2016 ANNUAL GROUNDWATER REPORT

Gallegos Canyon Unit #142E
NMOCD Case#: 3RP-179-0
Meter Code: 03906
T29N, R12W Sec 25, Unit G

SITE DETAILS

Site Location: Latitude: 36.699300 N, Longitude: -108.046700 W
Land Type: Private/Fee Operator: BP America Production Company

SITE BACKGROUND

- **Site Assessment:** 4/94
- **Excavation:** 4/94 (20 cy)
- **Re-excavation:** 10/98 (882 cy)

Environmental Remediation activities at the Gallegos Canyon Unit #142 (Site) are 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 BP America Production Company and is active.

The Site is located on private land (T29N, R12W, Sec25, Unit G). Various site investigations have occurred from 1997 through 2014. Monitoring wells were installed in 1997 (MW-1), 2001 (MW-2), and 2014 (MW-3 and MW-5 through MW-8). Monitoring well MW-4 was not installed. Temporary piezometers PZ-1 through PZ-6 were installed and removed in 1997. Free product has been observed and historically recovered at the Site. Free product was observed in MW-2 in 2016, but was not recovered as this free product is not associated with the EPCGP release. BP has indicated that they had a release in the vicinity of MW-2. Currently, groundwater sampling is conducted on a semi-annual basis.

SUMMARY OF 2016 ACTIVITIES

On April 16 and October 14, 2016, water levels were gauged at MW-1, MW-2, MW-3, MW-5, MW-6, MW-7, and MW-8. Groundwater samples were collected from MW-1, MW-5, MW-6, MW-7, and MW-8, using HydraSleeve™ (HydraSleeve) no-purge 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 Pensacola, Florida where they were analyzed for benzene, toluene, ethylbenzene, and total xylenes (BTEX). Additional field parameters were collected from the excess sample water recovered by the HydraSleeve. Excess sample water is poured into a YSI multi-parameter instrument sample cup and analyzed. Field parameters include dissolved oxygen, temperature, conductivity, pH, and oxidation-reduction potential. Field

parameters are not collected if free product is present. The unused sample water is combined in a waste container and taken to Basin Disposal, Inc. for disposal.

SUMMARY TABLES

Historic analytical and water level data are summarized in Table 1 and Table 2, respectively. 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 results of the 2016 groundwater sampling and gauging events.

ANALYTICAL LAB REPORTS

The groundwater analytical lab reports are included as Appendix A.

GROUNDWATER RESULTS

- The groundwater flow direction was generally to the southwest during the April 18, 2016 gauging event, and to the southeast during the October 14, 2016 gauging event (see Figures 2 and 4).
- One or more groundwater samples collected in 2016 from MW-1, MW-5, MW-6, and MW-7 exceeded the New Mexico Water Quality Control Commission (NMWQCC) standard (10 micrograms per liter [µg/L]) for benzene in groundwater. Monitoring well MW-8 was below the NMWQCC standard or not detected.
- Concentrations of toluene were either below the NMWQCC standard (750 µg/L) or not detected in the Site monitoring wells sampled in 2016.
- Concentrations of ethylbenzene were either below the NMWQCC standard (750 µg/L) or not detected in the Site monitoring wells sampled in 2016.
- Concentrations of total xylenes were either below the NMWQCC standard (620 µg/L) or not detected in the Site monitoring wells sampled in 2016.

PLANNED FUTURE ACTIVITIES

Groundwater monitoring events will be conducted on a semi-annual basis. EPCGP will continue to monitor the current operator's site activities as they address a recent release at the Site. The 2017 Annual Report will be submitted in early 2018.

TABLES

TABLE 1 - GROUNDWATER ANALYTICAL RESULTS

Gallegos Canyon Unit #142E					
Location	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
NMWQCC Standards:		10	750	750	620
MW-1	03/10/97	4010	7960	213	2050
MW-1	08/06/97	1040	1310	49.4	647
MW-1	11/05/97	543	719	33.9	342
MW-1	02/13/98	343	354	27.6	394
MW-1	05/06/98	429	216	13.6	176
MW-1	05/04/99	143	20.4	7.78	63.3
MW-1	05/25/00	230	4.4	6	450
MW-1	06/01/01	130	0.5	3.5	6.1
MW-1	05/14/02	34	4.9	1	3.3
MW-1	03/07/03	270	36.8	8.3	21.1
MW-1	09/17/03	150	77	1.9	12.8
MW-1	03/22/04	1.4	<0.14	<0.029	<0.082
MW-1	03/17/05	169	1.3	2.7	6.6
MW-1	06/23/05	810	1.9	0.62	8.1
MW-1	09/26/05	232	14.9	4	15.1
MW-1	12/14/05	354	10.6	5.9	25.6
MW-1	01/09/06	NS	NS	NS	NS
MW-1	01/18/06	NS	NS	NS	NS
MW-1	03/28/06	362	0.37 J	15	15.7
MW-1	06/14/06	210	6.5	2.3	6.1
MW-1	06/28/07	109	12.6	1.1	5.5
MW-1	06/23/08	2320	305	140	934
MW-1	06/02/09	35.3	<1	0.75 J	1.4 J
MW-1	12/30/09	597	10.7 J	26.5	159
MW-1	01/25/10	NS	NS	NS	NS
MW-1	05/25/10	NS	NS	NS	NS
MW-1	09/24/10	NS	NS	NS	NS
MW-1	11/09/10	8610	2770	348	2810
MW-1	02/01/11	NS	NS	NS	NS
MW-1	05/03/11	NS	NS	NS	NS
MW-1	09/27/11	NS	NS	NS	NS
MW-1	11/16/11	229	36.2	5.3	39.3
MW-1	02/16/12	NS	NS	NS	NS
MW-1	05/07/12	NS	NS	NS	NS
MW-1	06/07/13	810	<0.30	<0.20	4.3 J
MW-1	09/11/13	25	<0.30	<0.20	0.39 J
MW-1	12/13/13	330	<0.90	6.9	20
MW-1	04/03/14	560	<3.8	<2.0	<6.5
MW-1	10/25/14	57	<0.70	1.9	3.0 J
MW-1	05/30/15	270	<5.0	1.6	32
MW-1	11/18/15	990	1.6	26	250
MW-1	04/18/16	22	<5.0	<1.0	<5.0
MW-1	10/14/16	520	<10	<2.0	<10

TABLE 1 - GROUNDWATER ANALYTICAL RESULTS

Gallegos Canyon Unit #142E					
Location	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
NMWQCC Standards:		10	750	750	620
MW-2	12/13/01	22000	25000	500	4300
MW-2	05/14/02	NS	NS	NS	NS
MW-2	09/17/03	6890	4760	219	1770
MW-2	03/22/04	13000	8880	321	2850
MW-2	03/17/05	2800	1640	125	978
MW-2	09/14/05	1980	915	63.8	391
MW-2	01/09/06	NS	NS	NS	NS
MW-2	01/18/06	NS	NS	NS	NS
MW-2	06/14/06	2140	811	83.5	610
MW-2	06/28/07	2100	492	140	1050
MW-2	06/23/08	221	1.5 J	3.9	5.8
MW-2	06/02/09	NS	NS	NS	NS
MW-2	12/30/09	6660	6750	764	6210
MW-2	01/25/10	NS	NS	NS	NS
MW-2	05/25/10	NS	NS	NS	NS
MW-2	09/24/10	NS	NS	NS	NS
MW-2	11/09/10	3900	2450	342	2660
MW-2	02/01/11	NS	NS	NS	NS
MW-2	05/03/11	NS	NS	NS	NS
MW-2	09/27/11	NS	NS	NS	NS
MW-2	11/16/11	2040	1020	231	1520
MW-2	02/16/12	NS	NS	NS	NS
MW-2	05/07/12	NS	NS	NS	NS
MW-2	06/07/13	6000	1100	500	3800
MW-2	09/11/13	2200	470	240	1900
MW-2	12/13/13	5500	830	510	3700
MW-2	04/03/14	NS	NS	NS	NS
MW-2	10/25/14	NS	NS	NS	NS
MW-2	05/30/15	3300	140	570	3400
MW-2	11/18/15	4000	120	520	1500
MW-2	04/18/16	NS	NS	NS	NS
MW-2	10/14/16	NS	NS	NS	NS

TABLE 1 - GROUNDWATER ANALYTICAL RESULTS

Gallegos Canyon Unit #142E					
Location	**Date**	**Benzene (µg/L)**	**Toluene (µg/L)**	**Ethylbenzene (µg/L)**	**Total Xylenes (µg/L)**
NMWQCC Standards:		10	750	750	620
MW-3	10/25/14	<0.38	<0.70	<0.50	<1.6
MW-3	05/30/15	<1.0	<5.0	<1.0	<5.0
MW-3	11/18/15	<1.0	<1.0	<1.0	<3.0
MW-3	04/18/16	NS	NS	NS	NS
MW-3	10/14/16	NS	NS	NS	NS
MW-5	10/25/14	1.8	<0.70	0.89 J	11
MW-5	05/30/15	<1.0	<5.0	<1.0	<5.0
MW-5	11/18/15	<1.0	<1.0	<1.0	<3.0
MW-5	04/18/16	22	<5.0	<1.0	5.9
MW-5	10/14/16	<1.0	<5.0	<1.0	<5.0
MW-6	10/25/14	1.1	<0.70	<0.50	<1.6
MW-6	05/30/15	190	<25	<5.0	110
MW-6	11/18/15	<1.0	<1.0	<1.0	<3.0
MW-6	04/18/16	47	<5.0	20	6.4
MW-6	10/14/16	<1.0	<5.0	<1.0	<5.0
MW-7	10/25/14	4.7	0.70 J	1.7	5.7 J
MW-7	05/30/15	6.5	<5.0	<1.0	1.8 J
MW-7	11/18/15	4.3	<1.0	<1.0	<3.0
MW-7	04/18/16	480	350	31	200
MW-7	10/14/16	<1.0	<5.0	<1.0	<5.0

TABLE 1 - GROUNDWATER ANALYTICAL RESULTS

Gallegos Canyon Unit #142E					
Location	**Date**	**Benzene (µg/L)**	**Toluene (µg/L)**	**Ethylbenzene (µg/L)**	**Total Xylenes (µg/L)**
NMWQCC Standards:		10	750	750	620
TMW-1	01/06/06	NS	NS	NS	NS
TMW-1	01/09/06	NS	NS	NS	NS
TMW-1	01/18/06	NS	NS	NS	NS
TMW-1	06/23/08	NS	NS	NS	NS
TMW-1	12/30/09	3660	1550	520	4110
TMW-1	01/25/10	NS	NS	NS	NS
TMW-1	05/25/10	NS	NS	NS	NS
TMW-1	09/24/10	NS	NS	NS	NS
TMW-1	11/09/10	8880	14400	956	9040
TMW-1	02/01/11	NS	NS	NS	NS
TMW-1	05/03/11	NS	NS	NS	NS
TMW-1	09/27/11	NS	NS	NS	NS
TMW-1	11/16/11	3890	6250	420	3610
TMW-1	02/16/12	NS	NS	NS	NS
TMW-1	05/07/12	NS	NS	NS	NS
TMW-1	06/07/13	5100	1100	190	2600
TMW-1	09/11/13	6600	960	190	2600
TMW-1	12/13/13	6500	2200	410	4000
TMW-1	04/03/14	NS	NS	NS	NS
MW-8	10/25/14	0.77 J	<0.70	<0.50	<1.6
MW-8	05/30/15	36	<5.0	3.1	19
MW-8	11/18/15	6.6	<1.0	<1.0	<3.0
MW-8	04/18/16	3	<5.0	<1.0	<5.0
MW-8	10/14/16	4.8	<5.0	<1.0	<5.0

Notes:
µg/L = micrograms per liter
Results highlighted yellow exceed their respective New Mexico Water Quality Control Commission (NMWQCC) 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).
"NS" = Monitoring well not sampled

TABLE 2 - GROUNDWATER ELEVATION RESULTS

Gallegos Canyon Unit #142E						
Location	Date	TOC	Depth to Water (ft.)	Depth to LNAPL (ft.)	LNAPL Thickness (ft.)	GW Elevation (ft.)
MW-1	03/10/97	5481.83	16.78	NR		5465.05
MW-1	08/06/97	5481.83	14.46	NR		5467.37
MW-1	11/05/97	5481.83	15.02	NR		5466.81
MW-1	02/13/98	5481.83	18.18	NR		5463.65
MW-1	05/06/98	5481.83	18.69	NR		5463.14
MW-1	05/04/99	5481.83	17.61	NR		5464.22
MW-1	05/25/00	5481.83	16.44	NR		5465.39
MW-1	06/01/01	5481.83	17.08	NR		5464.75
MW-1	05/14/02	5481.83	14.70	NR		5467.13
MW-1	03/07/03	5481.83	15.32	ND		5466.52
MW-1	09/17/03	5481.83	DRY	ND		DRY
MW-1	03/22/04	5481.83	17.38	ND		5464.45
MW-1	03/17/05	5481.83	18.15	ND		5463.69
MW-1	06/23/05	5481.83	14.72	ND		5467.11
MW-1	09/26/05	5481.83	11.95	ND		5469.88
MW-1	12/14/05	5481.83	14.67	ND		5467.16
MW-1	01/09/06	5481.83	15.67	ND		5466.16
MW-1	01/18/06	5481.83	15.97	ND		5465.86
MW-1	03/28/06	5481.83	18.16	ND		5463.67
MW-1	06/14/06	5481.83	13.08	ND		5468.75
MW-1	06/28/07	5481.83	16.18	ND		5465.65
MW-1	06/23/08	5481.83	15.45	ND		5466.38
MW-1	06/02/09	5481.83	17.80	ND		5464.03
MW-1	12/30/09	5481.83	16.82	ND		5465.01
MW-1	01/25/10	5481.83	17.61	ND		5464.22
MW-1	05/25/10	5481.83	18.45	ND		5463.38
MW-1	09/24/10	5481.83	14.59	ND		5467.24
MW-1	11/09/10	5481.83	14.86	ND		5466.97
MW-1	02/01/11	5481.83	17.46	ND		5464.37
MW-1	05/03/11	5481.83	19.22	ND		5462.61
MW-1	09/27/11	5481.83	11.12	ND		5470.71
MW-1	11/16/11	5481.83	12.75	ND		5469.08
MW-1	02/16/12	5481.83	15.47	ND		5466.36
MW-1	05/07/12	5481.83	16.21	ND		5465.62
MW-1	06/07/13	5481.83	14.06	ND		5467.77
MW-1	09/11/13	5481.83	12.61	ND		5469.22
MW-1	12/13/13	5481.83	14.22	ND		5467.61
MW-1	04/03/14	5481.83	17.66	ND		5464.17
MW-1	10/25/14	5481.83	12.69	ND		5469.14
MW-1	05/30/15	5481.83	16.29	ND		5465.54
MW-1	11/18/15	5481.83	14.52	ND		5467.31
MW-1	04/18/16	5481.83	19.06	ND		5462.77
MW-1	10/14/16	5481.83	15.54	ND		5466.29

TABLE 2 - GROUNDWATER ELEVATION RESULTS

Gallegos Canyon Unit #142E						
Location	Date	TOC	Depth to Water (ft.)	Depth to LNAPL (ft.)	LNAPL Thickness (ft.)	GW Elevation (ft.)
MW-2	12/13/01	5481.56	14.52	NR		5467.04
MW-2	05/14/02	5481.56	14.37	NR		5467.19
MW-2	09/17/03	5481.56	DRY	ND		DRY
MW-2	03/22/04	5481.56	17.06	ND		5464.50
MW-2	03/17/05	5481.56	17.83	ND		5463.73
MW-2	09/14/05	5481.56	11.45	ND		5470.11
MW-2	01/09/06	5481.56	15.35	ND		5466.21
MW-2	01/18/06	5481.56	15.65	ND		5465.91
MW-2	06/14/06	5481.56	12.64	ND		5468.92
MW-2	06/28/07	5481.56	16.86	ND		5464.70
MW-2	06/23/08	5481.56	15.15	ND		5466.41
MW-2	06/02/09	5481.56	17.84	17.42	0.42	5464.04
MW-2	12/30/09	5481.56	16.48	16.45	0.03	5465.10
MW-2	01/25/10	5481.56	17.45	17.27	0.18	5464.25
MW-2	05/25/10	5481.56	18.55	18.05	0.50	5463.39
MW-2	09/24/10	5481.56	14.25	ND		5467.31
MW-2	11/09/10	5481.56	14.50	14.49	0.01	5467.07
MW-2	02/01/11	5481.56	17.15	ND		5464.41
MW-2	05/03/11	5481.56	18.91	ND		5462.65
MW-2	09/27/11	5481.56	12.65	ND		5468.91
MW-2	11/16/11	5481.56	12.37	ND		5469.19
MW-2	02/16/12	5481.56	15.13	ND		5466.43
MW-2	05/07/12	5481.56	16.91	ND		5464.65
MW-2	06/07/13	5481.56	13.63	ND		5467.93
MW-2	09/11/13	5481.56	12.18	ND		5469.38
MW-2	12/13/13	5481.56	13.92	ND		5467.64
MW-2	04/03/14	5481.56	17.42	17.31	0.11	5464.22
MW-2	10/25/14	5481.56	12.14	ND		5469.42
MW-2	05/30/15	5481.56	15.92	ND		5465.64
MW-2	11/18/15	5481.56	14.26	ND		5467.30
MW-2	04/18/16	5481.56	18.99	18.69	0.30	5462.80
MW-2	10/14/16	5481.56	15.26	ND		5466.30
TMW-1	01/06/06	5481.43	15.29	ND		5466.14
TMW-1	01/09/06	5481.43	15.27	ND		5466.16
TMW-1	01/18/06	5481.43	15.57	ND		5465.87
TMW-1	06/23/08	5481.43	15.04	ND		5466.39
TMW-1	12/30/09	5481.43	NA	ND		NA
TMW-1	01/25/10	5481.43	17.23	ND		5464.20
TMW-1	05/25/10	5481.43	18.70	17.80	0.90	5463.41
TMW-1	09/24/10	5481.43	14.45	14.10	0.35	5467.25
TMW-1	11/09/10	5481.43	14.62	14.37	0.25	5467.00
TMW-1	02/01/11	5481.43	17.45	17.00	0.45	5464.32
TMW-1	05/03/11	5481.43	19.76	18.55	1.21	5462.58
TMW-1	09/27/11	5481.43	12.43	12.03	0.40	5469.30
TMW-1	11/16/11	5481.43	12.44	12.31	0.13	5469.09
TMW-1	02/16/12	5481.43	14.25	12.03	2.22	5468.85
TMW-1	05/07/12	5481.43	14.20	14.18	0.02	5467.25
TMW-1	06/07/13	5481.43	13.65	ND		5467.78
TMW-1	09/11/13	5481.43	12.14	ND		5469.29
TMW-1	12/13/13	5481.43	13.90	ND		5467.53
TMW-1	04/03/14	5481.43	17.36	17.25	0.11	5464.16

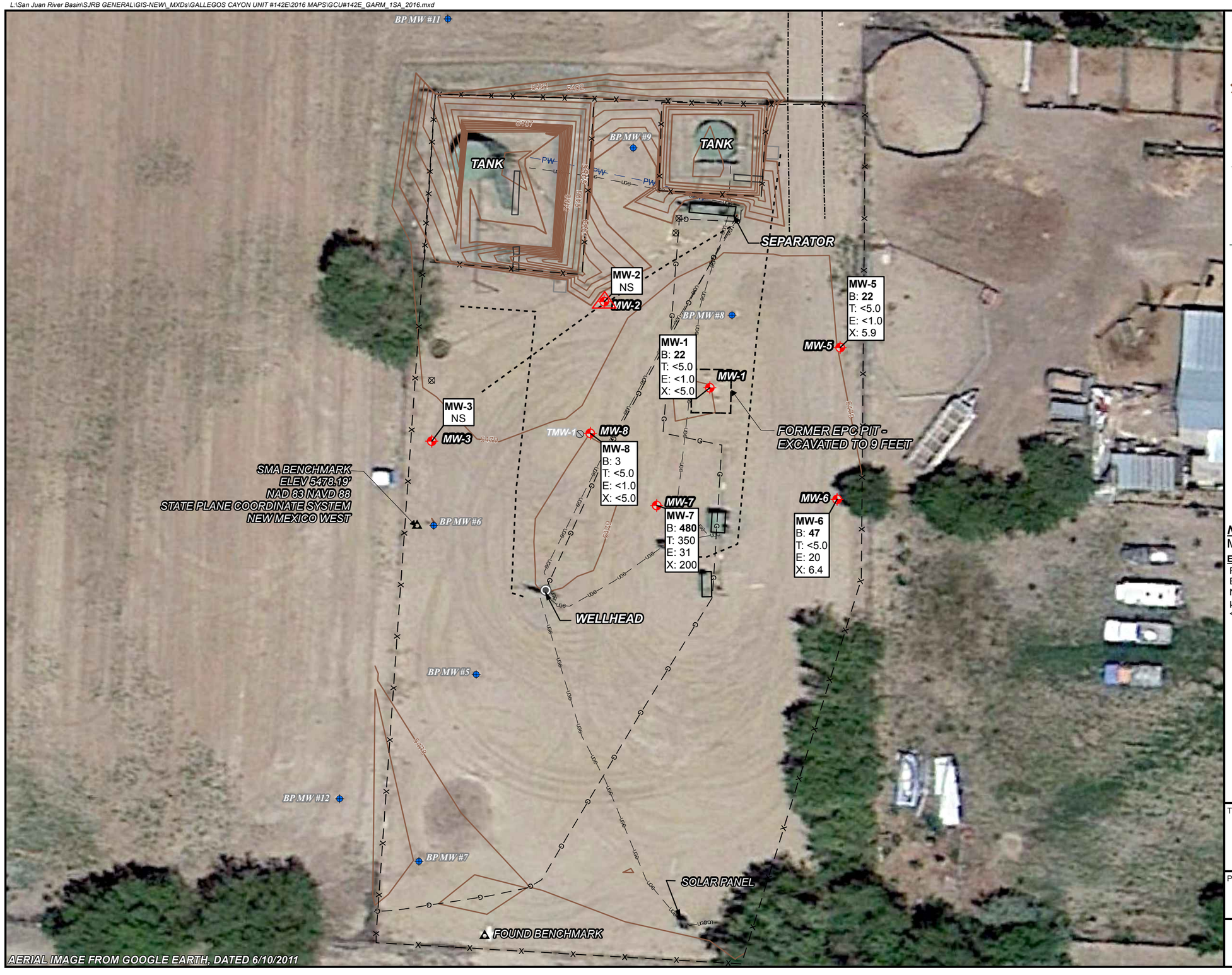
TABLE 2 - GROUNDWATER ELEVATION RESULTS

Gallegos Canyon Unit #142E						
Location	**Date**	**TOC**	**Depth to Water (ft.)**	**Depth to LNAPL (ft.)**	**LNAPL Thickness (ft.)**	**GW Elevation (ft.)**
MW-3	10/25/14	5481.87	12.53	ND		5469.34
MW-3	05/30/15	5481.87	16.32	ND		5465.55
MW-3	11/18/15	5481.87	14.65	ND		5467.22
MW-3	04/18/16	5481.87	19.18	ND		5462.69
MW-3	10/14/16	5481.87	15.64	ND		5466.23
MW-5	10/25/14	5482.04	12.73	ND		5469.31
MW-5	05/30/15	5482.04	16.50	ND		5465.54
MW-5	11/18/15	5482.04	14.80	ND		5467.24
MW-5	04/18/16	5482.04	19.20	ND		5462.84
MW-5	10/14/16	5482.04	15.78	ND		5466.26
MW-6	10/25/14	5481.45	12.31	ND		5469.14
MW-6	05/30/15	5481.45	16.01	ND		5465.44
MW-6	11/18/15	5481.45	14.36	ND		5467.09
MW-6	04/18/16	5481.45	18.73	ND		5462.72
MW-6	10/14/16	5481.45	15.35	ND		5466.10
MW-7	10/25/14	5481.80	12.59	ND		5469.21
MW-7	05/30/15	5481.80	16.32	ND		5465.48
MW-7	11/18/15	5481.80	14.67	ND		5467.13
MW-7	04/18/16	5481.80	19.09	ND		5462.71
MW-7	10/14/16	5481.80	15.66	ND		5466.14
MW-8	10/25/14	5481.83	12.50	ND		5469.33
MW-8	05/30/15	5481.83	16.28	ND		5465.55
MW-8	11/18/15	5481.83	14.60	ND		5467.23
MW-8	04/18/16	5481.83	19.11	ND		5462.72
MW-8	10/14/16	5481.83	15.61	ND		5466.22

Notes:
"ft" = feet
"TOC" = Top of casing
LNAPL = light non-aqueous phase liquid
"ND" = LNAPL not detected
"NR" = LNAPL not recorded

FIGURES

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\GALLEGOS CAYON UNIT #142E\2016 MAPS\GCU#142E_GARM_1SA_2016.mxd



LEGEND:

- 5795 — APPROX. GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- ABANDONED UNKNOWN LINE
- FENCE
- PRODUCED WATER LINE
- UNDERGROUND CABLE
- UNDERGROUND GAS LINE
- ABANDONED MONITORING WELL
- SMA BENCHMARK
- MONITORING WELL
- MONITORING WELL WITH MEASUREABLE FREE PRODUCT
- MONITORING WELL ASSOCIATED WITH UNRELATED RELEASE
- WELLHEAD
- RIG ANCHOR

NOTE:

MW-4 was a soil boring only (no well constructed).

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
<1 = 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 30 60

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
	11/30/2016	SLG	SLG	SRV

TITLE:

GROUNDWATER ANALYTICAL RESULTS
APRIL 18, 2016

PROJECT: **GALLEGOS CANYON UNIT #142E**
SAN JUAN RIVER BASIN
SAN JUAN COUNTY, NEW MEXICO

MWH

Figure No.: 1

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\GALLEGOS CAYON UNIT #142E\2016 MAPS\GCU#142E_GECM_1SA_2016.mxd

BP MW #11
BP MW #9
BP MW #8
BP MW #6
BP MW #5
BP MW #12
BP MW #7
TANK
TANK
SEPARATOR
WELLHEAD
SOLAR PANEL
FOUND BM
5462.75
5462.8
5462.7
MW-2
MW-2
5462.80
MW-5
MW-5
5462.84
MW-1
MW-1
5462.77
TMW-1
MW-8
MW-8
5462.72
MW-3
MW-3
5462.69
MW-7
MW-7
5462.71
MW-6
MW-6
5462.72
FORMER EPC PIT - EXCAVATED TO 9 FEET
SMA BENCHMARK
ELEV 5478.19'
NAD 83 NAVD 88
STATE PLANE COORDINATE SYSTEM
NEW MEXICO WEST
AERIAL IMAGE FROM GOOGLE EARTH, DATED 6/10/2011

LEGEND:

- 5795 — APPROX. GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- ABANDONED UNKNOWN LINE
- FENCE
- PRODUCED WATER LINE
- UNDERGROUND CABLE
- UNDERGROUND GAS LINE
- ABANDONED MONITORING WELL
- SMA BENCHMARK
- MONITORING WELL
- MONITORING WELL WITH MEASUREABLE FREE PRODUCT
- MONITORING WELL ASSOCIATED WITH UNRELATED RELEASE
- WELLHEAD
- RIG ANCHOR

NOTES:

5467.31 — GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)

5457.8 — WATER LEVEL ELEVATION CONTOUR (DASHED WHERE INFERRED, FEET ABOVE MEAN SEA LEVEL, 0.05 FOOT CONTOUR INTERVAL)

DIRECTION OF APPARENT GROUNDWATER FLOW

N

SCALE IN FEET

0 30 60

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
	11/14/2016	SLG	SLG	SRV

TITLE:

GROUNDWATER ELEVATION MAP
APRIL18, 2016

PROJECT: **GALLEGOS CANYON UNIT #142E**
SAN JUAN RIVER BASIN
SAN JUAN COUNTY, NEW MEXICO

MWH

Figure No.: **2**

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\GALLEGOS CAYON UNIT #142E\2016 MAPS\GCU#142E_GARM_2SA_2016.mxd

LEGEND:

- 5795 — APPROX. GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- ABANDONED UNKNOWN LINE
- FENCE
- PRODUCED WATER LINE
- UNDERGROUND CABLE
- UNDERGROUND GAS LINE
- ABANDONED MONITORING WELL
- SMA BENCHMARK
- MONITORING WELL
- MONITORING WELL ASSOCIATED WITH UNRELATED RELEASE
- WELLHEAD
- RIG ANCHOR

NOTE:
MW-4 was a soil boring only (no well constructed).

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
<1 = 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 30 60

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
	11/30/2016	SLG	SLG	SRV

TITLE:

GROUNDWATER ANALYTICAL RESULTS
OCTOBER 14, 2016

PROJECT:
GALLEGOS CANYON UNIT #142E
SAN JUAN RIVER BASIN
SAN JUAN COUNTY, NEW MEXICO

MWH

Figure No.: 3

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\GALLEGOS CAYON UNIT #142E\2016 MAPS\GCU#142E_GECM_2SA_2016.mxd

BP MW #11
BP MW #9
BP MW #8
BP MW #6
BP MW #5
BP MW #12
BP MW #7
TANK
TANK
SEPARATOR
WELLHEAD
SOLAR PANEL
FOUND BM
FORMER EPC PIT - EXCAVATED TO 9 FEET
SMA BENCHMARK
ELEV 5478.19'
NAD 83 NAVD 88
STATE PLANE COORDINATE SYSTEM
NEW MEXICO WEST
MW-2 5466.3
MW-3 5466.23
MW-1 5466.29
MW-8 5466.22
MW-5 5466.26
MW-6 5466.1
MW-7 5466.14
TMW-1
5466.3
5466.25
5466.2
5466.15
5466.1
AERIAL IMAGE FROM GOOGLE EARTH, DATED 6/10/2011

LEGEND:

- 5795 — APPROX. GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- ABANDONED UNKNOWN LINE
- FENCE
- PRODUCED WATER LINE
- UNDERGROUND CABLE
- UNDERGROUND GAS LINE
- ABANDONED MONITORING WELL
- SMA BENCHMARK
- MONITORING WELL
- MONITORING WELL ASSOCIATED WITH UNRELATED RELEASE
- WELLHEAD
- RIG ANCHOR

NOTES:

5467.31 — GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)

5467.3 — WATER LEVEL ELEVATION CONTOUR (DASHED WHERE INFERRED, FEET ABOVE MEAN SEA LEVEL, 0.05 FOOT CONTOUR INTERVAL)

DIRECTION OF APPARENT GROUNDWATER FLOW

N

SCALE IN FEET

0 30 60

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
	11/10/2016	SLG	SLG	SRV

TITLE:

GROUNDWATER ELEVATION MAP
OCTOBER 14, 2016

PROJECT: **GALLEGOS CANYON UNIT #142E**
SAN JUAN RIVER BASIN
SAN JUAN COUNTY, NEW MEXICO

MWH

Figure No.: **4**

APPENDIX A

MAY 3, 2016 GROUNDWATER SAMPLING ANALYTICAL REPORT
OCTOBER 27, 2016 GROUNDWATER SAMPLING ANALYTICAL REPORT

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

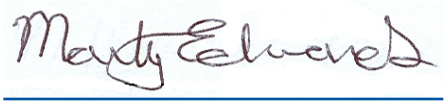
ANALYTICAL REPORT

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

TestAmerica Job ID: 400-120436-1
Client Project/Site: GCU Com A#142E

For:
MWH Americas Inc
11153 Aurora Avenue
Des Moines, Iowa 50322-7904

Attn: Steve Varsa



Authorized for release by:
5/3/2016 5:16:50 PM

Marty Edwards, Manager of Project Management
(850)474-1001
marty.edwards@testamericainc.com

Table of Contents

Client: MWH Americas Inc
Project/Site: GCU Com A#142E

TestAmerica Job ID: 400-120436-1

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: 400-120436-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-120436-1

Comments
No additional comments.

Receipt
The samples were received on 4/19/2016 9:43 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.4° C.

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

Detection Summary

Client: MWH Americas Inc
Project/Site: GCU Com A#142E

TestAmerica Job ID: 400-120436-1

Client Sample ID: MW-1 — Lab Sample ID: 400-120436-1

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene	22		1.0		ug/L	1		8021B	Total/NA

Client Sample ID: MW-5 — Lab Sample ID: 400-120436-2

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene	22		1.0		ug/L	1		8021B	Total/NA
Xylenes, Total	5.9		5.0		ug/L	1		8021B	Total/NA

Client Sample ID: MW-6 — Lab Sample ID: 400-120436-3

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene	47		1.0		ug/L	1		8021B	Total/NA
Ethylbenzene	20		1.0		ug/L	1		8021B	Total/NA
Xylenes, Total	6.4		5.0		ug/L	1		8021B	Total/NA

Client Sample ID: MW-7 — Lab Sample ID: 400-120436-4

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene	480		5.0		ug/L	5		8021B	Total/NA
Ethylbenzene	31		5.0		ug/L	5		8021B	Total/NA
Toluene	350		25		ug/L	5		8021B	Total/NA
Xylenes, Total	200		25		ug/L	5		8021B	Total/NA

Client Sample ID: MW-8 — Lab Sample ID: 400-120436-5

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene	3.0		1.0		ug/L	1		8021B	Total/NA

Client Sample ID: TRIP BLANK — Lab Sample ID: 400-120436-6

No Detections.

This Detection Summary does not include radiochemical test results.

Sample Summary

Client: MWH Americas Inc
Project/Site: GCU Com A#142E

TestAmerica Job ID: 400-120436-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-120436-1	MW-1	Water	04/18/16 09:35	04/19/16 09:43
400-120436-2	MW-5	Water	04/18/16 10:05	04/19/16 09:43
400-120436-3	MW-6	Water	04/18/16 09:55	04/19/16 09:43
400-120436-4	MW-7	Water	04/18/16 10:00	04/19/16 09:43
400-120436-5	MW-8	Water	04/18/16 09:50	04/19/16 09:43
400-120436-6	TRIP BLANK	Water	04/18/16 00:00	04/19/16 09:43

Client: MWH Americas Inc
Project/Site: GCU Com A#142E

TestAmerica Job ID: 400-120436-1

Client Sample ID: MW-1
Date Collected: 04/18/16 09:35
Date Received: 04/19/16 09:43

Lab Sample ID: 400-120436-1
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**22**		1.0		ug/L			04/29/16 16:07	1
Ethylbenzene	<1.0		1.0		ug/L			04/29/16 16:07	1
Toluene	<5.0		5.0		ug/L			04/29/16 16:07	1
Xylenes, Total	<5.0		5.0		ug/L			04/29/16 16:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*95*		*78 - 124*		*04/29/16 16:07*	*1*

Client: MWH Americas Inc
Project/Site: GCU Com A#142E

TestAmerica Job ID: 400-120436-1

Client Sample ID: MW-5
Date Collected: 04/18/16 10:05
Date Received: 04/19/16 09:43

Lab Sample ID: 400-120436-2
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**22**		1.0		ug/L			04/29/16 17:15	1
Ethylbenzene	<1.0		1.0		ug/L			04/29/16 17:15	1
Toluene	<5.0		5.0		ug/L			04/29/16 17:15	1
Xylenes, Total	**5.9**		5.0		ug/L			04/29/16 17:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*95*		*78 - 124*		*04/29/16 17:15*	*1*

Client: MWH Americas Inc
Project/Site: GCU Com A#142E

TestAmerica Job ID: 400-120436-1

Client Sample ID: MW-6
Date Collected: 04/18/16 09:55
Date Received: 04/19/16 09:43

Lab Sample ID: 400-120436-3
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**47**		1.0		ug/L			04/29/16 17:49	1
Ethylbenzene	**20**		1.0		ug/L			04/29/16 17:49	1
Toluene	<5.0		5.0		ug/L			04/29/16 17:49	1
Xylenes, Total	**6.4**		5.0		ug/L			04/29/16 17:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*99*		*78 - 124*		*04/29/16 17:49*	*1*

Client: MWH Americas Inc
Project/Site: GCU Com A#142E

TestAmerica Job ID: 400-120436-1

Client Sample ID: MW-7
Date Collected: 04/18/16 10:00
Date Received: 04/19/16 09:43

Lab Sample ID: 400-120436-4
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	480		5.0		ug/L			04/29/16 18:23	5
Ethylbenzene	31		5.0		ug/L			04/29/16 18:23	5
Toluene	350		25		ug/L			04/29/16 18:23	5
Xylenes, Total	200		25		ug/L			04/29/16 18:23	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*99*		*78 - 124*		*04/29/16 18:23*	*5*

Client: MWH Americas Inc
Project/Site: GCU Com A#142E

TestAmerica Job ID: 400-120436-1

Client Sample ID: MW-8
Date Collected: 04/18/16 09:50
Date Received: 04/19/16 09:43

Lab Sample ID: 400-120436-5
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**3.0**		1.0		ug/L			04/29/16 18:58	1
Ethylbenzene	<1.0		1.0		ug/L			04/29/16 18:58	1
Toluene	<5.0		5.0		ug/L			04/29/16 18:58	1
Xylenes, Total	<5.0		5.0		ug/L			04/29/16 18:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*99*		*78 - 124*		*04/29/16 18:58*	*1*

Client: MWH Americas Inc
Project/Site: GCU Com A#142E

TestAmerica Job ID: 400-120436-1

Client Sample ID: TRIP BLANK
Date Collected: 04/18/16 00:00
Date Received: 04/19/16 09:43

Lab Sample ID: 400-120436-6
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0		ug/L			04/29/16 19:32	1
Ethylbenzene	<1.0		1.0		ug/L			04/29/16 19:32	1
Toluene	<5.0		5.0		ug/L			04/29/16 19:32	1
Xylenes, Total	<5.0		5.0		ug/L			04/29/16 19:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*97*		*78 - 124*		*04/29/16 19:32*	*1*

QC Association Summary

Client: MWH Americas Inc
Project/Site: GCU Com A#142E

TestAmerica Job ID: 400-120436-1

GC VOA

Analysis Batch: 304029

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-120432-A-10 MS	Matrix Spike	Total/NA	Water	8021B	
400-120432-A-10 MSD	Matrix Spike Duplicate	Total/NA	Water	8021B	
400-120436-1	MW-1	Total/NA	Water	8021B	
400-120436-2	MW-5	Total/NA	Water	8021B	
400-120436-3	MW-6	Total/NA	Water	8021B	
400-120436-4	MW-7	Total/NA	Water	8021B	
400-120436-5	MW-8	Total/NA	Water	8021B	
400-120436-6	TRIP BLANK	Total/NA	Water	8021B	
LCS 400-304029/1003	Lab Control Sample	Total/NA	Water	8021B	
MB 400-304029/5	Method Blank	Total/NA	Water	8021B	

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 400-304029/5
Matrix: Water
Analysis Batch: 304029

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

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0		ug/L			04/29/16 11:33	1
Ethylbenzene	<1.0		1.0		ug/L			04/29/16 11:33	1
Toluene	<5.0		5.0		ug/L			04/29/16 11:33	1
Xylenes, Total	<5.0		5.0		ug/L			04/29/16 11:33	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*91*		*78 - 124*		*04/29/16 11:33*	*1*

Lab Sample ID: LCS 400-304029/1003
Matrix: Water
Analysis Batch: 304029

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	48.2		ug/L		96	85 - 115		
Ethylbenzene			50.0	43.6		ug/L		87	85 - 115		
Toluene			50.0	44.4		ug/L		89	85 - 115		
Xylenes, Total			150	130		ug/L		87	85 - 115		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
a,a,a-Trifluorotoluene (pid)	*99*		*78 - 124*

Lab Sample ID: 400-120432-A-10 MS
Matrix: Water
Analysis Batch: 304029

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	<1.0		50.0	51.7		ug/L		102	44 - 150		
Ethylbenzene	<1.0		50.0	51.5		ug/L		103	70 - 142		
Toluene	<5.0		50.0	52.7		ug/L		105	69 - 136		
Xylenes, Total	<5.0		150	154		ug/L		103	68 - 142		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
a,a,a-Trifluorotoluene (pid)	*100*		*78 - 124*

Lab Sample ID: 400-120432-A-10 MSD
Matrix: Water
Analysis Batch: 304029

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<1.0		50.0	55.7		ug/L		110	44 - 150	7	16
Ethylbenzene	<1.0		50.0	52.1		ug/L		104	70 - 142	1	16
Toluene	<5.0		50.0	53.3		ug/L		107	69 - 136	1	16
Xylenes, Total	<5.0		150	155		ug/L		104	68 - 142	1	15

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
a,a,a-Trifluorotoluene (pid)	*100*		*78 - 124*

Lab Chronicle

Client: MWH Americas Inc
Project/Site: GCU Com A#142E

TestAmerica Job ID: 400-120436-1

Client Sample ID: MW-1
Date Collected: 04/18/16 09:35
Date Received: 04/19/16 09:43

Lab Sample ID: 400-120436-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	304029	04/29/16 16:07	MKA	TAL PEN
	Instrument ID: CH_JOAN									

Client Sample ID: MW-5
Date Collected: 04/18/16 10:05
Date Received: 04/19/16 09:43

Lab Sample ID: 400-120436-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	304029	04/29/16 17:15	MKA	TAL PEN
	Instrument ID: CH_JOAN									

Client Sample ID: MW-6
Date Collected: 04/18/16 09:55
Date Received: 04/19/16 09:43

Lab Sample ID: 400-120436-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	304029	04/29/16 17:49	MKA	TAL PEN
	Instrument ID: CH_JOAN									

Client Sample ID: MW-7
Date Collected: 04/18/16 10:00
Date Received: 04/19/16 09:43

Lab Sample ID: 400-120436-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		5	5 mL	5 mL	304029	04/29/16 18:23	MKA	TAL PEN
	Instrument ID: CH_JOAN									

Client Sample ID: MW-8
Date Collected: 04/18/16 09:50
Date Received: 04/19/16 09:43

Lab Sample ID: 400-120436-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	304029	04/29/16 18:58	MKA	TAL PEN
	Instrument ID: CH_JOAN									

Client Sample ID: TRIP BLANK
Date Collected: 04/18/16 00:00
Date Received: 04/19/16 09:43

Lab Sample ID: 400-120436-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	304029	04/29/16 19:32	MKA	TAL PEN
	Instrument ID: CH_JOAN									

Lab Chronicle

Client: MWH Americas Inc
Project/Site: GCU Com A#142E

TestAmerica Job ID: 400-120436-1

Laboratory References:

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

Certification Summary

Client: MWH Americas Inc
Project/Site: GCU Com A#142E

TestAmerica Job ID: 400-120436-1

Laboratory: TestAmerica Pensacola

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-16
Arizona	State Program	9	AZ0710	01-11-17
Arkansas DEQ	State Program	6	88-0689	09-01-16
California	ELAP	9	2510	03-31-18
Florida	NELAP	4	E81010	06-30-16
Georgia	State Program	4	N/A	06-30-16
Illinois	NELAP	5	200041	10-09-16
Iowa	State Program	7	367	07-31-16
Kansas	NELAP	7	E-10253	05-31-16 *
Kentucky (UST)	State Program	4	53	06-30-16
Kentucky (WW)	State Program	4	98030	12-31-16
Louisiana	NELAP	6	30976	06-30-16
Maryland	State Program	3	233	09-30-16
Massachusetts	State Program	1	M-FL094	06-30-16
Michigan	State Program	5	9912	06-30-16
New Jersey	NELAP	2	FL006	06-30-16
North Carolina (WW/SW)	State Program	4	314	12-31-16
Oklahoma	State Program	6	9810	08-31-16
Pennsylvania	NELAP	3	68-00467	01-31-17
Rhode Island	State Program	1	LAO00307	12-30-16
South Carolina	State Program	4	96026	06-30-16
Tennessee	State Program	4	TN02907	06-30-16
Texas	NELAP	6	T104704286-15-9	09-30-16
USDA	Federal		P330-13-00193	07-01-16
Virginia	NELAP	3	460166	06-14-16
West Virginia DEP	State Program	3	136	06-30-16

* Certification renewal pending - certification considered valid.

Method Summary

Client: MWH Americas Inc
Project/Site: GCU Com A#142E

TestAmerica Job ID: 400-120436-1

Method	Method Description	Protocol	Laboratory
8021B	Volatile Organic Compounds (GC)	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 Pensacola
3355 McLemore Drive
Pensacola. FL 32514
Phone (850) 474-1001 Fax (850) 478-2671

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Clint Oberbroeckling	Lab PM: Edwards, Marty P	400-120436 COC	Carrier Tracking No(s):	COC No: 400-54744-21715.1
Client Contact: Ms. Sarah Gardner	Phone: 515 251 1005	E-Mail: marty.edwards@testamericainc.com			Page: Page 1 of 1
Company: MWH Americas Inc		Analysis Requested			Job #: 10508834
Address: 1560 Broadway Suite 1800	Due Date Requested: PER AAF#				Preservation Codes:
City: Denver	TAT Requested (days): Per AAF				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 - Na2S2O3, S - H2SO4, T - TSP Dodecanydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)
State, Zip: CO, 80202	MWH-03-30-15-CWO-01				
Phone: 303-291-2239(Tel)	PO #: Purchase Order Requested				Other:
Email: sarah.gardner@mwhglobal.com	WO #:				
Project Name: GCU Com A #142E	Project #: 40005479				
Site: GCU Com A #142E	SSOW#:				

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	8021B - BTEX 8021	Preservation Code	Special Instructions/Note:
MW-1	4/18/19	0935	G	Water	X	2	
CW ~~MW-2~~ MW-5		1005		Water	X	2	
MW-6		955		Water	X	2	
MW-7		1000		Water	X	2	
MW-8		950		Water	X	2	
TRIP Blank	—	—	—	Water	X		
				Water			
				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:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		4/18/16 1530	MWH		4/19/16 0943	TA
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: △ Yes \ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 2.4°C IR6

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5/3/2016

Login Sample Receipt Checklist

Client: MWH Americas Inc

Job Number: 400-120436-1

Login Number: 120436

List Number: 1

Creator: Crawford, Lauren E

List Source: TestAmerica Pensacola

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	2.4°C IR-6
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 (excluding tests with immediate HTs)	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

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: 400-128742-1
Client Project/Site: GCU Com A #142E

For:
MWH Americas Inc
1560 Broadway
Suite 1800
Denver, Colorado 80202

Attn: Ms. Sarah Gardner

Carol M Webb

Authorized for release by:
10/27/2016 11:17:09 AM

Carol Webb, Project Manager II
(850)471-6250
carol.webb@testamericainc.com

Table of Contents

Definitions/Glossary

Client: MWH Americas Inc
Project/Site: GCU Com A #142E

TestAmerica Job ID: 400-128742-1

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)

Case Narrative

Client: MWH Americas Inc
Project/Site: GCU Com A #142E

TestAmerica Job ID: 400-128742-1

Job ID: 400-128742-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-128742-1

Comments
No additional comments.

Receipt
The samples were received on 10/15/2016 9:13 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.2º C.

Receipt Exceptions
The container label for the following sample did not match the information listed on the Chain-of-Custody (COC): MW-7 (400-128742-4). The container labels list MW-8, while the COC lists MW-7. The client was notified and confirmed the COC was correct and the label was corrected.

GC 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.

Detection Summary

Client: MWH Americas Inc
Project/Site: GCU Com A #142E

TestAmerica Job ID: 400-128742-1

Client Sample ID: MW-1 — Lab Sample ID: 400-128742-1

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene	520		2.0		ug/L	2		8021B	Total/NA

Client Sample ID: MW-5 — Lab Sample ID: 400-128742-2

No Detections.

Client Sample ID: MW-6 — Lab Sample ID: 400-128742-3

No Detections.

Client Sample ID: MW-7 — Lab Sample ID: 400-128742-4

No Detections.

Client Sample ID: MW-8 — Lab Sample ID: 400-128742-5

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene	4.8		1.0		ug/L	1		8021B	Total/NA

Client Sample ID: TB — Lab Sample ID: 400-128742-6

No Detections.

This Detection Summary does not include radiochemical test results.

Sample Summary

Client: MWH Americas Inc
Project/Site: GCU Com A #142E

TestAmerica Job ID: 400-128742-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-128742-1	MW-1	Water	10/14/16 08:42	10/15/16 09:13
400-128742-2	MW-5	Water	10/14/16 08:49	10/15/16 09:13
400-128742-3	MW-6	Water	10/14/16 08:52	10/15/16 09:13
400-128742-4	MW-7	Water	10/14/16 09:04	10/15/16 09:13
400-128742-5	MW-8	Water	10/14/16 08:58	10/15/16 09:13
400-128742-6	TB	Water	10/14/16 00:00	10/15/16 09:13

Client: MWH Americas Inc
Project/Site: GCU Com A #142E

TestAmerica Job ID: 400-128742-1

Client Sample ID: MW-1
Date Collected: 10/14/16 08:42
Date Received: 10/15/16 09:13

Lab Sample ID: 400-128742-1
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**520**		2.0		ug/L			10/25/16 18:17	2
Ethylbenzene	<2.0		2.0		ug/L			10/25/16 18:17	2
Toluene	<10		10		ug/L			10/25/16 18:17	2
Xylenes, Total	<10		10		ug/L			10/25/16 18:17	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*104*		*78 - 124*		*10/25/16 18:17*	*2*

Client: MWH Americas Inc
Project/Site: GCU Com A #142E

TestAmerica Job ID: 400-128742-1

Client Sample ID: MW-5
Date Collected: 10/14/16 08:49
Date Received: 10/15/16 09:13

Lab Sample ID: 400-128742-2
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0		ug/L			10/25/16 14:37	1
Ethylbenzene	<1.0		1.0		ug/L			10/25/16 14:37	1
Toluene	<5.0		5.0		ug/L			10/25/16 14:37	1
Xylenes, Total	<5.0		5.0		ug/L			10/25/16 14:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*101*		*78 - 124*		*10/25/16 14:37*	*1*

Client: MWH Americas Inc
Project/Site: GCU Com A #142E

TestAmerica Job ID: 400-128742-1

Client Sample ID: MW-6
Date Collected: 10/14/16 08:52
Date Received: 10/15/16 09:13

Lab Sample ID: 400-128742-3
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0		ug/L			10/25/16 15:04	1
Ethylbenzene	<1.0		1.0		ug/L			10/25/16 15:04	1
Toluene	<5.0		5.0		ug/L			10/25/16 15:04	1
Xylenes, Total	<5.0		5.0		ug/L			10/25/16 15:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*99*		*78 - 124*		*10/25/16 15:04*	*1*

Client: MWH Americas Inc
Project/Site: GCU Com A #142E

TestAmerica Job ID: 400-128742-1

Client Sample ID: MW-7
Date Collected: 10/14/16 09:04
Date Received: 10/15/16 09:13

Lab Sample ID: 400-128742-4
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0		ug/L			10/25/16 18:45	1
Ethylbenzene	<1.0		1.0		ug/L			10/25/16 18:45	1
Toluene	<5.0		5.0		ug/L			10/25/16 18:45	1
Xylenes, Total	<5.0		5.0		ug/L			10/25/16 18:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*100*		*78 - 124*		*10/25/16 18:45*	*1*

Client: MWH Americas Inc
Project/Site: GCU Com A #142E

TestAmerica Job ID: 400-128742-1

Client Sample ID: MW-8
Date Collected: 10/14/16 08:58
Date Received: 10/15/16 09:13

Lab Sample ID: 400-128742-5
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**4.8**		1.0		ug/L			10/25/16 15:59	1
Ethylbenzene	<1.0		1.0		ug/L			10/25/16 15:59	1
Toluene	<5.0		5.0		ug/L			10/25/16 15:59	1
Xylenes, Total	<5.0		5.0		ug/L			10/25/16 15:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*106*		*78 - 124*		*10/25/16 15:59*	*1*

Client: MWH Americas Inc
Project/Site: GCU Com A #142E

TestAmerica Job ID: 400-128742-1

Client Sample ID: TB
Date Collected: 10/14/16 00:00
Date Received: 10/15/16 09:13

Lab Sample ID: 400-128742-6
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0		ug/L			10/25/16 16:27	1
Ethylbenzene	<1.0		1.0		ug/L			10/25/16 16:27	1
Toluene	<5.0		5.0		ug/L			10/25/16 16:27	1
Xylenes, Total	<5.0		5.0		ug/L			10/25/16 16:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*99*		*78 - 124*		*10/25/16 16:27*	*1*

QC Association Summary

Client: MWH Americas Inc
Project/Site: GCU Com A #142E

TestAmerica Job ID: 400-128742-1

GC VOA

Analysis Batch: 328165

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-128742-1	MW-1	Total/NA	Water	8021B	
400-128742-2	MW-5	Total/NA	Water	8021B	
400-128742-3	MW-6	Total/NA	Water	8021B	
400-128742-4	MW-7	Total/NA	Water	8021B	
400-128742-5	MW-8	Total/NA	Water	8021B	
400-128742-6	TB	Total/NA	Water	8021B	
MB 400-328165/5	Method Blank	Total/NA	Water	8021B	
LCS 400-328165/1004	Lab Control Sample	Total/NA	Water	8021B	
400-128742-2 MS	MW-5	Total/NA	Water	8021B	
400-128742-2 MSD	MW-5	Total/NA	Water	8021B	

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 400-328165/5
Matrix: Water
Analysis Batch: 328165

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

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0		ug/L			10/25/16 13:15	1
Ethylbenzene	<1.0		1.0		ug/L			10/25/16 13:15	1
Toluene	<5.0		5.0		ug/L			10/25/16 13:15	1
Xylenes, Total	<5.0		5.0		ug/L			10/25/16 13:15	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*101*		*78 - 124*		*10/25/16 13:15*	*1*

Lab Sample ID: LCS 400-328165/1004
Matrix: Water
Analysis Batch: 328165

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	49.0		ug/L		98	85 - 115		
Ethylbenzene			50.0	48.4		ug/L		97	85 - 115		
Toluene			50.0	49.5		ug/L		99	85 - 115		
Xylenes, Total			150	145		ug/L		97	85 - 115		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
a,a,a-Trifluorotoluene (pid)	*97*		*78 - 124*

Lab Sample ID: 400-128742-2 MS
Matrix: Water
Analysis Batch: 328165

Client Sample ID: MW-5
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	<1.0		50.0	56.6		ug/L		113	44 - 150		
Ethylbenzene	<1.0		50.0	53.6		ug/L		107	70 - 142		
Toluene	<5.0		50.0	55.3		ug/L		111	69 - 136		
Xylenes, Total	<5.0		150	160		ug/L		106	68 - 142		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
a,a,a-Trifluorotoluene (pid)	*101*		*78 - 124*

Lab Sample ID: 400-128742-2 MSD
Matrix: Water
Analysis Batch: 328165

Client Sample ID: MW-5
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<1.0		50.0	54.4		ug/L		109	44 - 150	4	16
Ethylbenzene	<1.0		50.0	51.3		ug/L		103	70 - 142	4	16
Toluene	<5.0		50.0	53.1		ug/L		106	69 - 136	4	16
Xylenes, Total	<5.0		150	153		ug/L		102	68 - 142	4	15

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
a,a,a-Trifluorotoluene (pid)	*105*		*78 - 124*

Lab Chronicle

Client: MWH Americas Inc
Project/Site: GCU Com A #142E

TestAmerica Job ID: 400-128742-1

Client Sample ID: MW-1
Date Collected: 10/14/16 08:42
Date Received: 10/15/16 09:13

Lab Sample ID: 400-128742-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		2	5 mL	5 mL	328165	10/25/16 18:17	GRK	TAL PEN
	Instrument ID: CH_RITA									

Client Sample ID: MW-5
Date Collected: 10/14/16 08:49
Date Received: 10/15/16 09:13

Lab Sample ID: 400-128742-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	328165	10/25/16 14:37	GRK	TAL PEN
	Instrument ID: CH_RITA									

Client Sample ID: MW-6
Date Collected: 10/14/16 08:52
Date Received: 10/15/16 09:13

Lab Sample ID: 400-128742-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	328165	10/25/16 15:04	GRK	TAL PEN
	Instrument ID: CH_RITA									

Client Sample ID: MW-7
Date Collected: 10/14/16 09:04
Date Received: 10/15/16 09:13

Lab Sample ID: 400-128742-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	328165	10/25/16 18:45	GRK	TAL PEN
	Instrument ID: CH_RITA									

Client Sample ID: MW-8
Date Collected: 10/14/16 08:58
Date Received: 10/15/16 09:13

Lab Sample ID: 400-128742-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	328165	10/25/16 15:59	GRK	TAL PEN
	Instrument ID: CH_RITA									

Client Sample ID: TB
Date Collected: 10/14/16 00:00
Date Received: 10/15/16 09:13

Lab Sample ID: 400-128742-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	328165	10/25/16 16:27	GRK	TAL PEN
	Instrument ID: CH_RITA									

Lab Chronicle

Client: MWH Americas Inc
Project/Site: GCU Com A #142E

TestAmerica Job ID: 400-128742-1

Laboratory References:

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

Certification Summary

Client: MWH Americas Inc
Project/Site: GCU Com A #142E

TestAmerica Job ID: 400-128742-1

Laboratory: TestAmerica Pensacola

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-17
Arizona	State Program	9	AZ0710	01-11-17
Arkansas DEQ	State Program	6	88-0689	09-01-17
California	ELAP	9	2510	03-31-18
Florida	NELAP	4	E81010	06-30-17
Georgia	State Program	4	N/A	06-30-17
Illinois	NELAP	5	200041	10-09-17
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-17
Kentucky (UST)	State Program	4	53	06-30-17
Kentucky (WW)	State Program	4	98030	12-31-16
Louisiana	NELAP	6	30976	06-30-17
Maryland	State Program	3	233	09-30-17
Massachusetts	State Program	1	M-FL094	06-30-17
Michigan	State Program	5	9912	05-06-17
New Jersey	NELAP	2	FL006	06-30-17
North Carolina (WW/SW)	State Program	4	314	12-31-16
Oklahoma	State Program	6	9810	08-31-17
Pennsylvania	NELAP	3	68-00467	01-31-17
Rhode Island	State Program	1	LAO00307	12-30-16
South Carolina	State Program	4	96026	06-30-16 *
Tennessee	State Program	4	TN02907	06-30-17
Texas	NELAP	6	T104704286-16-10	09-30-17
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-17
Washington	State Program	10	C915	05-15-17
West Virginia DEP	State Program	3	136	06-30-17

* Certification renewal pending - certification considered valid.

Method Summary

Client: MWH Americas Inc
Project/Site: GCU Com A #142E

TestAmerica Job ID: 400-128742-1

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

SERIAL NUMBER: 80997

681-Atlanta

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Phone: 850-474-1001
Fax: 850-478-2671
Website: www.testamericainc.com

QUOTE NO.:
BOTTLE ORDER NO.:
ORDER - LOG-IN NO.: C

CLIENT: Epcape
ADDRESS:
PAGE: 1 OF 1

PROJECT NAME: GCU#142E
PROJECT NO.:
CLIENT PROJECT MANAGER: Clint Oberbroeckling
PROJECT LOC. (STATE): NM

SAMPLED BY: CWO
CONTRACT / P.O. NO.: ~~ARCP~~ ENG-MWH-09-23-16-CWO-01
CLIENT PHONE: 515-210.4299
CLIENT E-MAIL OR FAX:

TAT REQUESTED: RUSH NEEDS LAB PREAPPROVAL ▫ NORMAL 10 BUSINESS DAYS
▫ 1 DAY ▫ 2 DAYS ▫ 3 DAYS ▫ 5 DAYS ▫ 20 DAYS (Package) ▫ X OTHER: See Contract

SAMPLE DISPOSAL: ▫ RETURN TO CLIENT X DISPOSAL BY LAB
▫ SEE CONTRACT ▫ OTHER:

REQUESTED ANALYSIS: BTEX 8015B

POSSIBLE HAZARD IDENTIFICATION
X NON-HAZARD
Δ FLAMMABLE
Δ RADIOACTIVE
Δ POISON B
Δ UNKNOWN
Δ OTHER:

NO. OF COOLERS PER SHIPMENT:

SPECIAL INSTRUCTIONS/ CONDITIONS OF RECEIPT

LAB USE ONLY - SAMPLE NUMBER

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	PRESERVATIVE: No Preservative	HCL - Hydrochloric Acid	HNO3 - Nitric Acid	H2SO4 - Sulfuric Acid or H3PO4	NAOH - Sodium Hydroxide	CH3OH - Methanol	NAHSO4 - Sodium Bisulfate	NA2S2O3 - Sodium Thiosulfate	Other:	MATRIX: Drinking Water	Aqueous GW, SW, WW	Solid, Semisolid, Sediment	Air	NonAqueous (Oil, Solvent, etc.)	NUMBER OF CONTAINERS SUBMITTED
10/14/16	842	MW-1		2									X				2
	849	MW-5		2													2
	852	MW-6		2													2
	904	MW-7		2													2
	858	MW-8		2													2
	—	TB		2													2

400-128742 COC

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
EMPTY CONTAINERS				10/14/16	16:00			
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME
EMPTY CONTAINERS								

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY:	DATE	TIME	CUSTODY INTACT? Δ YES Δ NO	CUSTODY SEAL NO.	REMARKS:
	10/15/16	0913			2.2°C IR-6

TAL-8251 (1207)

Login Sample Receipt Checklist

Client: MWH Americas Inc

Job Number: 400-128742-1

Login Number: 128742
List Number: 1
Creator: Benforado, Jessica L

List Source: TestAmerica Pensacola

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.	N/A	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.2°C IR-6
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.	False	Refer to Job Narrative for details.
Samples are received within Holding Time (excluding tests with immediate HTs)	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	