2016 ANNUAL GROUNDWATER REPORT

HAMNER #9
NMOCD Case#: 3RP-190-0
Meter Code: 97213
T29N, 09W, Sec 20, Unit A

SITE DETAILS

Site Location: Latitude: 36.714939 N, Longitude: -107.796150
Land Type: Federal
Operator: Burlington Resources Oil & Gas Company LP

SITE BACKGROUND

- **Site Assessment:** 5/94
- **Excavations:** 5/94 (70 cy)
- **ORC Nutrient Injection:** 11/02

Environmental Remediation activities at the Hamner #9 (Site) are 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 (EPCGP's) program methods. Currently, the Site is operated by Burlington Resources Oil & Gas Company LP and is active.

The Site is located on Federal land. Various site investigations have occurred from 1994 through 2015. Monitoring wells were installed in 1995 (MW-1), 1999 (MW-2 and MW-3), 2006 (MW-4), and 2015 (MW-5, MW-6, and MW-7). Monitoring well MW-2 was plugged and abandoned on October 23, 2015 as it had gone dry. Monitoring well MW-3 was found to be damaged on April 6, 2014, and it was also plugged and abandoned on October 23, 2015. Free product has not been observed at the Site. Groundwater sampling was completed on a quarterly basis beginning the second quarter of 2016 in order to evaluate eligibility of the Site for No Further Action.

SUMMARY OF 2016 ACTIVITIES

On April 16, August 9, and October 14, 2016, water levels were gauged at MW-1, MW-4, MW-5, MW-6, MW-7. Groundwater samples were collected from MW-1, MW-4, MW-5, MW-6, and MW-7, 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 (TestAmerica) where they were analyzed for benzene, toluene, ethylbenzene, and total xylenes (BTEX). Larger HydraSleeve sampling devices were used to collect additional groundwater volume from MW-1 and MW-7 during the April, 16, 2016 sampling event. The additional sample was submitted to TestAmerica for analysis of selected polynuclear aromatic hydrocarbons (PAHs).

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 groundwater analytical results and well gauging data are summarized in Tables 1 and 2, respectively. PAH analytical results are summarized in Table 3.

SITE MAPS

Groundwater analytical maps (Figures 1, 3 and 5) and groundwater elevation contour maps (Figures 2, 4 and 6) 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 at the Site is generally to the south-southwest (see Figures 2, 4 and 6).

- Concentrations of benzene were either below the New Mexico Water Quality Control Commission standard (10 µg/L) or not detected in the Site monitoring wells sampled in 2016.

- 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

Based on the 2016 groundwater sampling results, one additional quarterly groundwater sampling event is planned for the first calendar quarter of 2017. If groundwater concentrations remain below NMWQCC standards after four consecutive quarters, groundwater monitoring may cease, and EPCGP may request site closure from NMOCD. If site closure is not requested in 2017, a 2017 Annual Report will be submitted in early 2018.

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TABLES

TABLE 1 GROUNDWATER ANALYTICAL RESULTS

HAMNER #9					
Location	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
NMWQCC Standards:		10	750	750	620
MW-1	08/25/95	198	1480	146	2250
MW-1	11/08/96	559	499	395	933
MW-1	02/10/97	350	101	233	476
MW-1	05/08/97	266	9.75	230	308
MW-1	08/05/97	272	228	172	370
MW-1	11/04/97	216	72.1	133	260
MW-1	02/03/98	245	276	109	375
MW-1	05/07/98	166	6.02	110	202
MW-1	08/04/98	171	74.4	86.1	209
MW-1	11/03/98	151	58.7	76.4	204
MW-1	02/02/99	153	64.8	89.7	217
MW-1	05/19/99	137	89.4	67.3	141
MW-1	08/04/99	105	32.6	63	113
MW-1	11/09/99	120	39	75	170
MW-1	02/25/00	130	70	78	190
MW-1	05/24/00	110	130	56	200
MW-1	08/01/00	120	39	80	210
MW-1	11/06/00	84	120	56	190
MW-1	02/12/01	95	44	60	150
MW-1	05/30/01	110	36	78	200
MW-1	08/07/01	99	43	58	150
MW-1	12/04/01	150	53	50	110
MW-1	02/25/02	83	25	59	120
MW-1	05/14/02	57	78	46	150
MW-1	11/04/02	72.5	50	47	178.6
MW-1	05/19/03	31.1	24.4	23.9	158
MW-1	11/15/03	65.5	65	44.5	190
MW-1	05/11/04	57.6	44.5	52.1	153
MW-1	11/16/04	38	26.4	34.7	126
MW-1	05/18/05	74	27.9	93.1	340
MW-1	08/23/05	28.6	7	46.3	175
MW-1	11/08/05	26.2	5.5	35.5	137
MW-1	02/23/06	22.1	7.1	28.2	102
MW-1	05/23/06	21.6	4.2	28.3	76.6
MW-1	08/23/06	18.9	5	29.1	76.7
MW-1	11/08/06	20.4	8.2	28.8	71.9
MW-1	02/26/07	14.8	4.7	23.7	72.1
MW-1	05/24/07	12.5	1.5	24.6	45.1
MW-1	08/21/07	10.1	0.75	22.2	38
MW-1	11/13/07	5.7	0.79	13.3	16.5
MW-1	02/12/08	7.5	1.6	19.6	32.9
MW-1	05/07/08	NS	NS	NS	NS
MW-1	05/08/08	4.3	5.8	17.4	51
MW-1	08/26/08	3.7	1.5	15.6	17.2
MW-1	11/06/08	3.8	3.1	17.5	22.2
MW-1	04/06/14	<1.0	5.1 J	26	13
MW-1	10/24/14	0.94 J	<0.70	28	8.8 J
MW-1	05/30/15	1.1	<5.0	23	12
MW-1	11/20/15	<1.0	1	21	4.1
MW-1	04/18/16	<1.0	<5.0	13	6.1
MW-1	08/09/16	1.9	<5.0	24	11
MW-1	10/12/16	<1.0	6.2	19	<5.0

TABLE 1 GROUNDWATER ANALYTICAL RESULTS

HAMNER #9					
Location	**Date**	**Benzene (µg/L)**	**Toluene (µg/L)**	**Ethylbenzene (µg/L)**	**Total Xylenes (µg/L)**
NMWQCC Standards:		10	750	750	620
MW-2	10/15/99	0.5	0.5	0.5	0.5
MW-2	08/28/00	0.5	0.5	0.5	0.5
MW-2	05/30/01	0.5	0.5	0.5	0.5
MW-2	08/07/01	NS	NS	NS	NS
MW-2	02/25/02	NS	NS	NS	NS
MW-2	05/14/02	0.5	0.5	0.5	1
MW-2	05/19/03	NS	NS	NS	NS
MW-2	04/06/14	NS	NS	NS	NS
MW-2	10/24/14	NS	NS	NS	NS
MW-2	05/30/15	NS	NS	NS	NS
MW-2	10/23/15	MW-2 Plugged and Abandoned			
MW-3	10/15/99	0.5	0.5	0.5	0.5
MW-3	08/28/00	0.5	0.5	0.5	0.5
MW-3	05/30/01	0.5	0.5	0.5	0.5
MW-3	08/07/01	NS	NS	NS	NS
MW-3	02/25/02	NS	NS	NS	NS
MW-3	05/14/02	NS	NS	NS	NS
MW-3	06/13/02	0.5	0.5	0.5	1
MW-3	11/12/02	NS	NS	NS	NS
MW-3	05/19/03	NS	NS	NS	NS
MW-3	11/15/03	NS	NS	NS	NS
MW-3	05/11/04	NS	NS	NS	NS
MW-3	11/16/04	NS	NS	NS	NS
MW-3	05/18/05	NS	NS	NS	NS
MW-3	08/23/05	NS	NS	NS	NS
MW-3	11/08/05	NS	NS	NS	NS
MW-3	02/23/06	NS	NS	NS	NS
MW-3	05/23/06	NS	NS	NS	NS
MW-3	08/23/06	NS	NS	NS	NS
MW-3	11/08/06	NS	NS	NS	NS
MW-3	02/26/07	NS	NS	NS	NS
MW-3	04/06/14	MW-3 damaged, and can no longer be sampled			
MW-3	05/23/15	MW-3 plugged and abandoned			

TABLE 1 GROUNDWATER ANALYTICAL RESULTS

HAMNER #9					
Location	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
NMWQCC Standards:		10	750	750	620
MW-4	11/08/06	1	0.28	1	0.36
MW-4	02/26/07	NS	NS	NS	NS
MW-4	05/24/07	NS	NS	NS	NS
MW-4	08/21/07	1	1	1	2
MW-4	11/13/07	2	2	2	6
MW-4	02/12/08	2	2	2	6
MW-4	05/07/08	NS	NS	NS	NS
MW-4	05/08/08	NS	NS	NS	NS
MW-4	08/26/08	1	1	1	3
MW-4	11/06/08	NS	NS	NS	NS
MW-4	04/06/14	<0.20	<0.38	<0.20	<0.65
MW-4	10/24/14	<0.38	<0.70	<0.50	<1.6
MW-4	05/30/15	<1.0	<5.0	<1.0	1.7J
MW-4	11/21/15	<1.0	<1.0	<1.0	<3.0
MW-4	04/18/16	<1.0	<5.0	<1.0	<5.0
MW-4	08/09/16	<1.0	<5.0	<1.0	<5.0
MW-4	10/12/16	<1.0	<5.0	<1.0	<5.0
MW-5	11/21/15	<1.0	<5.0	<1.0	<5.0
MW-5	04/18/16	<1.0	<5.0	<1.0	<5.0
MW-5	08/09/16	<1.0	<5.0	<1.0	<5.0
MW-5	10/12/16	<1.0	<5.0	<1.0	<5.0
MW-6	11/21/15	<1.0	<5.0	<1.0	<5.0
MW-6	04/18/16	<1.0	<5.0	<1.0	<5.0
MW-6	08/09/16	<1.0	<5.0	<1.0	<5.0
MW-6	10/12/16	<1.0	<5.0	<1.0	<5.0
MW-7	11/21/15	<1.0	<5.0	<1.0	<5.0
MW-7	04/18/16	<1.0	<5.0	<1.0	<5.0
MW-7	08/09/16	<1.0	<5.0	<1.0	<5.0
MW-7	10/12/16	<1.0	<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

HAMNER #9						
Location	Date	TOC	Depth to Water (ft.)	Depth to LNAPL (ft.)	LNAPL Thickness (ft.)	GW Elevation (ft.)
MW-1	08/25/95	5597.36	29.53	NR		5567.83
MW-1	11/08/96	5597.36	30.30	NR		5567.06
MW-1	02/10/97	5597.36	30.07	NR		5567.29
MW-1	05/08/97	5597.36	29.99	NR		5567.37
MW-1	08/05/97	5597.36	30.16	NR		5567.20
MW-1	11/04/97	5597.36	30.21	NR		5567.15
MW-1	02/03/98	5597.36	32.48	NR		5564.88
MW-1	05/07/98	5597.36	32.38	NR		5564.98
MW-1	08/04/98	5597.36	32.54	NR		5564.82
MW-1	11/03/98	5597.36	32.62	NR		5564.74
MW-1	02/02/99	5597.36	32.42	NR		5564.94
MW-1	05/19/99	5597.36	32.28	NR		5565.08
MW-1	08/04/99	5597.36	32.28	NR		5565.08
MW-1	11/09/99	5597.36	32.19	NR		5565.17
MW-1	02/25/00	5597.36	32.05	NR		5565.31
MW-1	05/24/00	5597.36	31.96	NR		5565.40
MW-1	08/01/00	5597.36	32.08	NR		5565.28
MW-1	11/06/00	5597.36	32.19	NR		5565.17
MW-1	02/12/01	5597.36	32.12	NR		5565.24
MW-1	05/30/01	5597.36	32.06	NR		5565.30
MW-1	08/07/01	5597.36	32.28	NR		5565.08
MW-1	12/04/01	5597.36	32.40	NR		5564.96
MW-1	02/25/02	5597.36	32.39	NR		5564.97
MW-1	05/14/02	5597.36	32.37	NR		5564.99
MW-1	11/04/02	5597.36	32.67	NR		5564.69
MW-1	05/19/03	5597.36	32.45	ND		5564.91
MW-1	11/15/03	5597.36	32.76	ND		5564.60
MW-1	05/11/04	5597.36	32.61	ND		5564.75
MW-1	11/16/04	5597.36	32.88	ND		5564.48
MW-1	05/18/05	5597.36	32.67	ND		5564.69
MW-1	08/23/05	5597.36	33.05	ND		5564.31
MW-1	11/08/05	5597.36	32.93	ND		5564.43
MW-1	02/23/06	5597.36	32.81	ND		5564.55
MW-1	05/23/06	5597.36	32.83	ND		5564.53
MW-1	08/23/06	5597.36	33.06	ND		5564.30
MW-1	11/08/06	5597.36	33.09	ND		5564.27
MW-1	02/26/07	5597.36	32.94	ND		5564.42
MW-1	05/24/07	5597.36	32.86	ND		5564.50
MW-1	08/21/07	5597.36	33.13	ND		5564.23
MW-1	11/13/07	5597.36	33.21	ND		5564.15
MW-1	02/12/08	5597.36	33.10	ND		5564.26
MW-1	05/07/08	5597.36	32.98	ND		5564.38
MW-1	05/08/08	5597.36	32.98	ND		5564.38
MW-1	08/26/08	5597.36	33.25	ND		5564.11
MW-1	11/06/08	5597.36	33.29	ND		5564.07
MW-1	04/06/14	5597.36	33.33	ND		5564.03
MW-1	10/24/14	5597.36	33.70	ND		5563.66
MW-1	05/30/15	5597.36	33.24	ND		5564.12
MW-1	11/20/15	5597.36	33.54	ND		5563.82
MW-1	04/18/16	5597.36	33.34	ND		5564.02
MW-1	08/09/16	5597.36	33.47	ND		5563.89
MW-1	10/12/16	5597.36	33.55	ND		5563.81

TABLE 2 - GROUNDWATER ELEVATION RESULTS

HAMNER #9						
Location	**Date**	**TOC**	**Depth to Water (ft.)**	**Depth to LNAPL (ft.)**	**LNAPL Thickness (ft.)**	**GW Elevation (ft.)**
MW-2	10/15/99	5596.69	29.57	NR		5567.12
MW-2	08/28/00	5596.69	31.65	NR		5565.04
MW-2	05/30/01	5596.69	31.57	NR		5565.12
MW-2	08/07/01	5596.69	31.80	NR		5564.89
MW-2	02/25/02	5596.69	31.85	NR		5564.84
MW-2	05/14/02	5596.69	31.85	NR		5564.84
MW-2	05/19/03	5596.69	31.92	ND		5564.77
MW-2	04/06/14	5596.69	DRY	ND		DRY
MW-2	10/24/14	5596.69	DRY	ND		DRY
MW-2	05/30/15	5596.69	DRY	ND		DRY
MW-2	10/23/15		MW-2 Plugged and Abandoned			
MW-3	10/15/99	5597.41	28.34	NR		5569.07
MW-3	08/28/00	5597.41	30.96	NR		5566.45
MW-3	05/30/01	5597.41	30.87	NR		5566.54
MW-3	08/07/01	5597.41	31.10	NR		5566.31
MW-3	02/25/02	5597.41	31.21	NR		5566.20
MW-3	05/14/02	5597.41	31.23	NR		5566.18
MW-3	06/13/02	5597.41	31.33	NR		5566.08
MW-3	11/12/02	5597.41	31.45	NR		5565.96
MW-3	05/19/03	5597.41	31.33	ND		5566.08
MW-3	11/15/03	5597.41	31.64	ND		5565.77
MW-3	05/11/04	5597.41	31.51	ND		5565.90
MW-3	11/16/04	5597.41	31.77	ND		5565.64
MW-3	05/18/05	5597.41	31.63	ND		5565.78
MW-3	08/23/05	5597.41	31.82	ND		5565.59
MW-3	11/08/05	5597.41	38.03	ND		5559.38
MW-3	02/23/06	5597.41	31.70	ND		5565.71
MW-3	05/23/06	5597.41	31.73	ND		5565.68
MW-3	08/23/06	5597.41	31.97	ND		5565.44
MW-3	11/08/06	5597.41	31.96	ND		5565.45
MW-3	02/26/07	5597.41	31.82	ND		5565.59
MW-3	04/06/14		MW-3 damaged, and can no longer be gauged			
MW-3	10/23/15		MW-2 Plugged and Abandoned			

TABLE 2 - GROUNDWATER ELEVATION RESULTS

HAMNER #9						
Location	Date	TOC	Depth to Water (ft.)	Depth to LNAPL (ft.)	LNAPL Thickness (ft.)	GW Elevation (ft.)
MW-4	11/08/06	5594.55	30.32	ND		5564.23
MW-4	02/26/07	5594.55	30.15	ND		5564.40
MW-4	05/24/07	5594.55	30.07	ND		5564.48
MW-4	08/21/07	5594.55	30.31	ND		5564.24
MW-4	11/13/07	5594.55	30.41	ND		5564.14
MW-4	02/12/08	5594.55	30.31	ND		5564.24
MW-4	05/07/08	5594.55	30.18	ND		5564.37
MW-4	05/08/08	5594.55	30.18	ND		5564.37
MW-4	08/26/08	5594.55	30.42	ND		5564.13
MW-4	11/06/08	5594.55	30.50	ND		5564.05
MW-4	04/06/14	5594.55	30.49	ND		5564.06
MW-4	10/24/14	5594.55	36.83	ND		5557.72
MW-4	05/30/15	5594.55	30.31	ND		5564.24
MW-4	11/21/15	5594.55	30.71	ND		5563.84
MW-4	04/18/16	5594.55	30.49	ND		5564.06
MW-4	08/09/16	5594.55	30.64	ND		5563.91
MW-4	10/12/16	5594.55	30.72	ND		5563.83
MW-5	11/21/15	5598.31	33.09	ND		5565.22
MW-5	04/18/16	5598.31	33.04	ND		5565.27
MW-5	08/09/16	5598.31	33.27	ND		5565.04
MW-5	10/12/16	5598.31	33.27	ND		5565.04
MW-6	11/21/15	5597.09	32.38	ND		5564.71
MW-6	04/18/16	5597.09	32.25	ND		5564.84
MW-6	08/09/16	5597.09	32.40	ND		5564.69
MW-6	10/12/16	5597.09	32.43	ND		5564.66
MW-7	11/21/15	5593.43	29.58	ND		5563.85
MW-7	04/18/16	5593.43	29.38	ND		5564.05
MW-7	08/09/16	5593.43	29.51	ND		5563.92
MW-7	10/12/16	5593.43	29.58	ND		5563.85

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

TABLE 3 - GROUNDWATER PAH ANALYTICAL RESULTS

HAMNER #9						
Location	**Date**	**1-Methylnaphthalene (µg/L)**	**2-Methylnaphthalene (µg/L)**	**Naphthalenes (µg/L)**	**Total Naphthalenes (µg/L)**	**Benzo(a)pyrene (µg/L)**
NMWQCC Standards:		-	-	-	30	0.7
MW-1	04/18/16	2.5	BRL	BRL	2.5	BRL
MW-7	04/18/16	BRL	BRL	BRL	BRL	BRL

Notes:
"µg/L" = micrograms per liter
"NMWQCC" = New Mexico Water Quality Control Commission (NMWQCC)
"-" NMWQCC Standard is not established
"BRL" = analyte was not detected at the indicated reporting limit.

FIGURES

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LEGEND:

- 5595 — APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- FENCE
- NATURAL GAS LINE
- ABANDONED MONITORING WELL
- MONITORING WELL
- RIG ANCHOR
- SMA BENCHMARK
- WELLHEAD

EXPLANATION OF ANALYTES AND APPLICABLE STANDARDS:

RESULTS IN **BOLDFACE** TYPE INDICATE CONCENTRATION IN EXCESS OF THE STANDARD FOR THAT ANALYTE.
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 = Total Naphthalenes	30 µg/L
Bap = Benzo(a)pyrene	0.7 µg/L

N

SCALE IN FEET
0 40 80

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

TITLE:

GROUNDWATER ANALYTICAL RESULTS APRIL 18, 2016

PROJECT:
HAMNER #9
SAN JUAN RIVER BASIN
SAN JUAN COUNTY, NEW MEXICO

MWH

Figure No.: 1

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\HAMNER #9\2016 MAPS\Hamner_#9_GECM_1SA_2016.mxd

MW-5
5565.27

MW-4
5564.06

MW-1
5564.02

MW-7
5564.05

MW-6
5564.84

MW-2

MW-3

PIT

FORMER EPC PIT - EXCAVATED TO 12 FEET

METER HOUSE

HAMNER #9 WELLHEAD

COMPRESSOR

MOTOR OIL DRUM

SOLAR PANEL

SEPARATOR

SMA BENCHMARK
ELEV. 5593.57'
STATE PLANE COORDINATE SYSTEM
NEW MEXICO WEST

5599 5598 5597 5596 5595 5594 5593 5592 5591 5590 5589 5566 5565.5 5565 5564.5

LEGEND:

- 5594 — APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- FENCE
- GAS — NATURAL GAS LINE
- ABANDONED MONITORING WELL
- MONITORING WELL
- RIG ANCHOR
- SMA BENCHMARK
- WELLHEAD

NOTES:

5564.71 GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)

5564.5 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
	1/19/2017	CCL	CCL	SRV

TITLE:

GROUNDWATER ELEVATION MAP
APRIL 18, 2016

PROJECT:
HAMNER #9
SAN JUAN RIVER BASIN
SAN JUAN COUNTY, NEW MEXICO

MWH

Figure No.:
2

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\HAMNER #9\2016 MAPS\Hamner_#9_GARM_3Q_2016.mxd

LEGEND:

- 5595 — APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- FENCE
- NATURAL GAS LINE
- ABANDONED MONITORING WELL
- MONITORING WELL
- RIG ANCHOR
- SMA BENCHMARK
- WELLHEAD

EXPLANATION OF ANALYTES AND APPLICABLE STANDARDS:

RESULTS IN **BOLDFACE** TYPE INDICATE CONCENTRATION IN EXCESS OF THE STANDARD FOR THAT ANALYTE.
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 40 80

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

TITLE:

GROUNDWATER ANALYTICAL RESULTS
August 9, 2016

PROJECT:
HAMNER #9
SAN JUAN RIVER BASIN
SAN JUAN COUNTY, NEW MEXICO

MWH

Figure No.: 3

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\HAMNER #9\2016 MAPS\Hamner_#9_GECM_3Q_2016.mxd

MW-5
5565.04
MW-4
5563.91
MW-1
5563.89
MW-7
5563.92
MW-6
5564.69
MW-2
MW-3
PIT
FORMER EPC PIT - EXCAVATED TO 12 FEET
METER HOUSE
HAMNER #9 WELLHEAD
COMPRESSOR
MOTOR OIL DRUM
SOLAR PANEL
SEPARATOR
SMA BENCHMARK
ELEV. 5593.57'
STATE PLANE COORDINATE SYSTEM
NEW MEXICO WEST

5599 5598 5597 5596 5595 5594 5593 5592 5591 5590 5589 5564.5 5564

LEGEND:

- 5594 — APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- FENCE
- G A S — NATURAL GAS LINE
- ABANDONED MONITORING WELL
- MONITORING WELL
- RIG ANCHOR
- SMA BENCHMARK
- WELLHEAD

NOTES:

- 5564.71 — GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)
- 5564.5 — 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
	1/19/2017	CCL	CCL	SRV

TITLE:

GROUNDWATER ELEVATION MAP
AUGUST 9, 2016

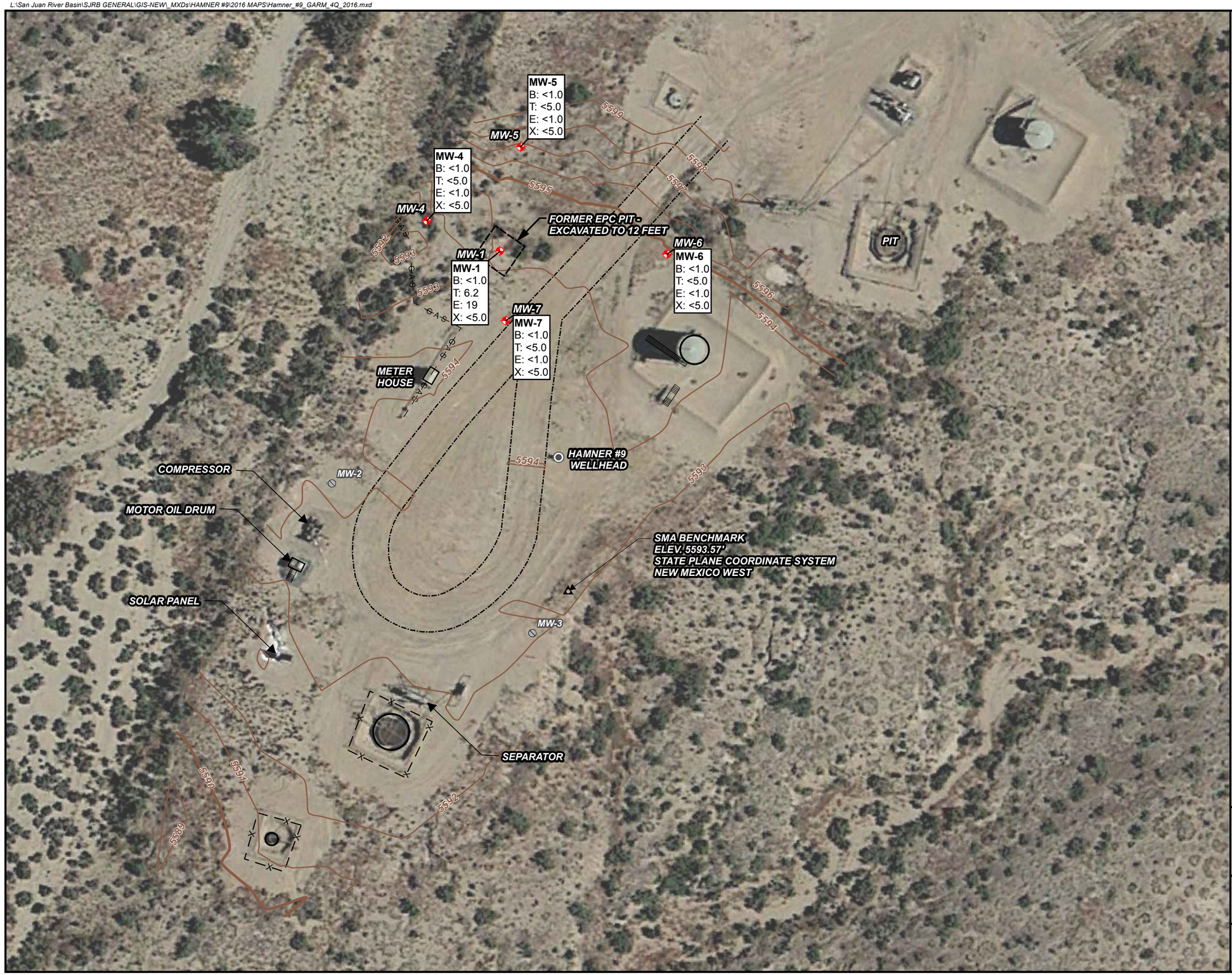
PROJECT:

HAMNER #9
SAN JUAN RIVER BASIN
SAN JUAN COUNTY, NEW MEXICO

MWH

Figure No.: 4

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\HAMNER #9\2016 MAPS\Hamner_#9_GARM_4Q_2016.mxd



LEGEND:

- 5595 — APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- FENCE
- NATURAL GAS LINE
- ABANDONED MONITORING WELL
- MONITORING WELL
- RIG ANCHOR
- SMA BENCHMARK
- WELLHEAD

EXPLANATION OF ANALYTES AND APPLICABLE STANDARDS:

RESULTS IN **BOLDFACE** TYPE INDICATE CONCENTRATION IN EXCESS OF THE STANDARD FOR THAT ANALYTE.
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 40 80

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

TITLE:

GROUNDWATER ANALYTICAL RESULTS
OCTOBER 12, 2016

PROJECT:
HAMNER #9
SAN JUAN RIVER BASIN
SAN JUAN COUNTY, NEW MEXICO

MWH

Figure No.:
5

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\HAMNER #9\2016 MAPS\Hamner_#9_GECM_4Q_2016.mxd

MW-5
5565.04
MW-4
5563.83
MW-1
5563.81
MW-7
5563.85
MW-6
5564.66
MW-5
MW-4
MW-1
MW-7
MW-6
MW-2
MW-3
5565
5564.5
5564
5599
5598
5597
5596
5595
5594
5593
5592
5591
5590
5589
5602
FORMER EPC PIT - EXCAVATED TO 12 FEET
PIT
METER HOUSE
HAMNER #9 WELLHEAD
COMPRESSOR
MOTOR OIL DRUM
SOLAR PANEL
SEPARATOR
SMA BENCHMARK
ELEV. 5593.57'
STATE PLANE COORDINATE SYSTEM
NEW MEXICO WEST

LEGEND:

- 5594 — APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- FENCE
- NATURAL GAS LINE
- ABANDONED MONITORING WELL
- MONITORING WELL
- RIG ANCHOR
- SMA BENCHMARK
- WELLHEAD

NOTES:

- 5564.71 — GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)
- 5564.5 — WATER LEVEL ELEVATION CONTOUR (DASHED WHERE INFERRED FEET ABOVE MEAN SEA LEVEL, 0.5 FOOT CONTOUR LEVEL)
- DIRECTION OF GROUNDWATER FLOW

N

SCALE IN FEET
0 40 80

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
	1/19/2017	CCL	CCL	SRV

TITLE:

GROUNDWATER ELEVATION MAP
OCTOBER 12, 2016

PROJECT:

HAMNER #9
SAN JUAN RIVER BASIN
SAN JUAN COUNTY, NEW MEXICO

MWH

Figure No.: 6

APPENDIX A

MAY 3, 2016 GROUNDWATER SAMPLING ANALYTICAL REPORT
AUGUST 19, 2016 GROUNDWATER SAMPLING ANALYTICAL REPORT
OCTOBER 26, 2016 GROUNDWATER SAMPLING ANALYTICAL REPORT

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

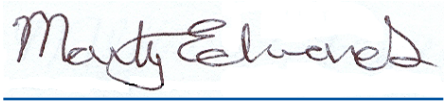
ANALYTICAL REPORT

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

TestAmerica Job ID: 400-120437-1
Client Project/Site: Hamner #9

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

Attn: Steve Varsa



Authorized for release by:
5/3/2016 5:20:49 PM

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

Table of Contents

Glossary

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

Job ID: 400-120437-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-120437-1

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

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

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

Detection Summary

Client: MWH Americas Inc
Project/Site: Hamner #9

TestAmerica Job ID: 400-120437-1

Client Sample ID: MW-1 — Lab Sample ID: 400-120437-1

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
1-Methylnaphthalene	2.5		0.20		ug/L	1		8270C LL	Total/NA
Ethylbenzene	13		1.0		ug/L	1		8021B	Total/NA
Xylenes, Total	6.1		5.0		ug/L	1		8021B	Total/NA

Client Sample ID: MW-4 — Lab Sample ID: 400-120437-2

No Detections.

Client Sample ID: MW-5 — Lab Sample ID: 400-120437-3

No Detections.

Client Sample ID: MW-6 — Lab Sample ID: 400-120437-4

No Detections.

Client Sample ID: MW-7 — Lab Sample ID: 400-120437-5

No Detections.

Client Sample ID: TRIP BLANK — Lab Sample ID: 400-120437-6

No Detections.

This Detection Summary does not include radiochemical test results.

Sample Summary

Client: MWH Americas Inc
Project/Site: Hamner #9

TestAmerica Job ID: 400-120437-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-120437-1	MW-1	Water	04/18/16 11:15	04/19/16 09:43
400-120437-2	MW-4	Water	04/18/16 11:20	04/19/16 09:43
400-120437-3	MW-5	Water	04/18/16 11:25	04/19/16 09:43
400-120437-4	MW-6	Water	04/18/16 11:30	04/19/16 09:43
400-120437-5	MW-7	Water	04/18/16 11:35	04/19/16 09:43
400-120437-6	TRIP BLANK	Water	04/18/16 00:00	04/19/16 09:43

Client: MWH Americas Inc
Project/Site: Hamner #9

TestAmerica Job ID: 400-120437-1

Client Sample ID: MW-1
Date Collected: 04/18/16 11:15
Date Received: 04/19/16 09:43

Lab Sample ID: 400-120437-1
Matrix: Water

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	<0.20		0.20		ug/L		04/22/16 10:37	04/27/16 20:40	1
1-Methylnaphthalene	**2.5**		0.20		ug/L		04/22/16 10:37	04/25/16 22:53	1
2-Methylnaphthalene	<0.20		0.20		ug/L		04/22/16 10:37	04/25/16 22:53	1
Naphthalene	<0.20		0.20		ug/L		04/22/16 10:37	04/25/16 22:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*114*		*15 - 122*	*04/22/16 10:37*	*04/25/16 22:53*	*1*
Nitrobenzene-d5	*85*		*19 - 130*	*04/22/16 10:37*	*04/25/16 22:53*	*1*
Terphenyl-d14	*111*		*33 - 138*	*04/22/16 10:37*	*04/25/16 22:53*	*1*

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0		ug/L			04/22/16 14:21	1
Ethylbenzene	**13**		1.0		ug/L			04/22/16 14:21	1
Toluene	<5.0		5.0		ug/L			04/22/16 14:21	1
Xylenes, Total	**6.1**		5.0		ug/L			04/22/16 14:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*106*		*78 - 124*		*04/22/16 14:21*	*1*

Client: MWH Americas Inc
Project/Site: Hamner #9

TestAmerica Job ID: 400-120437-1

Client Sample ID: MW-4
Date Collected: 04/18/16 11:20
Date Received: 04/19/16 09:43

Lab Sample ID: 400-120437-2
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			04/29/16 13:22	1
Ethylbenzene	<1.0		1.0		ug/L			04/29/16 13:22	1
Toluene	<5.0		5.0		ug/L			04/29/16 13:22	1
Xylenes, Total	<5.0		5.0		ug/L			04/29/16 13:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*103*		*78 - 124*		*04/29/16 13:22*	*1*

Client: MWH Americas Inc
Project/Site: Hamner #9

TestAmerica Job ID: 400-120437-1

Client Sample ID: MW-5
Date Collected: 04/18/16 11:25
Date Received: 04/19/16 09:43

Lab Sample ID: 400-120437-3
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			04/22/16 14:51	1
Ethylbenzene	<1.0		1.0		ug/L			04/22/16 14:51	1
Toluene	<5.0		5.0		ug/L			04/22/16 14:51	1
Xylenes, Total	<5.0		5.0		ug/L			04/22/16 14:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*97*		*78 - 124*		*04/22/16 14:51*	*1*

Client: MWH Americas Inc
Project/Site: Hamner #9

TestAmerica Job ID: 400-120437-1

Client Sample ID: MW-6
Date Collected: 04/18/16 11:30
Date Received: 04/19/16 09:43

Lab Sample ID: 400-120437-4
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			04/29/16 02:12	1
Ethylbenzene	<1.0		1.0		ug/L			04/29/16 02:12	1
Toluene	<5.0		5.0		ug/L			04/29/16 02:12	1
Xylenes, Total	<5.0		5.0		ug/L			04/29/16 02:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*103*		*78 - 124*		*04/29/16 02:12*	*1*

Client: MWH Americas Inc
Project/Site: Hamner #9

TestAmerica Job ID: 400-120437-1

Client Sample ID: MW-7
Date Collected: 04/18/16 11:35
Date Received: 04/19/16 09:43

Lab Sample ID: 400-120437-5
Matrix: Water

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	<0.20		0.20		ug/L		04/22/16 10:37	04/25/16 23:19	1
1-Methylnaphthalene	<0.20		0.20		ug/L		04/22/16 10:37	04/25/16 23:19	1
2-Methylnaphthalene	<0.20		0.20		ug/L		04/22/16 10:37	04/25/16 23:19	1
Naphthalene	<0.20		0.20		ug/L		04/22/16 10:37	04/25/16 23:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*94*		*15 - 122*	*04/22/16 10:37*	*04/25/16 23:19*	*1*
Nitrobenzene-d5	*81*		*19 - 130*	*04/22/16 10:37*	*04/25/16 23:19*	*1*
Terphenyl-d14	*92*		*33 - 138*	*04/22/16 10:37*	*04/25/16 23:19*	*1*

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 14:21	1
Ethylbenzene	<1.0		1.0		ug/L			04/29/16 14:21	1
Toluene	<5.0		5.0		ug/L			04/29/16 14:21	1
Xylenes, Total	<5.0		5.0		ug/L			04/29/16 14:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*103*		*78 - 124*		*04/29/16 14:21*	*1*

Client: MWH Americas Inc
Project/Site: Hamner #9

TestAmerica Job ID: 400-120437-1

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

Lab Sample ID: 400-120437-6
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			04/28/16 21:17	1
Ethylbenzene	<1.0		1.0		ug/L			04/28/16 21:17	1
Toluene	<5.0		5.0		ug/L			04/28/16 21:17	1
Xylenes, Total	<5.0		5.0		ug/L			04/28/16 21:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*103*		*78 - 124*		*04/28/16 21:17*	*1*

QC Association Summary

Client: MWH Americas Inc
Project/Site: Hamner #9

TestAmerica Job ID: 400-120437-1

GC/MS Semi VOA

Prep Batch: 302905

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-120437-1	MW-1	Total/NA	Water	3520C	
400-120437-5	MW-7	Total/NA	Water	3520C	
LCS 400-302905/2-A	Lab Control Sample	Total/NA	Water	3520C	
MB 400-302905/1-A	Method Blank	Total/NA	Water	3520C	

Analysis Batch: 303326

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-120437-1	MW-1	Total/NA	Water	8270C LL	302905
400-120437-5	MW-7	Total/NA	Water	8270C LL	302905

Analysis Batch: 303625

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 400-302905/2-A	Lab Control Sample	Total/NA	Water	8270C LL	302905
MB 400-302905/1-A	Method Blank	Total/NA	Water	8270C LL	302905

Analysis Batch: 303725

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-120437-1	MW-1	Total/NA	Water	8270C LL	302905

GC VOA

Analysis Batch: 302977

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-120367-A-2 MS	Matrix Spike	Total/NA	Water	8021B	
400-120367-A-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8021B	
400-120437-1	MW-1	Total/NA	Water	8021B	
400-120437-3	MW-5	Total/NA	Water	8021B	
LCS 400-302977/1002	Lab Control Sample	Total/NA	Water	8021B	
MB 400-302977/4	Method Blank	Total/NA	Water	8021B	

Analysis Batch: 303827

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-120432-A-6 MS	Matrix Spike	Total/NA	Water	8021B	
400-120432-A-6 MSD	Matrix Spike Duplicate	Total/NA	Water	8021B	
400-120437-4	MW-6	Total/NA	Water	8021B	
400-120437-6	TRIP BLANK	Total/NA	Water	8021B	
LCS 400-303827/1002	Lab Control Sample	Total/NA	Water	8021B	
MB 400-303827/3	Method Blank	Total/NA	Water	8021B	

Analysis Batch: 304034

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-120437-2	MW-4	Total/NA	Water	8021B	
400-120437-5	MW-7	Total/NA	Water	8021B	
400-120437-5 MS	MW-7	Total/NA	Water	8021B	
400-120437-5 MSD	MW-7	Total/NA	Water	8021B	
LCS 400-304034/1001	Lab Control Sample	Total/NA	Water	8021B	
MB 400-304034/2	Method Blank	Total/NA	Water	8021B	

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Lab Sample ID: MB 400-302905/1-A
Matrix: Water
Analysis Batch: 303625

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 302905

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	<0.050		0.050		ug/L		04/22/16 08:49	04/28/16 01:22	1
1-Methylnaphthalene	<0.050		0.050		ug/L		04/22/16 08:49	04/28/16 01:22	1
2-Methylnaphthalene	<0.050		0.050		ug/L		04/22/16 08:49	04/28/16 01:22	1
Naphthalene	<0.050		0.050		ug/L		04/22/16 08:49	04/28/16 01:22	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*92*		*15 - 122*	*04/22/16 08:49*	*04/28/16 01:22*	*1*
Nitrobenzene-d5	*84*		*19 - 130*	*04/22/16 08:49*	*04/28/16 01:22*	*1*
Terphenyl-d14	*106*		*33 - 138*	*04/22/16 08:49*	*04/28/16 01:22*	*1*

Lab Sample ID: LCS 400-302905/2-A
Matrix: Water
Analysis Batch: 303625

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 302905

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzo[a]pyrene			5.00	3.47		ug/L		69	52 - 120		
1-Methylnaphthalene			5.00	4.71		ug/L		94	41 - 120		
2-Methylnaphthalene			5.00	4.75		ug/L		95	32 - 124		
Naphthalene			5.00	4.69		ug/L		94	39 - 125		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*93*		*15 - 122*
Nitrobenzene-d5	*93*		*19 - 130*
Terphenyl-d14	*90*		*33 - 138*

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 400-302977/4
Matrix: Water
Analysis Batch: 302977

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			04/22/16 12:59	1
Ethylbenzene	<1.0		1.0		ug/L			04/22/16 12:59	1
Toluene	<5.0		5.0		ug/L			04/22/16 12:59	1
Xylenes, Total	<5.0		5.0		ug/L			04/22/16 12:59	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*100*		*78 - 124*		*04/22/16 12:59*	*1*

Lab Sample ID: LCS 400-302977/1002
Matrix: Water
Analysis Batch: 302977

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	49.3		ug/L		99	85 - 115		
Ethylbenzene			50.0	49.7		ug/L		99	85 - 115		

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

Lab Sample ID: LCS 400-302977/1002
Matrix: Water
Analysis Batch: 302977

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Toluene			50.0	49.5		ug/L		99	85 - 115		
Xylenes, Total			150	149		ug/L		99	85 - 115		

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

Lab Sample ID: 400-120367-A-2 MS
Matrix: Water
Analysis Batch: 302977

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	44.0		ug/L		88	44 - 150		
Ethylbenzene	<1.0		50.0	44.1		ug/L		88	70 - 142		
Toluene	<5.0		50.0	44.4		ug/L		89	69 - 136		
Xylenes, Total	<5.0		150	132		ug/L		88	68 - 142		

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

Lab Sample ID: 400-120367-A-2 MSD
Matrix: Water
Analysis Batch: 302977

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	47.5		ug/L		95	44 - 150	8	16
Ethylbenzene	<1.0		50.0	47.8		ug/L		96	70 - 142	8	16
Toluene	<5.0		50.0	47.9		ug/L		96	69 - 136	8	16
Xylenes, Total	<5.0		150	144		ug/L		96	68 - 142	8	15

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

Lab Sample ID: MB 400-303827/3
Matrix: Water
Analysis Batch: 303827

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			04/28/16 12:18	1
Ethylbenzene	<1.0		1.0		ug/L			04/28/16 12:18	1
Toluene	<5.0		5.0		ug/L			04/28/16 12:18	1
Xylenes, Total	<5.0		5.0		ug/L			04/28/16 12:18	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*104*		*78 - 124*		*04/28/16 12:18*	*1*

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

Lab Sample ID: LCS 400-303827/1002
Matrix: Water
Analysis Batch: 303827

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	49.3		ug/L		99	85 - 115		
Ethylbenzene			50.0	49.3		ug/L		99	85 - 115		
Toluene			50.0	49.2		ug/L		98	85 - 115		
Xylenes, Total			150	148		ug/L		99	85 - 115		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
a,a,a-Trifluorotoluene (pid)	*102*		*78 - 124*

Lab Sample ID: 400-120432-A-6 MS
Matrix: Water
Analysis Batch: 303827

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	5.8		50.0	52.7		ug/L		94	44 - 150		
Ethylbenzene	<1.0		50.0	47.4		ug/L		94	70 - 142		
Toluene	9.5		50.0	56.6		ug/L		94	69 - 136		
Xylenes, Total	8.5		150	150		ug/L		95	68 - 142		

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

Lab Sample ID: 400-120432-A-6 MSD
Matrix: Water
Analysis Batch: 303827

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	5.8		50.0	49.2		ug/L		87	44 - 150	7	16
Ethylbenzene	<1.0		50.0	44.7		ug/L		88	70 - 142	6	16
Toluene	9.5		50.0	53.3		ug/L		87	69 - 136	6	16
Xylenes, Total	8.5		150	144		ug/L		90	68 - 142	5	15

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

Lab Sample ID: MB 400-304034/2
Matrix: Water
Analysis Batch: 304034

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 11:06	1
Ethylbenzene	<1.0		1.0		ug/L			04/29/16 11:06	1
Toluene	<5.0		5.0		ug/L			04/29/16 11:06	1
Xylenes, Total	<5.0		5.0		ug/L			04/29/16 11:06	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*104*		*78 - 124*		*04/29/16 11:06*	*1*

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

Lab Sample ID: LCS 400-304034/1001
Matrix: Water
Analysis Batch: 304034

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	47.3		ug/L		95	85 - 115
Ethylbenzene	50.0	46.2		ug/L		92	85 - 115
Toluene	50.0	47.0		ug/L		94	85 - 115
Xylenes, Total	150	141		ug/L		94	85 - 115

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
a,a,a-Trifluorotoluene (pid)	*102*		*78 - 124*

Lab Sample ID: 400-120437-5 MS
Matrix: Water
Analysis Batch: 304034

Client Sample ID: MW-7
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	44.5		ug/L		89	44 - 150
Ethylbenzene	<1.0		50.0	43.7		ug/L		87	70 - 142
Toluene	<5.0		50.0	44.4		ug/L		89	69 - 136
Xylenes, Total	<5.0		150	134		ug/L		89	68 - 142

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
a,a,a-Trifluorotoluene (pid)	*102*		*78 - 124*

Lab Sample ID: 400-120437-5 MSD
Matrix: Water
Analysis Batch: 304034

Client Sample ID: MW-7
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	45.5		ug/L		91	44 - 150	2	16
Ethylbenzene	<1.0		50.0	45.6		ug/L		91	70 - 142	4	16
Toluene	<5.0		50.0	45.4		ug/L		91	69 - 136	2	16
Xylenes, Total	<5.0		150	137		ug/L		91	68 - 142	2	15

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
a,a,a-Trifluorotoluene (pid)	*102*		*78 - 124*

Lab Chronicle

Client: MWH Americas Inc
Project/Site: Hamner #9

TestAmerica Job ID: 400-120437-1

Client Sample ID: MW-1
Date Collected: 04/18/16 11:15
Date Received: 04/19/16 09:43

Lab Sample ID: 400-120437-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			250 mL	1.0 mL	302905	04/22/16 10:37	KH1	TAL PEN
Total/NA	Analysis	8270C LL		1	250 mL	1.0 mL	303326	04/25/16 22:53	KJA	TAL PEN
	Instrument ID: LUCY									
Total/NA	Prep	3520C			250 mL	1.0 mL	302905	04/22/16 10:37	KH1	TAL PEN
Total/NA	Analysis	8270C LL		1	250 mL	1.0 mL	303725	04/27/16 20:40	TJB	TAL PEN
	Instrument ID: Peanuts									
Total/NA	Analysis	8021B		1	5 mL	5 mL	302977	04/22/16 14:21	MKA	TAL PEN
	Instrument ID: CH_RITA									

Client Sample ID: MW-4
Date Collected: 04/18/16 11:20
Date Received: 04/19/16 09:43

Lab Sample ID: 400-120437-2
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	304034	04/29/16 13:22	MKA	TAL PEN
	Instrument ID: ETHYL									

Client Sample ID: MW-5
Date Collected: 04/18/16 11:25
Date Received: 04/19/16 09:43

Lab Sample ID: 400-120437-3
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	302977	04/22/16 14:51	MKA	TAL PEN
	Instrument ID: CH_RITA									

Client Sample ID: MW-6
Date Collected: 04/18/16 11:30
Date Received: 04/19/16 09:43

Lab Sample ID: 400-120437-4
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	303827	04/29/16 02:12	MKA	TAL PEN
	Instrument ID: ETHYL									

Client Sample ID: MW-7
Date Collected: 04/18/16 11:35
Date Received: 04/19/16 09:43

Lab Sample ID: 400-120437-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			250 mL	1.0 mL	302905	04/22/16 10:37	KH1	TAL PEN
Total/NA	Analysis	8270C LL		1	250 mL	1.0 mL	303326	04/25/16 23:19	KJA	TAL PEN
	Instrument ID: LUCY									
Total/NA	Analysis	8021B		1	5 mL	5 mL	304034	04/29/16 14:21	MKA	TAL PEN
	Instrument ID: ETHYL									

Lab Chronicle

Client: MWH Americas Inc
Project/Site: Hamner #9

TestAmerica Job ID: 400-120437-1

Client Sample ID: TRIP BLANK

Date Collected: 04/18/16 00:00
Date Received: 04/19/16 09:43

Lab Sample ID: 400-120437-6

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	303827	04/28/16 21:17	MKA	TAL PEN
	Instrument ID: ETHYL									

Laboratory References:

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

Certification Summary

Client: MWH Americas Inc
Project/Site: Hamner #9

TestAmerica Job ID: 400-120437-1

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: Hamner #9

TestAmerica Job ID: 400-120437-1

Method	Method Description	Protocol	Laboratory
8270C LL	Semivolatile Organic Compounds by GCMS - Low Levels	SW846	TAL PEN
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
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400-120437 COC

Client Information	Sampler: Clint Oberbroeckling	Lab PM: Edwards, Marty P	Carrier Tracking No(s):	COC No: 400-54746-24012.1
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 #: 105088834
Address: 1560 Broadway Suite 1800	Due Date Requested: Per ARP			Preservation Codes:
City: Denver	TAT Requested (days): Per ARP			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 Dodecahydrate; U - Acetone; V - MCAA; W - ph 4-5; Z - other (specify)
State, Zip: CO, 80202	AR # MWH-03-30-15-0004			
Phone: 303-291-2239(Tel)	PO #: Purchase Order Requested			Other:
Email: sarah.gardner@mwhglobal.com	WO #:			
Project Name: Hamner #9	Project #: 40005479			
Site: Hamner #9	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)	Preservation Code:	8021B - BTEX 8021	8270C_LL - PAHs	Total Number of containers	Special Instructions/Note:
MW-1	4/18/16	1115	G	Water		X	X	4	
~~MW-3~~ two MW-4		1120		Water				2	
MW-5		1125		Water				2	
MW-6		1130		Water				2	
MW-7		1135		Water			X	4	
TRIP BLANK		—	—	Water				2	
				Water					
				Water					
two									

Possible Hazard Identification
[X] 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 [X] 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: 4/18/16 1530	Company: MWH	Received by:	Date/Time: 4/19/16 0943	Company: TA	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company	

Custody Seals Intact: [ ] Yes [ ] No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 2.4°C IR 6

5/3/2016

Login Sample Receipt Checklist

Client: MWH Americas Inc

Job Number: 400-120437-1

Login Number: 120437
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.	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	

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ANALYTICAL REPORT

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

TestAmerica Job ID: 400-125655-1
Client Project/Site: Hamner #9

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

Attn: Steve Varsa

Authorized for release by:
8/19/2016 9:51:42 AM
Carol Webb, Project Manager II
(850)471-6250
carol.webb@testamericainc.com

Designee for

Marty Edwards, Manager of Project Management
(850)471-6227
marty.edwards@testamericainc.com

Table of Contents

Definitions/Glossary

Client: MWH Americas Inc
Project/Site: Hamner #9

TestAmerica Job ID: 400-125655-1

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: Hamner #9

TestAmerica Job ID: 400-125655-1

Job ID: 400-125655-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-125655-1

Comments
No additional comments.

Receipt
The samples were received on 8/10/2016 10:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.9º C.

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: Hamner #9

TestAmerica Job ID: 400-125655-1

Client Sample ID: TRIP BLANK (8/9/16) — Lab Sample ID: 400-125655-1

No Detections.

Client Sample ID: MW-6 — Lab Sample ID: 400-125655-2

No Detections.

Client Sample ID: MW-5 — Lab Sample ID: 400-125655-3

No Detections.

Client Sample ID: MW-4 — Lab Sample ID: 400-125655-4

No Detections.

Client Sample ID: MW-7 — Lab Sample ID: 400-125655-5

No Detections.

Client Sample ID: MW-1 — Lab Sample ID: 400-125655-6

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene	1.9		1.0		ug/L	1		8021B	Total/NA
Ethylbenzene	24		1.0		ug/L	1		8021B	Total/NA
Xylenes, Total	11		5.0		ug/L	1		8021B	Total/NA

This Detection Summary does not include radiochemical test results.

Sample Summary

Client: MWH Americas Inc
Project/Site: Hamner #9

TestAmerica Job ID: 400-125655-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-125655-1	TRIP BLANK (8/9/16)	Water	08/09/16 12:00	08/10/16 10:20
400-125655-2	MW-6	Water	08/09/16 12:25	08/10/16 10:20
400-125655-3	MW-5	Water	08/09/16 12:30	08/10/16 10:20
400-125655-4	MW-4	Water	08/09/16 12:35	08/10/16 10:20
400-125655-5	MW-7	Water	08/09/16 12:40	08/10/16 10:20
400-125655-6	MW-1	Water	08/09/16 12:45	08/10/16 10:20

Client: MWH Americas Inc
Project/Site: Hamner #9

TestAmerica Job ID: 400-125655-1

Client Sample ID: TRIP BLANK (8/9/16)
Date Collected: 08/09/16 12:00
Date Received: 08/10/16 10:20

Lab Sample ID: 400-125655-1
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			08/15/16 15:06	1
Ethylbenzene	<1.0		1.0		ug/L			08/15/16 15:06	1
Toluene	<5.0		5.0		ug/L			08/15/16 15:06	1
Xylenes, Total	<5.0		5.0		ug/L			08/15/16 15:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*84*		*78 - 124*		*08/15/16 15:06*	*1*

Client: MWH Americas Inc
Project/Site: Hamner #9

TestAmerica Job ID: 400-125655-1

Client Sample ID: MW-6
Date Collected: 08/09/16 12:25
Date Received: 08/10/16 10:20

Lab Sample ID: 400-125655-2
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			08/15/16 18:01	1
Ethylbenzene	<1.0		1.0		ug/L			08/15/16 18:01	1
Toluene	<5.0		5.0		ug/L			08/15/16 18:01	1
Xylenes, Total	<5.0		5.0		ug/L			08/15/16 18:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*87*		*78 - 124*		*08/15/16 18:01*	*1*

Client: MWH Americas Inc
Project/Site: Hamner #9

TestAmerica Job ID: 400-125655-1

Client Sample ID: MW-5
Date Collected: 08/09/16 12:30
Date Received: 08/10/16 10:20

Lab Sample ID: 400-125655-3
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			08/15/16 18:36	1
Ethylbenzene	<1.0		1.0		ug/L			08/15/16 18:36	1
Toluene	<5.0		5.0		ug/L			08/15/16 18:36	1
Xylenes, Total	<5.0		5.0		ug/L			08/15/16 18:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*89*		*78 - 124*		*08/15/16 18:36*	*1*

Client: MWH Americas Inc
Project/Site: Hamner #9

TestAmerica Job ID: 400-125655-1

Client Sample ID: MW-4
Date Collected: 08/09/16 12:35
Date Received: 08/10/16 10:20

Lab Sample ID: 400-125655-4
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			08/15/16 19:11	1
Ethylbenzene	<1.0		1.0		ug/L			08/15/16 19:11	1
Toluene	<5.0		5.0		ug/L			08/15/16 19:11	1
Xylenes, Total	<5.0		5.0		ug/L			08/15/16 19:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*84*		*78 - 124*		*08/15/16 19:11*	*1*

Client: MWH Americas Inc
Project/Site: Hamner #9

TestAmerica Job ID: 400-125655-1

Client Sample ID: MW-7
Date Collected: 08/09/16 12:40
Date Received: 08/10/16 10:20

Lab Sample ID: 400-125655-5
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			08/15/16 19:46	1
Ethylbenzene	<1.0		1.0		ug/L			08/15/16 19:46	1
Toluene	<5.0		5.0		ug/L			08/15/16 19:46	1
Xylenes, Total	<5.0		5.0		ug/L			08/15/16 19:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*85*		*78 - 124*		*08/15/16 19:46*	*1*

Client: MWH Americas Inc
Project/Site: Hamner #9

TestAmerica Job ID: 400-125655-1

Client Sample ID: MW-1
Date Collected: 08/09/16 12:45
Date Received: 08/10/16 10:20

Lab Sample ID: 400-125655-6
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**1.9**		1.0		ug/L			08/15/16 11:37	1
Ethylbenzene	**24**		1.0		ug/L			08/15/16 11:37	1
Toluene	<5.0		5.0		ug/L			08/15/16 11:37	1
Xylenes, Total	**11**		5.0		ug/L			08/15/16 11:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*97*		*78 - 124*		*08/15/16 11:37*	*1*

QC Association Summary

Client: MWH Americas Inc
Project/Site: Hamner #9

TestAmerica Job ID: 400-125655-1

GC VOA

Analysis Batch: 318528

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-125655-1	TRIP BLANK (8/9/16)	Total/NA	Water	8021B	
400-125655-2	MW-6	Total/NA	Water	8021B	
400-125655-3	MW-5	Total/NA	Water	8021B	
400-125655-4	MW-4	Total/NA	Water	8021B	
400-125655-5	MW-7	Total/NA	Water	8021B	
400-125655-6	MW-1	Total/NA	Water	8021B	
MB 400-318528/5	Method Blank	Total/NA	Water	8021B	
LCS 400-318528/1003	Lab Control Sample	Total/NA	Water	8021B	
400-125655-6 MS	MW-1	Total/NA	Water	8021B	
400-125655-6 MSD	MW-1	Total/NA	Water	8021B	

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 400-318528/5
Matrix: Water
Analysis Batch: 318528

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			08/15/16 11:01	1
Ethylbenzene	<1.0		1.0		ug/L			08/15/16 11:01	1
Toluene	<5.0		5.0		ug/L			08/15/16 11:01	1
Xylenes, Total	<5.0		5.0		ug/L			08/15/16 11:01	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*85*		*78 - 124*		*08/15/16 11:01*	*1*

Lab Sample ID: LCS 400-318528/1003
Matrix: Water
Analysis Batch: 318528

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	47.5		ug/L		95	85 - 115		
Ethylbenzene			50.0	49.1		ug/L		98	85 - 115		
Toluene			50.0	47.8		ug/L		96	85 - 115		
Xylenes, Total			150	149		ug/L		99	85 - 115		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
a,a,a-Trifluorotoluene (pid)	*94*		*78 - 124*

Lab Sample ID: 400-125655-6 MS
Matrix: Water
Analysis Batch: 318528

Client Sample ID: MW-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	1.9		50.0	59.3		ug/L		115	44 - 150		
Ethylbenzene	24		50.0	83.4		ug/L		119	70 - 142		
Toluene	<5.0		50.0	60.2		ug/L		120	69 - 136		
Xylenes, Total	11		150	187		ug/L		117	68 - 142		

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

Lab Sample ID: 400-125655-6 MSD
Matrix: Water
Analysis Batch: 318528

Client Sample ID: MW-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	1.9		50.0	56.8		ug/L		110	44 - 150	4	16
Ethylbenzene	24		50.0	77.9		ug/L		108	70 - 142	7	16
Toluene	<5.0		50.0	57.2		ug/L		114	69 - 136	5	16
Xylenes, Total	11		150	173		ug/L		108	68 - 142	7	15

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

Lab Chronicle

Client: MWH Americas Inc
Project/Site: Hamner #9

TestAmerica Job ID: 400-125655-1

Client Sample ID: TRIP BLANK (8/9/16)
Date Collected: 08/09/16 12:00
Date Received: 08/10/16 10:20

Lab Sample ID: 400-125655-1
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	318528	08/15/16 15:06	SAB	TAL PEN
	Instrument ID: CH_JOAN									

Client Sample ID: MW-6
Date Collected: 08/09/16 12:25
Date Received: 08/10/16 10:20

Lab Sample ID: 400-125655-2
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	318528	08/15/16 18:01	SAB	TAL PEN
	Instrument ID: CH_JOAN									

Client Sample ID: MW-5
Date Collected: 08/09/16 12:30
Date Received: 08/10/16 10:20

Lab Sample ID: 400-125655-3
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	318528	08/15/16 18:36	SAB	TAL PEN
	Instrument ID: CH_JOAN									

Client Sample ID: MW-4
Date Collected: 08/09/16 12:35
Date Received: 08/10/16 10:20

Lab Sample ID: 400-125655-4
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	318528	08/15/16 19:11	SAB	TAL PEN
	Instrument ID: CH_JOAN									

Client Sample ID: MW-7
Date Collected: 08/09/16 12:40
Date Received: 08/10/16 10:20

Lab Sample ID: 400-125655-5
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	318528	08/15/16 19:46	SAB	TAL PEN
	Instrument ID: CH_JOAN									

Client Sample ID: MW-1
Date Collected: 08/09/16 12:45
Date Received: 08/10/16 10:20

Lab Sample ID: 400-125655-6
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	318528	08/15/16 11:37	SAB	TAL PEN
	Instrument ID: CH_JOAN									

Lab Chronicle

Client: MWH Americas Inc
Project/Site: Hamner #9

TestAmerica Job ID: 400-125655-1

Laboratory References:

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

Certification Summary

Client: MWH Americas Inc
Project/Site: Hamner #9

TestAmerica Job ID: 400-125655-1

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	09-01-16
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	10-09-16
Iowa	State Program	7	367	07-31-16 *
Kansas	NELAP	7	E-10253	10-31-16
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	08-31-16
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	06-30-17
Texas	NELAP	6	T104704286-15-9	09-30-16
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	08-31-16

* Certification renewal pending - certification considered valid.

Method Summary

Client: MWH Americas Inc
Project/Site: Hamner #9

TestAmerica Job ID: 400-125655-1

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: Brad Barton	Lab PM: Edwards, Marty P	Carrier Tracking No(s):	COC No: 400-56726-24605.1
Client Contact: Clint Oberbroeckling	Phone: 316 305 2789	E-Mail: marty.edwards@testamericainc.com		Page: Page 1 of 1
Company: MWH Americas Inc		Analysis Requested		Job #:
Address: 11153 Aurora Avenue	Due Date Requested: Per ARF			
City: Des Moines	TAT Requested (days): Per ARF			
State, Zip: IA, 50322-7904				
Phone: 303-291-2239(Tel)	PO #: Purchase Order Requested			
Email: clint.w.oberbroeckling@mwhglobal.com	WO #: ARF # ERG-MWH-06-28-16-CWO-01			
Project Name: Hamner #9	Project #: 40005479			
Site: Hamner #9	SSOW#:			

400-125655 COC

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 - Na2S2O3, 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	Perform MS/MSD	8021B - BTEX 8021	Total Number of containers	Special Instructions/Note:
Preservation Code:					X				
Trip Blank (8/9/16)	8/9/16	1200	-	W	N	N	3	3	
MW-6		1225	G	W	N	N	3	3	
MW-5		1230	G	W	N	N	3	3	
MW-4		1235	G	W	N	N	3	3	
MW-7		1240	G	W	N	N	3	3	
MW-1		1245	G	W	N	N	3	3	

Possible Hazard Identification
X 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 X Disposal By Lab ☐ Archive For ______ Months

Deliverable Requested: I, II, III, IV, Other (specify) Per ARF
Special Instructions/QC Requirements: Per ARF

Empty Kit Relinquished by:		Date:	Time:	Method of Shipment: Fed Ex Air	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by: Brad Barton	Date/Time: 8/9/16 1415	Company: MWH	Received by: Fed Ex office	Date/Time: 8/9/16 1415	Company: Fed Ex
Relinquished by: Fed Ex	Date/Time: 8/10/16 -	Company: Fed Ex	Received by: C Ch[illegible]	Date/Time: 08/10/16 1020	Company: TA
Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: 0.9°C IR5		

Login Sample Receipt Checklist

Client: MWH Americas Inc

Job Number: 400-125655-1

Login Number: 125655
List Number: 1
Creator: Chambers, Cheryle A

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	0.9°C IR5
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: 400-128676-1
Client Project/Site: Hamner #9

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

Attn: Ms. Sarah Gardner

Madonna Myers

Authorized for release by:
10/26/2016 9:48:24 AM
Madonna Myers, Project Manager II
(615)796-1870
madonna.myers@testamericainc.com

Designee for

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

Table of Contents

Glossary

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

Case Narrative

Client: MWH Americas Inc
Project/Site: Hamner #9

TestAmerica Job ID: 400-128676-1

Job ID: 400-128676-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-128676-1

Comments
No additional comments.

Receipt
The samples were received on 10/13/2016 9:39 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.6º C.

GC VOA
Method(s) 8021B: The sample was collected in properly preserved vials for analysis of volatile organic compounds (VOCs). However, when verified by the laboratory, the pH was greater than 2 and the following samples were analyzed after 7 days from sampling: MW-1 (400-128676-1).

No additional analytical or quality issues were noted, other than those described above or 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: Hamner #9

TestAmerica Job ID: 400-128676-1

Client Sample ID: MW-1 — Lab Sample ID: 400-128676-1

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Ethylbenzene	19		1.0		ug/L	1		8021B	Total/NA
Toluene	6.2		5.0		ug/L	1		8021B	Total/NA

Client Sample ID: MW-4 — Lab Sample ID: 400-128676-2

No Detections.

Client Sample ID: MW-5 — Lab Sample ID: 400-128676-3

No Detections.

Client Sample ID: MW-6 — Lab Sample ID: 400-128676-4

No Detections.

Client Sample ID: MW-7 — Lab Sample ID: 400-128676-5

No Detections.

Client Sample ID: TB-4 — Lab Sample ID: 400-128676-6

No Detections.

This Detection Summary does not include radiochemical test results.

Sample Summary

Client: MWH Americas Inc
Project/Site: Hamner #9

TestAmerica Job ID: 400-128676-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-128676-1	MW-1	Water	10/12/16 07:44	10/13/16 09:39
400-128676-2	MW-4	Water	10/12/16 08:00	10/13/16 09:39
400-128676-3	MW-5	Water	10/12/16 08:07	10/13/16 09:39
400-128676-4	MW-6	Water	10/12/16 08:16	10/13/16 09:39
400-128676-5	MW-7	Water	10/12/16 08:21	10/13/16 09:39
400-128676-6	TB-4	Water	10/12/16 00:00	10/13/16 09:39

Client: MWH Americas Inc
Project/Site: Hamner #9

TestAmerica Job ID: 400-128676-1

Client Sample ID: MW-1
Date Collected: 10/12/16 07:44
Date Received: 10/13/16 09:39

Lab Sample ID: 400-128676-1
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			10/24/16 19:54	1
Ethylbenzene	**19**		1.0		ug/L			10/24/16 19:54	1
Toluene	**6.2**		5.0		ug/L			10/24/16 19:54	1
Xylenes, Total	<5.0		5.0		ug/L			10/24/16 19:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*104*		*78 - 124*		*10/24/16 19:54*	*1*

Client: MWH Americas Inc
Project/Site: Hamner #9

TestAmerica Job ID: 400-128676-1

Client Sample ID: MW-4
Date Collected: 10/12/16 08:00
Date Received: 10/13/16 09:39

Lab Sample ID: 400-128676-2
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			10/24/16 20:53	1
Ethylbenzene	<1.0		1.0		ug/L			10/24/16 20:53	1
Toluene	<5.0		5.0		ug/L			10/24/16 20:53	1
Xylenes, Total	<5.0		5.0		ug/L			10/24/16 20:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*102*		*78 - 124*		*10/24/16 20:53*	*1*

Client: MWH Americas Inc
Project/Site: Hamner #9

TestAmerica Job ID: 400-128676-1

Client Sample ID: MW-5
Date Collected: 10/12/16 08:07
Date Received: 10/13/16 09:39

Lab Sample ID: 400-128676-3
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			10/24/16 21:53	1
Ethylbenzene	<1.0		1.0		ug/L			10/24/16 21:53	1
Toluene	<5.0		5.0		ug/L			10/24/16 21:53	1
Xylenes, Total	<5.0		5.0		ug/L			10/24/16 21:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*104*		*78 - 124*		*10/24/16 21:53*	*1*

Client: MWH Americas Inc
Project/Site: Hamner #9

TestAmerica Job ID: 400-128676-1

Client Sample ID: MW-6
Date Collected: 10/12/16 08:16
Date Received: 10/13/16 09:39

Lab Sample ID: 400-128676-4
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			10/24/16 22:51	1
Ethylbenzene	<1.0		1.0		ug/L			10/24/16 22:51	1
Toluene	<5.0		5.0		ug/L			10/24/16 22:51	1
Xylenes, Total	<5.0		5.0		ug/L			10/24/16 22:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*102*		*78 - 124*		*10/24/16 22:51*	*1*

Client: MWH Americas Inc
Project/Site: Hamner #9

TestAmerica Job ID: 400-128676-1

Client Sample ID: MW-7
Date Collected: 10/12/16 08:21
Date Received: 10/13/16 09:39

Lab Sample ID: 400-128676-5
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			10/24/16 23:50	1
Ethylbenzene	<1.0		1.0		ug/L			10/24/16 23:50	1
Toluene	<5.0		5.0		ug/L			10/24/16 23:50	1
Xylenes, Total	<5.0		5.0		ug/L			10/24/16 23:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*103*		*78 - 124*		*10/24/16 23:50*	*1*

Client: MWH Americas Inc
Project/Site: Hamner #9

TestAmerica Job ID: 400-128676-1

Client Sample ID: TB-4
Date Collected: 10/12/16 00:00
Date Received: 10/13/16 09:39

Lab Sample ID: 400-128676-6
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			10/21/16 02:13	1
Ethylbenzene	<1.0		1.0		ug/L			10/21/16 02:13	1
Toluene	<5.0		5.0		ug/L			10/21/16 02:13	1
Xylenes, Total	<5.0		5.0		ug/L			10/21/16 02:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*109*		*78 - 124*		*10/21/16 02:13*	*1*

QC Association Summary

Client: MWH Americas Inc
Project/Site: Hamner #9

TestAmerica Job ID: 400-128676-1

GC VOA

Analysis Batch: 327612

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-128676-6	TB-4	Total/NA	Water	8021B	
MB 400-327612/2	Method Blank	Total/NA	Water	8021B	
LCS 400-327612/1001	Lab Control Sample	Total/NA	Water	8021B	
400-128741-B-1 MS	Matrix Spike	Total/NA	Water	8021B	
400-128741-B-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8021B	

Analysis Batch: 327992

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-128676-1	MW-1	Total/NA	Water	8021B	
400-128676-2	MW-4	Total/NA	Water	8021B	
400-128676-3	MW-5	Total/NA	Water	8021B	
400-128676-4	MW-6	Total/NA	Water	8021B	
400-128676-5	MW-7	Total/NA	Water	8021B	
MB 400-327992/4	Method Blank	Total/NA	Water	8021B	
LCS 400-327992/1025	Lab Control Sample	Total/NA	Water	8021B	
400-128739-B-2 MS	Matrix Spike	Total/NA	Water	8021B	
400-128739-B-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8021B	

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 400-327612/2
Matrix: Water
Analysis Batch: 327612

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			10/20/16 10:12	1
Ethylbenzene	<1.0		1.0		ug/L			10/20/16 10:12	1
Toluene	<5.0		5.0		ug/L			10/20/16 10:12	1
Xylenes, Total	<5.0		5.0		ug/L			10/20/16 10:12	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*108*		*78 - 124*		*10/20/16 10:12*	*1*

Lab Sample ID: LCS 400-327612/1001
Matrix: Water
Analysis Batch: 327612

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	51.6		ug/L		103	85 - 115		
Ethylbenzene			50.0	50.4		ug/L		101	85 - 115		
Toluene			50.0	51.2		ug/L		102	85 - 115		
Xylenes, Total			150	153		ug/L		102	85 - 115		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
a,a,a-Trifluorotoluene (pid)	*107*		*78 - 124*

Lab Sample ID: 400-128741-B-1 MS
Matrix: Water
Analysis Batch: 327612

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	47.7		ug/L		95	44 - 150		
Ethylbenzene	<1.0		50.0	47.4		ug/L		95	70 - 142		
Toluene	<5.0		50.0	47.5		ug/L		95	69 - 136		
Xylenes, Total	<5.0		150	143		ug/L		95	68 - 142		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
a,a,a-Trifluorotoluene (pid)	*107*		*78 - 124*

Lab Sample ID: 400-128741-B-1 MSD
Matrix: Water
Analysis Batch: 327612

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	48.8		ug/L		98	44 - 150	2	16
Ethylbenzene	<1.0		50.0	48.3		ug/L		97	70 - 142	2	16
Toluene	<5.0		50.0	48.7		ug/L		97	69 - 136	2	16
Xylenes, Total	<5.0		150	146		ug/L		97	68 - 142	3	15

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
a,a,a-Trifluorotoluene (pid)	*106*		*78 - 124*

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

Lab Sample ID: MB 400-327992/4
Matrix: Water
Analysis Batch: 327992

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			10/24/16 15:57	1
Ethylbenzene	<1.0		1.0		ug/L			10/24/16 15:57	1
Toluene	<5.0		5.0		ug/L			10/24/16 15:57	1
Xylenes, Total	<5.0		5.0		ug/L			10/24/16 15:57	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*104*		*78 - 124*		*10/24/16 15:57*	*1*

Lab Sample ID: LCS 400-327992/1025
Matrix: Water
Analysis Batch: 327992

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	49.6		ug/L		99	85 - 115		
Ethylbenzene			50.0	48.3		ug/L		97	85 - 115		
Toluene			50.0	49.3		ug/L		99	85 - 115		
Xylenes, Total			150	148		ug/L		99	85 - 115		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
a,a,a-Trifluorotoluene (pid)	*102*		*78 - 124*

Lab Sample ID: 400-128739-B-2 MS
Matrix: Water
Analysis Batch: 327992

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	48.8		ug/L		98	44 - 150		
Ethylbenzene	<1.0		50.0	48.6		ug/L		97	70 - 142		
Toluene	<5.0		50.0	48.6		ug/L		97	69 - 136		
Xylenes, Total	<5.0		150	145		ug/L		97	68 - 142		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
a,a,a-Trifluorotoluene (pid)	*103*		*78 - 124*

Lab Sample ID: 400-128739-B-2 MSD
Matrix: Water
Analysis Batch: 327992

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	41.9		ug/L		84	44 - 150	15	16
Ethylbenzene	<1.0		50.0	41.2		ug/L		82	70 - 142	16	16
Toluene	<5.0		50.0	41.8		ug/L		84	69 - 136	15	16
Xylenes, Total	<5.0		150	125		ug/L		83	68 - 142	15	15

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
a,a,a-Trifluorotoluene (pid)	*102*		*78 - 124*

Lab Chronicle

Client: MWH Americas Inc
Project/Site: Hamner #9

TestAmerica Job ID: 400-128676-1

Client Sample ID: MW-1
Date Collected: 10/12/16 07:44
Date Received: 10/13/16 09:39

Lab Sample ID: 400-128676-1
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	327992	10/24/16 19:54	CMW	TAL PEN
	Instrument ID: ETHYL									

Client Sample ID: MW-4
Date Collected: 10/12/16 08:00
Date Received: 10/13/16 09:39

Lab Sample ID: 400-128676-2
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	327992	10/24/16 20:53	CMW	TAL PEN
	Instrument ID: ETHYL									

Client Sample ID: MW-5
Date Collected: 10/12/16 08:07
Date Received: 10/13/16 09:39

Lab Sample ID: 400-128676-3
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	327992	10/24/16 21:53	CMW	TAL PEN
	Instrument ID: ETHYL									

Client Sample ID: MW-6
Date Collected: 10/12/16 08:16
Date Received: 10/13/16 09:39

Lab Sample ID: 400-128676-4
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	327992	10/24/16 22:51	CMW	TAL PEN
	Instrument ID: ETHYL									

Client Sample ID: MW-7
Date Collected: 10/12/16 08:21
Date Received: 10/13/16 09:39

Lab Sample ID: 400-128676-5
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	327992	10/24/16 23:50	CMW	TAL PEN
	Instrument ID: ETHYL									

Client Sample ID: TB-4
Date Collected: 10/12/16 00:00
Date Received: 10/13/16 09:39

Lab Sample ID: 400-128676-6
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	327612	10/21/16 02:13	GRK	TAL PEN
	Instrument ID: ETHYL									

Lab Chronicle

Client: MWH Americas Inc
Project/Site: Hamner #9

TestAmerica Job ID: 400-128676-1

Laboratory References:

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

Certification Summary

Client: MWH Americas Inc
Project/Site: Hamner #9

TestAmerica Job ID: 400-128676-1

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: Hamner #9

TestAmerica Job ID: 400-128676-1

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: Carol Webb	Carrier Tracking No(s):	COC No: 400-59087-25370.11
Client Contact: Clint Oberbroeckling	Phone: 515 210 4279	E-Mail:		Page: Page 11 of 11
Company: MWH Americas Inc				Job #:
Address: 11153 Aurora Avenue	Due Date Requested: Std turn			
City: Des Moines	TAT Requested (days):			
State, Zip: IA, 50322-7904				
Phone:	PO #:			
Email: clint.w.oberbroeckling@mwhglobal.com	WO #:			
Project Name: San Juan River Basin	Project #: 10508834			
Site: Hamner #9	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8021B -	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A		
MW-1	10/12/16	744	G	Water			X		
MW-4	10/12/16	800	G	Water			X		
MW-5	10/12/16	807	G	Water			X		
MW-6	10/12/16	816	G	Water			X		
MW-7	10/12/16	821	G	Water			X		
TB-4				Water					
				Water					

400-128676 COC

Possible Hazard Identification
[X] 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 [X] Disposal By Lab [ ] Archive For _____ Months

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

Special Instructions/QC Requirements: ARF # ERG-MWH-09-23%-CWO-01

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

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		10/12/16 1200	MWH		10/12/16 939	
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: 3.6°C IR6

Login Sample Receipt Checklist

Client: MWH Americas Inc

Job Number: 400-128676-1
SDG Number:

Login Number: 128676
List Number: 1
Creator: Hughes, Nicholas T

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	3.6°C - IR6
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	