3R - 196

2013 AGWMR

04 / 03 / 2014

MWH

BUILDING A BETTER WORLD

March 4, 2014

Mr. Glenn von Gonten
New Mexico Oil Conservation Division (NMOCD)
1220 South St., Francis Drive
Santa Fe, NM 87505

RE: 2013 Annual Report Submittals
San Juan River Basin Program - Pit Sites

Dear Mr. von Gonten

On behalf of El Paso CGP Company (EPCGPC), MWH is submitting the enclosed 2013 Annual Reports for 18 of its remaining San Juan River Basin pit groundwater remediation sites. The reports present the 2013 sampling data and planned activities for 2014 at these sites.

If you have any questions concerning the enclosed reports, please contact either Joe Wiley (representing EPCGPC) at 713-420-3475 or me at 515-253-0830.

Sincerely,

David C. Wombacher
Principal Engineer

/mja:dcw:hls
Enclosures
cc: Bill Freeman – NNEPA, Shiprock, NM (Navajo Nation Lands, See Table 1)
Mark Kelly – BLM, Farmington, NM (Federal Lands, See Table 1)
Brandon Powell – NMOCD, Aztec, NM (all 18 reports)
Joe Wiley – EPCGP Company (all 18 reports, electronic)

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TABLE 1

REPORT LISTING AND LAND TYPE
SAN JUAN RIVER BASIN PROGRAM – PIT SITES

METER or LINE ID	NMOCD CASE NO.	SITE NAME	Land Type
87640	3RP-155-0	Canada Mesa #2	Federal
89961	3RP-170-0	Fields A#7A	Federal
73220	3RP-068-0	Fogelson 4-1 Com. #14	Federal
95608	3RP-407-0	Gallegos Canyon Unit #124E	Navajo
03906	3RP-179-0	GCU Com A #142E	State/Fee
89894	3RP-186-0	Hammond #41A	Federal
94715	3RP-196-0	James F. Bell #1E	Federal
70194	3RP-201-0	Johnston Fed #4	State/Fee
89232	3RP-202-0	Johnston Fed #6A	Federal
LD072	3RP-204-0	K27 LD072	Federal
LD087	3RP-205-0	K-31 Line Drip	State/Fee
72556	3RP-207-0	Knight #1	State/Fee
LD174	3RP-212-0	Lateral L 40	Federal
LD151	3RP-213-0	Lateral 0-21 Line Drip	Federal
94810	3RP-223-0	Miles Fed 1A	Federal
89620	3RP-235-0	Sandoval GC A #1A	Federal
70445	3RP-074-0	Standard Oil Com #1	State/Fee
71669	3RP-239-0	State Gas Com N #1	State/Fee

2013 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) 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 CPG Company's (EPCGP) 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 2013.

SUMMARY OF 2013 ACTIVITIES

In July 2013, a site survey was completed to re-develop a base site map and to confirm the accuracy of existing monitoring well elevations and locations.

On June 7, September 12, and December 13, 2013, 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 a HydraSleeve™ (HydraSleeve); a disposable, no-purge passive groundwater sampling device. 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 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 Test America Laboratories in Corpus Christi, Texas where they were analyzed for benzene, toluene, ethylbenzene, and total xylenes (BTEX). A selective free product recovery sock kit was removed from monitoring well MW-1 during the June 2013 monitoring event. Additional field parameters were collected including dissolved oxygen, temperature, conductivity, pH, and ORP using a YSI multi-parameter instrument, if free product was not present. The de minimis water remaining in HydraSleeves was combined in a waste container and transferred to an off-site 55-gallon drum for later disposal by Safety-Kleen.

2013 ANNUAL GROUNDWATER REPORT

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

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, 3, and 5) and groundwater elevation contour maps (Figures 2, 4, and 6) summarize the results of the 2013 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, 4, 6).

- Approximately 1.41 feet of free product was detected in MW-1 during the June 7 2013 sampling event. Concentrations of benzene, toluene, ethylbenzene, and total xylenes in groundwater collected from MW-1 were above the New Mexico Water Quality Control Commission (NMWQCC) standards for the June event. Approximately 1.54 feet of free product was measured on September 12 and 1.33 feet of free product was measured on December 13, 2013. Groundwater samples were not collected during the September and December sampling events due to the presence of free product.

- BTEX constituents were not detected in groundwater samples collected from MW-2 during the three 2013 quarterly sampling events.

- The benzene concentration in groundwater samples collected from MW-3 remained above the NMWQCC standard during the three 2013 quarterly sampling events. Total xylene concentrations also remained above standard for each of the three events. Toluene and ethylbenzene concentrations were not detected above their respective NMWQCC standards for any 2013 sampling events.

- BTEX constituents were not detected or were at concentrations below the reporting limit (J-flagged) in groundwater samples collected from MW-4 during the three 2013 quarterly sampling events.

PLANNED FUTURE ACTIVITIES

Following the completion of a Site access agreement with the current Site operator, the installation of additional monitoring wells is planned, 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

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	-	-

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	12/11/95	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

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	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

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	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	-	-

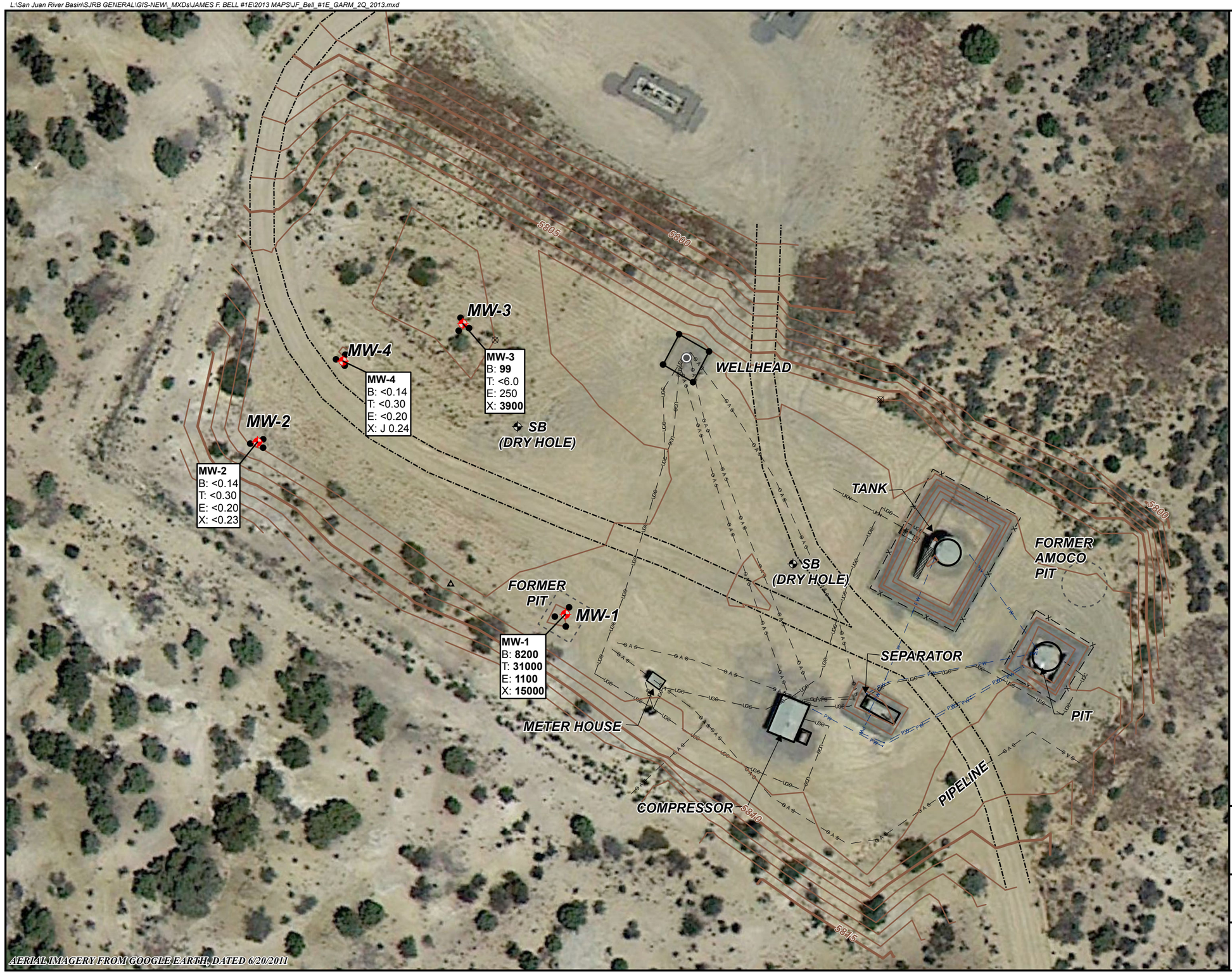
TABLE 1 - GROUNDWATER ANALYTICAL RESULTS

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	-	-
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	-	-

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\2013 MAPS\JF_Bell_#1E_GARM_2Q_2013.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

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

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	2/28/2014	CCL	CCL	DAW

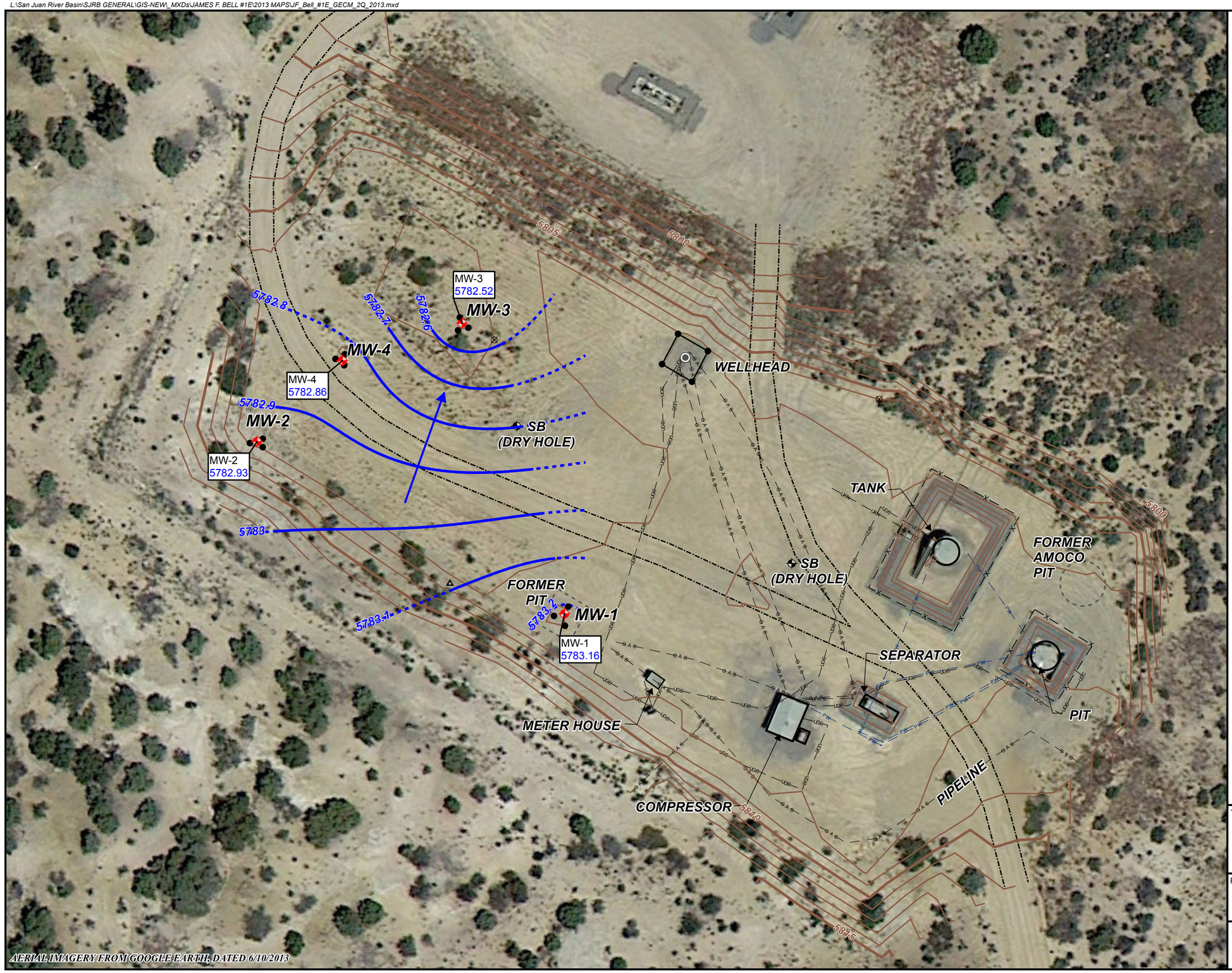
TITLE:
JAMES F. BELL #1E
GROUNDWATER ANALYTICAL RESULTS
SAMPLED JUNE 7, 2013

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\2013 MAPS\JF_Bell_#1E_GECM_2Q_2013.mxd



LEGEND:

- 6503 — APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- NATURAL GAS LINE
- PRODUCED WATER LINE
- UNDERGROUND CABLE
- 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	10/31/2013	CCL	CCL	DAW

TITLE:

JAMES F. BELL #1E
GROUNDWATER ELEVATION MAP
GAUGED JUNE 7, 2013

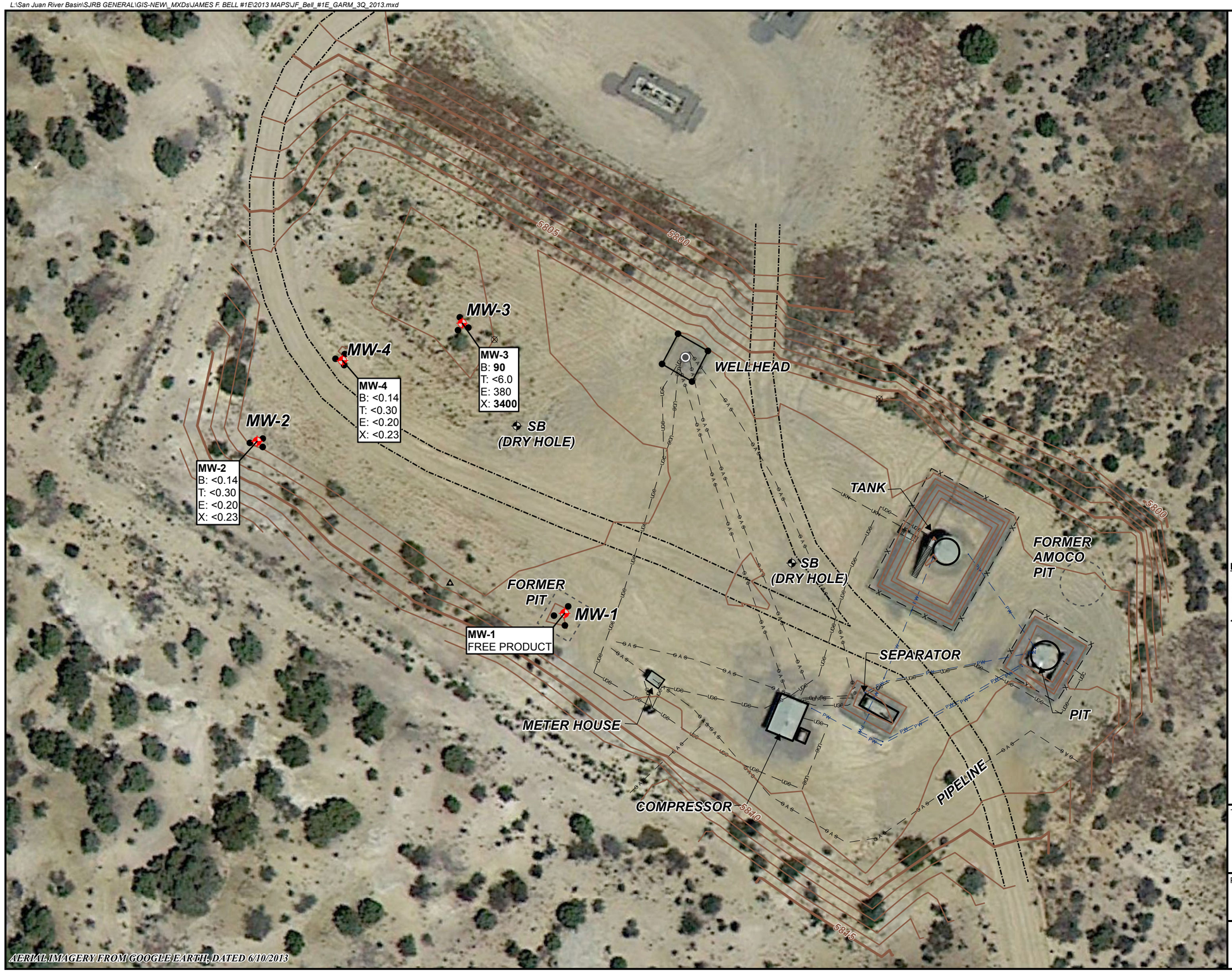
PROJECT:

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\2013 MAPS\JF_Bell_#1E_GARM_3Q_2013.mxd



LEGEND:

- 6503 — APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- NATURAL GAS LINE
- PRODUCED WATER LINE
- UNDERGROUND CABLE
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- RIG ANCHOR
- SMA BENCHMARK

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NS = NOT SAMPLED
µg/L = MICROGRAMS PER LITER
<0.30 = BELOW METHOD DETECTION LIMIT

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	2/28/2014	CCL	CCL	DAW

TITLE:

JAMES F. BELL #1E
GROUNDWATER ANALYTICAL RESULTS
SAMPLED SEPTEMBER 12, 2013

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\2013 MAPS\JF_Bell_#1E_GECM_3Q_2013.mxd

MW-3
5782.44

MW-4
5782.76

MW-2
5782.78

MW-1
5783.08

5782.7
5782.6
5782.5
5782.8
5782.9
5783
5783.1
5805
5800
5810
5815

MW-3
MW-4
MW-2
MW-1
SB (DRY HOLE)
SB (DRY HOLE)
WELLHEAD
TANK
FORMER AMOCO PIT
SEPARATOR
PIT
FORMER PIT
METER HOUSE
COMPRESSOR
PIPELINE

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

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DIRECTION OF GROUNDWATER FLOW

N

SCALE IN FEET
0 40 80

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
A	1/24/2014	CCL	CCL	DAW

TITLE:

JAMES F. BELL #1E
GROUNDWATER ELEVATION MAP
GAUGED SEPTEMBER 12, 2013

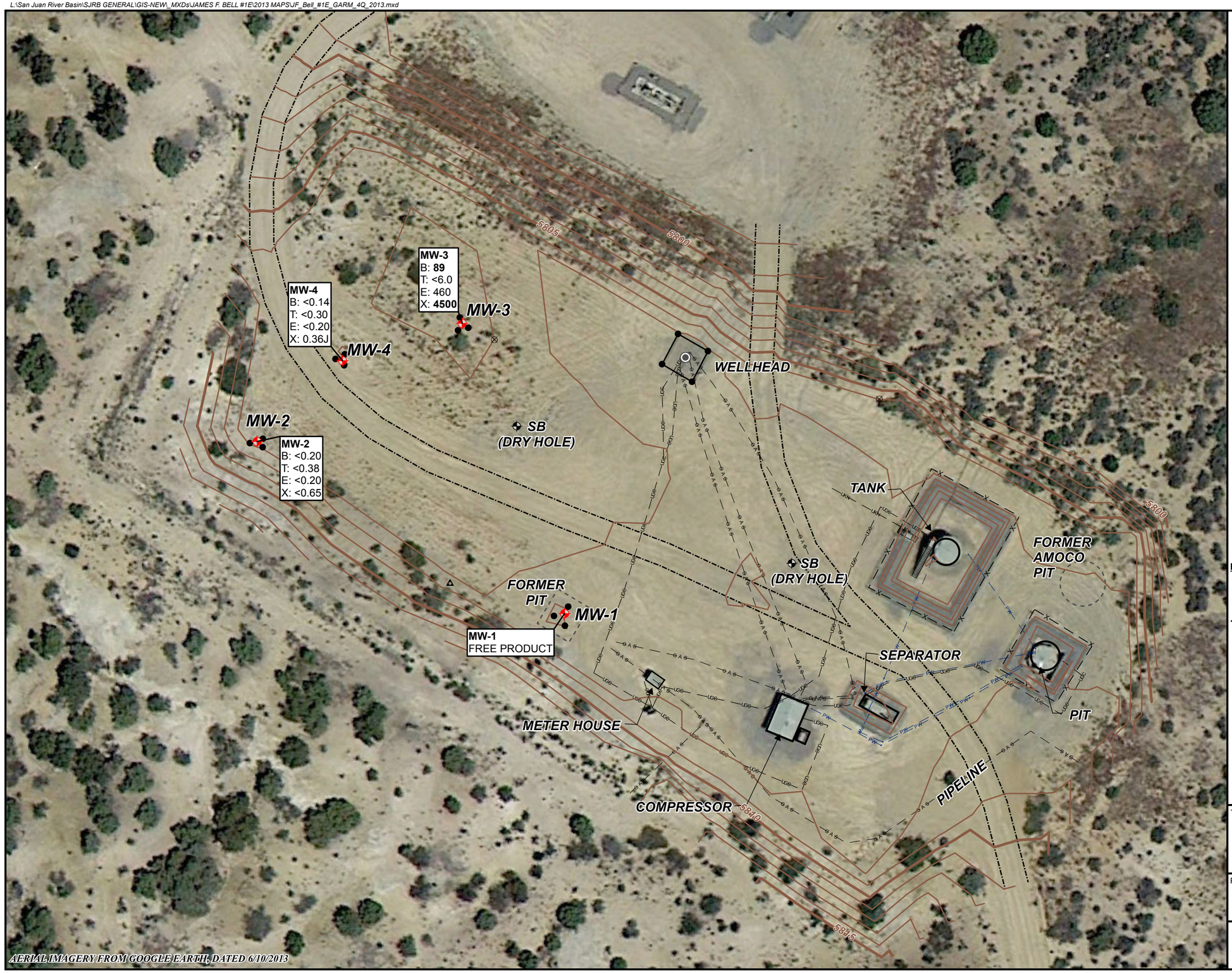
PROJECT:

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

MWH

Figure No.: 4

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\JAMES F. BELL #1E\2013 MAPS\JF_Bell_#1E_GARM_4Q_2013.mxd



LEGEND:

- 6503 — APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- GAS — NATURAL GAS LINE
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<0.30 = BELOW METHOD DETECTION LIMIT

ANALYTE	NMWQCC STANDARDS
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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	2/28/2014	CCL	CCL	DAW

TITLE:

JAMES F. BELL #1E
GROUNDWATER ANALYTICAL RESULTS
SAMPLED DECEMBER 13, 2013

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

MWH

Figure No.: 5

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\JAMES F. BELL #1E\2013 MAPS\JF_Bell_#1E_GECM_4Q_2013.mxd

MW-3
5782.87
MW-3
5782.9
MW-4
5783.19
MW-4
5782.95
5783.15
5783
MW-2
5783.08
MW-2
5783.05
5783.1
5783.15
5783.2
MW-1
5783.25
MW-1
5783.25
FORMER
PIT
WELLHEAD
TANK
SB
(DRY HOLE)
FORMER
AMOCO
PIT
SEPARATOR
PIT
METER HOUSE
COMPRESSOR
PIPELINE
5805
5800
5810
5815

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

LEGEND:

- 6503 — APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- NATURAL GAS LINE
- PRODUCED WATER LINE
- UNDERGROUND CABLE
- 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	1/17/2014	CCL	CCL	DAW

TITLE:
JAMES F. BELL #1E
GROUNDWATER ELEVATION MAP
GAUGED DECEMBER 13, 2013

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

MWH

Figure No.: 6

APPENDIX A

JUNE 7, 2013 GROUNDWATER SAMPLING ANALYTICAL REPORT
SEPTEMBER 12, 2013 GROUNDWATER SAMPLING ANALYTICAL REPORT
DECEMBER 13, 2013 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: 560-40550-1
TestAmerica Sample Delivery Group: June 2013
Client Project/Site: J. F. Bell #1E

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

Attn: Mr. Daniel Wade

Authorized for release by:
6/19/2013 9:19:47 AM

Timothy Kellogg, Lab Director
tim.kellogg@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

Qualifiers

GC/MS 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)
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)

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

TestAmerica Job ID: 560-40550-1
SDG: June 2013

Job ID: 560-40550-1

Laboratory: TestAmerica Corpus Christi

Narrative

Receipt

The samples were received on 6/12/2013 10:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.5º C. No analytical or quality issues were noted.

Detection Summary

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

TestAmerica Job ID: 560-40550-1
SDG: June 2013

Client Sample ID: MW-1 — Lab Sample ID: 560-40550-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	8.2		0.20	0.028	mg/L	200		8260B	Total/NA
Ethylbenzene	1.1		0.20	0.040	mg/L	200		8260B	Total/NA
Toluene	31		0.20	0.060	mg/L	200		8260B	Total/NA
Xylenes, Total	15		0.60	0.045	mg/L	200		8260B	Total/NA

Client Sample ID: MW-2 — Lab Sample ID: 560-40550-2

No Detections.

Client Sample ID: MW-3 — Lab Sample ID: 560-40550-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.099		0.020	0.0028	mg/L	20		8260B	Total/NA
Ethylbenzene	0.25		0.020	0.0040	mg/L	20		8260B	Total/NA
Xylenes, Total	3.9		0.060	0.0045	mg/L	20		8260B	Total/NA

Client Sample ID: MW-4 — Lab Sample ID: 560-40550-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Xylenes, Total	0.00024	J	0.0030	0.00023	mg/L	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-1

Lab Sample ID: 560-40550-1

Date Collected: 06/10/13 09:00
Matrix: Water
Date Received: 06/12/13 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**8.2**		0.20	0.028	mg/L			06/16/13 12:20	200
Ethylbenzene	**1.1**		0.20	0.040	mg/L			06/16/13 12:20	200
Toluene	**31**		0.20	0.060	mg/L			06/16/13 12:20	200
Xylenes, Total	**15**		0.60	0.045	mg/L			06/16/13 12:20	200

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*102*		*70 - 130*		*06/16/13 12:20*	*200*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*		*06/16/13 12:20*	*200*
Dibromofluoromethane (Surr)	*102*		*70 - 130*		*06/16/13 12:20*	*200*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 130*		*06/16/13 12:20*	*200*

Client Sample ID: MW-2

Lab Sample ID: 560-40550-2

Date Collected: 06/10/13 08:45
Matrix: Water
Date Received: 06/12/13 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00014		0.0010	0.00014	mg/L			06/16/13 12:45	1
Ethylbenzene	<0.00020		0.0010	0.00020	mg/L			06/16/13 12:45	1
Toluene	<0.00030		0.0010	0.00030	mg/L			06/16/13 12:45	1
Xylenes, Total	<0.00023		0.0030	0.00023	mg/L			06/16/13 12:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*70 - 130*		*06/16/13 12:45*	*1*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*		*06/16/13 12:45*	*1*
Dibromofluoromethane (Surr)	*109*		*70 - 130*		*06/16/13 12:45*	*1*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*		*06/16/13 12:45*	*1*

Client Sample ID: MW-3

Lab Sample ID: 560-40550-3

Date Collected: 06/10/13 08:25
Matrix: Water
Date Received: 06/12/13 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.099**		0.020	0.0028	mg/L			06/16/13 13:10	20
Ethylbenzene	**0.25**		0.020	0.0040	mg/L			06/16/13 13:10	20
Toluene	<0.0060		0.020	0.0060	mg/L			06/16/13 13:10	20
Xylenes, Total	**3.9**		0.060	0.0045	mg/L			06/16/13 13:10	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*104*		*70 - 130*		*06/16/13 13:10*	*20*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*		*06/16/13 13:10*	*20*
Dibromofluoromethane (Surr)	*99*		*70 - 130*		*06/16/13 13:10*	*20*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 130*		*06/16/13 13:10*	*20*

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

TestAmerica Job ID: 560-40550-1
SDG: June 2013

Client Sample ID: MW-4
Date Collected: 06/10/13 08:30
Date Received: 06/12/13 10:00

Lab Sample ID: 560-40550-4
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00014		0.0010	0.00014	mg/L			06/16/13 13:36	1
Ethylbenzene	<0.00020		0.0010	0.00020	mg/L			06/16/13 13:36	1
Toluene	<0.00030		0.0010	0.00030	mg/L			06/16/13 13:36	1
Xylenes, Total	**0.00024**	**J**	0.0030	0.00023	mg/L			06/16/13 13:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*70 - 130*		*06/16/13 13:36*	*1*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*		*06/16/13 13:36*	*1*
Dibromofluoromethane (Surr)	*105*		*70 - 130*		*06/16/13 13:36*	*1*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*		*06/16/13 13:36*	*1*

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

Lab Sample ID: MB 560-89164/8
Matrix: Water
Analysis Batch: 89164

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00014		0.0010	0.00014	mg/L			06/16/13 09:48	1
Ethylbenzene	<0.00020		0.0010	0.00020	mg/L			06/16/13 09:48	1
Toluene	<0.00030		0.0010	0.00030	mg/L			06/16/13 09:48	1
Xylenes, Total	<0.00023		0.0030	0.00023	mg/L			06/16/13 09:48	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*103*		*70 - 130*		*06/16/13 09:48*	*1*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*		*06/16/13 09:48*	*1*
Dibromofluoromethane (Surr)	*103*		*70 - 130*		*06/16/13 09:48*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 130*		*06/16/13 09:48*	*1*

Lab Sample ID: LCS 560-89164/3
Matrix: Water
Analysis Batch: 89164

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.0250	0.0281		mg/L		112	70 - 130
Ethylbenzene	0.0250	0.0246		mg/L		98	70 - 130
Toluene	0.0250	0.0277		mg/L		111	70 - 130
Xylenes, Total	0.0750	0.0741		mg/L		99	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*104*		*70 - 130*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*
Dibromofluoromethane (Surr)	*105*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*97*		*70 - 130*

Lab Chronicle

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

TestAmerica Job ID: 560-40550-1
SDG: June 2013

Client Sample ID: MW-1

Lab Sample ID: 560-40550-1

Date Collected: 06/10/13 09:00

Matrix: Water

Date Received: 06/12/13 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		200	89164	06/16/13 12:20	RT	TAL CC

Client Sample ID: MW-2

Lab Sample ID: 560-40550-2

Date Collected: 06/10/13 08:45

Matrix: Water

Date Received: 06/12/13 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	89164	06/16/13 12:45	RT	TAL CC

Client Sample ID: MW-3

Lab Sample ID: 560-40550-3

Date Collected: 06/10/13 08:25

Matrix: Water

Date Received: 06/12/13 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		20	89164	06/16/13 13:10	RT	TAL CC

Client Sample ID: MW-4

Lab Sample ID: 560-40550-4

Date Collected: 06/10/13 08:30

Matrix: Water

Date Received: 06/12/13 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	89164	06/16/13 13:36	RT	TAL CC

Laboratory References:

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

Certification Summary

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

TestAmerica Job ID: 560-40550-1
SDG: June 2013

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	10-31-13
Oklahoma	State Program	6	9968	08-31-13
Texas	NELAP	6	T104704210-12-8	03-31-14
USDA	Federal		P330-11-00060	02-03-14

Method Summary

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

TestAmerica Job ID: 560-40550-1
SDG: June 2013

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	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: J. F. Bell #1E

TestAmerica Job ID: 560-40550-1
SDG: June 2013

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
560-40550-1	MW-1	Water	06/10/13 09:00	06/12/13 10:00
560-40550-2	MW-2	Water	06/10/13 08:45	06/12/13 10:00
560-40550-3	MW-3	Water	06/10/13 08:25	06/12/13 10:00
560-40550-4	MW-4	Water	06/10/13 08:30	06/12/13 10:00

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No. 49421

CHAIN OF CUSTODY RECORD

Loc: 560
40550

560-40550 Chain of Custody

CUSTOMER INFORMATION	PROJECT INFORMATION
COMPANY: MWH	PROJECT NAME/NUMBER: J.F. Bell #1E
SEND REPORT TO: Daniel Wade	**BILLING INFORMATION**
ADDRESS: 1801 California St. Suite 2900 Denver, CO 80202	BILL TO: Kinder Morgan ADDRESS: Houston, Tx
PHONE: 303-291-2250	PHONE:
FAX:	FAX: PO NO:

ANALYSIS/METHOD REQUEST

SEAL INTACT: Yes
TEMP C: 3.3C
CORR TEMP C: 2.5C
IR GUN ID: 4
INITIAL/DATE: VM 06/12

SAMPLE NO.	SAMPLE DESCRIPTION	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	CONTAINER	PRESERV.	NUMBER 8260	REMARKS/PRECAUTIONS.
	MW-1	6/10/13	900	GW	VOA	HCL	3 x	
	MW-2	6/10/13	845	GW	VOA	HCL	3 x	
	MW-3	6/10/13	825	GW	VOA	HCL	3 x	
	MW-4	6/10/13	830	GW	VOA	HCL	3 x	

SAMPLER: Daniel Wade
SHIPMENT METHOD: FedEx
AIRBILL NO: 80 22 4442 6456

REQUIRED TURNAROUND: ☒ ROUTINE TAT (10 BUSINESS DAYS) ☐ RUSH TAT (MAY REQUIRE SURCHARGE)

1. RELINQUISHED BY: Daniel Wade	DATE	2. RELINQUISHED BY:	DATE	3. RELINQUISHED BY:	DATE
SIGNATURE:	6/11	SIGNATURE:		SIGNATURE:	
PRINTED NAME/COMPANY: MWH	TIME 1000	PRINTED NAME/COMPANY:	TIME	PRINTED NAME/COMPANY	TIME
1. RECEIVED BY:	DATE	2. RECEIVED BY:	DATE	3. RECEIVED BY:	DATE
SIGNATURE:	06/12/13	SIGNATURE:		SIGNATURE:	
PRINTED NAME/COMPANY:	TIME 1200	PRINTED NAME/COMPANY:	TIME	PRINTED NAME/COMPANY:	TIME

TAL-8222-560 (0412)

TestAmerica
1733 N. Padre Island Drive
Corpus Christi, TX 78408
Phone: 361.289.2673/Fax: 361.289.2471

Login Sample Receipt Checklist

Client: MWH Americas Inc

Job Number: 560-40550-1
SDG Number: June 2013

Login Number: 40550
List Number: 1
Creator: McDermott, Vivian

List Source: TestAmerica Corpus Christi

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.	N/A	

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ANALYTICAL REPORT

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

TestAmerica Job ID: 560-42544-1
TestAmerica Sample Delivery Group: September 2013
Client Project/Site: JF Bell Groundwater Analysis

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

Attn: Mr. Daniel Wade

Authorized for release by:
10/3/2013 11:27:45 AM
Lindy Maingot, Project Manager I
lindy.maingot@testamericainc.com

Designee for

Timothy Kellogg, Lab Director
tim.kellogg@testamericainc.com

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: 560-42544-1

Laboratory: TestAmerica Corpus Christi

Narrative

Job Narrative
560-42544-1

Comments
No additional comments.

Receipt
The samples were received on 9/14/2013 10:05 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.0º C.

GC/MS VOA
No analytical or quality issues were noted.

Organic Prep
No analytical or quality issues were noted.

Detection Summary

Client: MWH Americas Inc
Project/Site: JF Bell Groundwater Analysis

TestAmerica Job ID: 560-42544-1
SDG: September 2013

Client Sample ID: MW-2 — Lab Sample ID: 560-42544-1

No Detections.

Client Sample ID: MW-3 — Lab Sample ID: 560-42544-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.090		0.020	0.0028	mg/L	20		8260B	Total/NA
Ethylbenzene	0.38		0.020	0.0040	mg/L	20		8260B	Total/NA
Xylenes, Total	3.4		0.060	0.0045	mg/L	20		8260B	Total/NA

Client Sample ID: MW-4 — Lab Sample ID: 560-42544-3

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-2

Lab Sample ID: 560-42544-1

Date Collected: 09/12/13 12:30
Matrix: Water
Date Received: 09/14/13 10:05

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00014		0.0010	0.00014	mg/L			09/20/13 14:27	1
Ethylbenzene	<0.00020		0.0010	0.00020	mg/L			09/20/13 14:27	1
Toluene	<0.00030		0.0010	0.00030	mg/L			09/20/13 14:27	1
Xylenes, Total	<0.00023		0.0030	0.00023	mg/L			09/20/13 14:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*99*		*70 - 130*		*09/20/13 14:27*	*1*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*		*09/20/13 14:27*	*1*
Dibromofluoromethane (Surr)	*96*		*70 - 130*		*09/20/13 14:27*	*1*
1,2-Dichloroethane-d4 (Surr)	*91*		*70 - 140*		*09/20/13 14:27*	*1*

Client Sample ID: MW-3

Lab Sample ID: 560-42544-2

Date Collected: 09/12/13 12:40
Matrix: Water
Date Received: 09/14/13 10:05

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.090**		0.020	0.0028	mg/L			09/20/13 14:52	20
Ethylbenzene	**0.38**		0.020	0.0040	mg/L			09/20/13 14:52	20
Toluene	<0.0060		0.020	0.0060	mg/L			09/20/13 14:52	20
Xylenes, Total	**3.4**		0.060	0.0045	mg/L			09/20/13 14:52	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*99*		*70 - 130*		*09/20/13 14:52*	*20*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*		*09/20/13 14:52*	*20*
Dibromofluoromethane (Surr)	*97*		*70 - 130*		*09/20/13 14:52*	*20*
1,2-Dichloroethane-d4 (Surr)	*93*		*70 - 140*		*09/20/13 14:52*	*20*

Client Sample ID: MW-4

Lab Sample ID: 560-42544-3

Date Collected: 09/12/13 12:35
Matrix: Water
Date Received: 09/14/13 10:05

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00014		0.0010	0.00014	mg/L			09/20/13 15:18	1
Ethylbenzene	<0.00020		0.0010	0.00020	mg/L			09/20/13 15:18	1
Toluene	<0.00030		0.0010	0.00030	mg/L			09/20/13 15:18	1
Xylenes, Total	<0.00023		0.0030	0.00023	mg/L			09/20/13 15:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*97*		*70 - 130*		*09/20/13 15:18*	*1*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*		*09/20/13 15:18*	*1*
Dibromofluoromethane (Surr)	*99*		*70 - 130*		*09/20/13 15:18*	*1*
1,2-Dichloroethane-d4 (Surr)	*92*		*70 - 140*		*09/20/13 15:18*	*1*

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

Lab Sample ID: MB 560-92958/8
Matrix: Water
Analysis Batch: 92958

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00014		0.0010	0.00014	mg/L			09/20/13 09:51	1
Ethylbenzene	<0.00020		0.0010	0.00020	mg/L			09/20/13 09:51	1
Toluene	<0.00030		0.0010	0.00030	mg/L			09/20/13 09:51	1
Xylenes, Total	<0.00023		0.0030	0.00023	mg/L			09/20/13 09:51	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*98*		*70 - 130*		*09/20/13 09:51*	*1*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*		*09/20/13 09:51*	*1*
Dibromofluoromethane (Surr)	*103*		*70 - 130*		*09/20/13 09:51*	*1*
1,2-Dichloroethane-d4 (Surr)	*96*		*70 - 140*		*09/20/13 09:51*	*1*

Lab Sample ID: LCS 560-92958/3
Matrix: Water
Analysis Batch: 92958

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.0250	0.0249		mg/L		99	70 - 130
Ethylbenzene	0.0250	0.0248		mg/L		99	70 - 130
Toluene	0.0250	0.0245		mg/L		98	70 - 130
Xylenes, Total	0.0750	0.0734		mg/L		98	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*100*		*70 - 130*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*
Dibromofluoromethane (Surr)	*98*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*93*		*70 - 140*

Certification Summary

Client: MWH Americas Inc
Project/Site: JF Bell Groundwater Analysis

TestAmerica Job ID: 560-42544-1
SDG: September 2013

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	10-31-13
Oklahoma	State Program	6	9968	08-31-14
Texas	NELAP	6	T104704210-12-8	03-31-14
USDA	Federal		P330-11-00060	02-03-14

Method Summary

Client: MWH Americas Inc
Project/Site: JF Bell Groundwater Analysis

TestAmerica Job ID: 560-42544-1
SDG: September 2013

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	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: JF Bell Groundwater Analysis

TestAmerica Job ID: 560-42544-1
SDG: September 2013

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
560-42544-1	MW-2	Water	09/12/13 12:30	09/14/13 10:05
560-42544-2	MW-3	Water	09/12/13 12:40	09/14/13 10:05
560-42544-3	MW-4	Water	09/12/13 12:35	09/14/13 10:05

TestAmerica Corpus Christi
1733 North Padre Island Drive

Corpus Christi, TX 78408
phone 361.289.2673 fax 361.289.2471

9 lbs 1.9c
Cor 2.0c
IR4 Steel

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☑ Other:

Client Contact	Project Manager: Daniel Wade	Site Contact: Daniel Wade	Date: 9/17/13	COC No:
MWH Americas, Inc.	Tel/Fax: 303-291-2250	Lab Contact: Tim Kellogg	Carrier: FedEx	_____ of _____ COCs
1801 California Street, Suite 2900	**Analysis Turnaround Time**			For Lab U
Denver, Colorado 80202	Calendar (C) or Work Days (W) _____			Walk-in Cl
(303) 291-2222 Phone	TAT if different from Below _____			Lab Samp
(303) 291-2221 FAX	☑ 2 weeks			Loc: 560 42544
Project Name: SAN Juan River Basin	☐ 1 week			Job / SDG
Site: JF Bell	☐ 2 days			
P O # 56000058	☐ 1 day			Sampler:

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample (Y / N)	Composite = C / Grab = G	8260 - BTEX	Sample Specific Notes:
MW-2	9/12/13	1230	G	W	3			X	
MW-3	9/12/13	1240	G	W	3			X	
MW-4	9/12/13	1235	G	W	3			X	
								2	

560-42544 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☑ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments:

FedEx Sat 8031 5142 3691

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	MWH	9/13/13 1200		TAL	09/14/13 1005
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Form No. CA-C-WI-002, Rev. 4, dated 10/25/2012

Login Sample Receipt Checklist

Client: MWH Americas Inc

Job Number: 560-42544-1
SDG Number: September 2013

Login Number: 42544
List Number: 1
Creator: Wing, Randi

List Source: TestAmerica Corpus Christi

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.	N/A	
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.	N/A	

TestAmerica

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ANALYTICAL REPORT

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

TestAmerica Job ID: 560-44351-1
TestAmerica Sample Delivery Group: December 2013
Client Project/Site: James F. Bell #1E Groundwater Analysis

For:
MWH Americas Inc
2890 East Cottonwood Pkwy
Suite 300
Salt Lake City, Utah 84121

Attn: Mr. Cary Ruble

Authorized for release by:
12/30/2013 7:06:12 PM

Timothy Kellogg, Lab Director
(361)289-2673
tim.kellogg@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

Qualifiers

GC/MS 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)

Case Narrative

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

TestAmerica Job ID: 560-44351-1
SDG: December 2013

Job ID: 560-44351-1

Laboratory: TestAmerica Corpus Christi

Narrative

Receipt

The samples were received on 12/17/2013 10:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.5º C. No analytical or quality issues were noted.

Detection Summary

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

TestAmerica Job ID: 560-44351-1
SDG: December 2013

Client Sample ID: MW-2 — Lab Sample ID: 560-44351-1

No Detections.

Client Sample ID: MW-3 — Lab Sample ID: 560-44351-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.089		0.020	0.0028	mg/L	20		8260B	Total/NA
Ethylbenzene	0.46		0.020	0.0040	mg/L	20		8260B	Total/NA
Xylenes, Total	4.5		0.060	0.0045	mg/L	20		8260B	Total/NA

Client Sample ID: MW-4 — Lab Sample ID: 560-44351-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Xylenes, Total	0.00036	J	0.0030	0.00023	mg/L	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

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

TestAmerica Job ID: 560-44351-1
SDG: December 2013

Client Sample ID: MW-2

Lab Sample ID: 560-44351-1

Date Collected: 12/13/13 13:10
Matrix: Water
Date Received: 12/17/13 10:40

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00020		0.0020	0.00020	mg/L			12/22/13 05:48	1
Toluene	<0.00038		0.0020	0.00038	mg/L			12/22/13 05:48	1
Ethylbenzene	<0.00020		0.0020	0.00020	mg/L			12/22/13 05:48	1
Xylenes, Total	<0.00065		0.0020	0.00065	mg/L			12/22/13 05:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*58 - 129*		*12/22/13 05:48*	*1*
Trifluorotoluene (Surr)	*84*		*54 - 130*		*12/22/13 05:48*	*1*

Client Sample ID: MW-3

Lab Sample ID: 560-44351-2

Date Collected: 12/13/13 13:05
Matrix: Water
Date Received: 12/17/13 10:40

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.089**		0.020	0.0028	mg/L			12/24/13 16:04	20
Ethylbenzene	**0.46**		0.020	0.0040	mg/L			12/24/13 16:04	20
Toluene	<0.0060		0.020	0.0060	mg/L			12/24/13 16:04	20
Xylenes, Total	**4.5**		0.060	0.0045	mg/L			12/24/13 16:04	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*102*		*70 - 130*		*12/24/13 16:04*	*20*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*		*12/24/13 16:04*	*20*

Client Sample ID: MW-4

Lab Sample ID: 560-44351-3

Date Collected: 12/13/13 13:00
Matrix: Water
Date Received: 12/17/13 10:40

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00014		0.0010	0.00014	mg/L			12/24/13 16:30	1
Ethylbenzene	<0.00020		0.0010	0.00020	mg/L			12/24/13 16:30	1
Toluene	<0.00030		0.0010	0.00030	mg/L			12/24/13 16:30	1
Xylenes, Total	**0.00036**	**J**	0.0030	0.00023	mg/L			12/24/13 16:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*98*		*70 - 130*		*12/24/13 16:30*	*1*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*		*12/24/13 16:30*	*1*

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

Lab Sample ID: MB 560-96541/8
Matrix: Water
Analysis Batch: 96541

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00014		0.0010	0.00014	mg/L			12/24/13 11:54	1
Ethylbenzene	<0.00020		0.0010	0.00020	mg/L			12/24/13 11:54	1
Toluene	<0.00030		0.0010	0.00030	mg/L			12/24/13 11:54	1
Xylenes, Total	<0.00023		0.0030	0.00023	mg/L			12/24/13 11:54	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*102*		*70 - 130*		*12/24/13 11:54*	*1*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*		*12/24/13 11:54*	*1*

Lab Sample ID: LCS 560-96541/3
Matrix: Water
Analysis Batch: 96541

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.0250	0.0263		mg/L		105	70 - 130
Ethylbenzene	0.0250	0.0242		mg/L		97	70 - 130
Toluene	0.0250	0.0259		mg/L		104	70 - 130
Xylenes, Total	0.0750	0.0731		mg/L		98	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*102*		*70 - 130*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 560-96483/5
Matrix: Water
Analysis Batch: 96483

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00020		0.0020	0.00020	mg/L			12/21/13 21:49	1
Toluene	<0.00038		0.0020	0.00038	mg/L			12/21/13 21:49	1
Ethylbenzene	<0.00020		0.0020	0.00020	mg/L			12/21/13 21:49	1
Xylenes, Total	<0.00065		0.0020	0.00065	mg/L			12/21/13 21:49	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*58 - 129*		*12/21/13 21:49*	*1*
Trifluorotoluene (Surr)	*86*		*54 - 130*		*12/21/13 21:49*	*1*

Lab Sample ID: LCS 560-96483/4
Matrix: Water
Analysis Batch: 96483

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.0400	0.0355		mg/L		89	70 - 130
Toluene	0.0400	0.0358		mg/L		90	70 - 130
Ethylbenzene	0.0400	0.0361		mg/L		90	70 - 130

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

Lab Sample ID: LCS 560-96483/4
Matrix: Water
Analysis Batch: 96483

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Xylenes, Total			0.120	0.106		mg/L		88	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*91*		*58 - 129*
Trifluorotoluene (Surr)	*87*		*54 - 130*

Lab Sample ID: 560-44351-1 MS
Matrix: Water
Analysis Batch: 96483

Client Sample ID: MW-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	<0.00020		0.0400	0.0345		mg/L		86	64 - 130		
Toluene	<0.00038		0.0400	0.0346		mg/L		87	59 - 130		
Ethylbenzene	<0.00020		0.0400	0.0345		mg/L		86	63 - 133		
Xylenes, Total	<0.00065		0.120	0.101		mg/L		84	53 - 147		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*90*		*58 - 129*
Trifluorotoluene (Surr)	*85*		*54 - 130*

Lab Sample ID: 560-44351-1 MSD
Matrix: Water
Analysis Batch: 96483

Client Sample ID: MW-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.00020		0.0400	0.0349		mg/L		87	64 - 130	1	20
Toluene	<0.00038		0.0400	0.0347		mg/L		87	59 - 130	0	20
Ethylbenzene	<0.00020		0.0400	0.0343		mg/L		86	63 - 133	1	20
Xylenes, Total	<0.00065		0.120	0.101		mg/L		84	53 - 147	0	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*90*		*58 - 129*
Trifluorotoluene (Surr)	*84*		*54 - 130*

Lab Chronicle

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

TestAmerica Job ID: 560-44351-1
SDG: December 2013

Client Sample ID: MW-2

Lab Sample ID: 560-44351-1

Date Collected: 12/13/13 13:10
Matrix: Water
Date Received: 12/17/13 10:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	96483	12/22/13 05:48	RQH	TAL CC

Client Sample ID: MW-3

Lab Sample ID: 560-44351-2

Date Collected: 12/13/13 13:05
Matrix: Water
Date Received: 12/17/13 10:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		20	96541	12/24/13 16:04	RP56	TAL CC

Client Sample ID: MW-4

Lab Sample ID: 560-44351-3

Date Collected: 12/13/13 13:00
Matrix: Water
Date Received: 12/17/13 10:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	96541	12/24/13 16:30	RP56	TAL CC

Laboratory References:

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

Certification Summary

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

TestAmerica Job ID: 560-44351-1
SDG: December 2013

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	T104704210-12-8	03-31-14
USDA	Federal		P330-11-00060	02-03-14

Method Summary

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

TestAmerica Job ID: 560-44351-1
SDG: December 2013

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

TestAmerica Job ID: 560-44351-1
SDG: December 2013

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
560-44351-1	MW-2	Water	12/13/13 13:10	12/17/13 10:40
560-44351-2	MW-3	Water	12/13/13 13:05	12/17/13 10:40
560-44351-3	MW-4	Water	12/13/13 13:00	12/17/13 10:40

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: CCL	Lab PM: Kellogg, Timothy L.	Carrier Tracking No(s):	COC No: 560-11604-1157.1
Client Contact: ~~Mr. Daniel Wade~~ Christopher Lee	Phone: 303 291-2242	E-Mail: tim.kellogg@testamericainc.com		Page: Page Loc: 560
Company: MWH Americas Inc				Job #: 44351
Address: 1801 California Street Suite 2900	Due Date Requested:			
City: Denver	TAT Requested (days): STANDARD			
State, Zip: CO, 80202				
Phone: 713-420-3414(Tel)	PO #: Purchase Order not required			
Email: Christopher.C.Lee@mwhglobal.com ~~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 Codes: A - HCl; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; 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:
			Preservation Code:				A		
MW-2	12/13/13	1310	G	Water			X		
MW-3	12/13/13	1305	G	Water			X		
MW-4	12/13/13	1300	G	Water			X		
				Water					
				Water					
Trip Blank				Water					

560-44351 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
1	[signature]	12/16/13 0700		[signature]	12-17-13 10:40	TACC
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No

Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 1.3/1.5 IR Gun

12/30/2013

Login Sample Receipt Checklist

Client: MWH Americas Inc

Job Number: 560-44351-1
SDG Number: December 2013

Login Number: 44351
List Number: 1
Creator: Rood, Vivian R

List Source: TestAmerica Corpus Christi

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.	N/A	