09:45*	*1*
Toluene-d8 (Surr)	*95*		*80 - 120*		*10/31/14 09:45*	*1*

Lab Sample ID: LCS 400-235011/1002
Matrix: Water
Analysis Batch: 235011

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	50.0	54.6		ug/L		109	79 - 120
Ethylbenzene	50.0	48.3		ug/L		97	80 - 120
Toluene	50.0	47.2		ug/L		94	80 - 120
Xylenes, Total	100	97.3		ug/L		97	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*91*		*78 - 118*
Dibromofluoromethane	*109*		*81 - 121*
Toluene-d8 (Surr)	*96*		*80 - 120*

Lab Sample ID: MB 400-235149/4
Matrix: Water
Analysis Batch: 235149

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Xylenes, Total	<1.6		10	1.6	ug/L			11/01/14 11:00	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*92*		*78 - 118*		*11/01/14 11:00*	*1*
Dibromofluoromethane	*102*		*81 - 121*		*11/01/14 11:00*	*1*
Toluene-d8 (Surr)	*94*		*80 - 120*		*11/01/14 11:00*	*1*

Lab Sample ID: LCS 400-235149/1002
Matrix: Water
Analysis Batch: 235149

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Xylenes, Total	100	105		ug/L		105	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*91*		*78 - 118*
Dibromofluoromethane	*106*		*81 - 121*

Client: MWH Americas Inc
Project/Site: KM James F. Bell #1E

TestAmerica Job ID: 400-97688-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-235149/1002
Matrix: Water
Analysis Batch: 235149

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	93		80 - 120

Lab Chronicle

Client: MWH Americas Inc
Project/Site: KM James F. Bell #1E

TestAmerica Job ID: 400-97688-1

Client Sample ID: MW-2

Lab Sample ID: 400-97688-1

Date Collected: 10/21/14 12:30

Matrix: Water

Date Received: 10/28/14 09:39

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	235011	10/31/14 15:47	CLN	TAL PEN

Client Sample ID: MW-3

Lab Sample ID: 400-97688-2

Date Collected: 10/21/14 12:35

Matrix: Water

Date Received: 10/28/14 09:39

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		5	235011	10/31/14 17:47	CLN	TAL PEN
Total/NA	Analysis	8260B	DL	10	235149	11/01/14 20:32	CLN	TAL PEN

Client Sample ID: MW-4

Lab Sample ID: 400-97688-3

Date Collected: 10/21/14 12:40

Matrix: Water

Date Received: 10/28/14 09:39

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	235011	10/31/14 16:11	CLN	TAL PEN

Client Sample ID: TRIP BLANK

Lab Sample ID: 400-97688-4

Date Collected: 10/21/14 12:50

Matrix: Water

Date Received: 10/28/14 09:39

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	235011	10/31/14 16:35	CLN	TAL PEN

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Method Summary

Client: MWH Americas Inc
Project/Site: KM James F. Bell #1E

TestAmerica Job ID: 400-97688-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL PEN

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

TestAmerica Corpus Christi
1733 N. Padre Island Drive
Corpus Christi, TX 78408
Phone (361) 289-2673 Fax (361) 289-2471

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Chris Lee, Sarah Gardner	Lab PM: Salcher, Neal	Carrier Tracking No(s):	COC No: 560-15215-1511.1
Client Contact: Ms. Sarah Gardner	Phone:	E-Mail: neal.salcher@testamericainc.com		Page: Page 1 of 1
Company: MWH Americas Inc				Job #:

Address: 1801 California Street Suite 2900	Due Date Requested:	
City: Denver	TAT Requested (days):	
State, Zip: CO, 80202		
Phone: 303-291-2239(Tel)	PO #: Purchase Order Requested	
Email: sarah.gardner@mwhglobal.com	WO #: As per Enfos	
Project Name: KM James F. Bell #1E	Project #: 56004968	
Site:	SSOW#:	

Analysis Requested

400-97688 COC

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260B - BTEX	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A		
MW-2	10/21/14	1230	G	Water			X		
MW-3	10/21/14	1235	G	Water			X		
MW-4	10/21/14	1240	G	Water			X		
TRIP BLANK	10/21/14	1250	G	Water			X		
				Water					

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Date/Time	Company		Date/Time	Company
Relinquished by: Chris Lee	10/27/14 915	MWH	Received by:	10-28-14 939	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 5.8°C IR-2