2014 ANNUAL GROUNDWATER REPORT

Canada Mesa #2
Meter Code: 87640
T24N, R6W, Sec 24, Unit I

SITE DETAILS

Site Location: Latitude: 36.296081 N, Longitude: -107.414109 W
Land Type: Federal
Operator: Merrion Oil & Gas Corporation

SITE BACKGROUND

- **Site Assessment:** 7/94
- **Excavation:** 8/94

Canada Mesa #2 (Site) is being managed pursuant to the procedures set forth in the document entitled, "Remediation Plan for Groundwater Encountered during Pit Closure Activities" (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 Merrion Oil & Gas Corporation and is not active.

Canada Mesa #2 is located on Federal land. Various site investigations have occurred since 1994. Monitoring wells were installed in 1995 (MW-1) and 2000 (MW-2 and MW-3). There are three existing monitoring wells at the Site: MW-1, MW-2, and MW-3. Free product has been observed and recovered from MW-1 periodically. Free product was observed at MW-1 during one site visit in 2014.

SUMMARY OF 2014 ACTIVITIES

On April 4 and October 22, 2014, water levels and free product thickness, if present, were gauged at MW-1, MW-2, and MW-3, and groundwater samples were collected from each well using HydraSleeve™ (HydraSleeve) no-purge passive groundwater sampling devices. The HydraSleeves were set during the previous sampling event approximately 0.5 foot above termination depth of the monitoring wells using a suspension tether and stainless steel weights to collect a sample from the screened interval. Groundwater samples were placed into laboratory-supplied sample containers, packed on ice, and shipped under standard chain-of-custody protocols to Test America Laboratories, Inc. in Corpus Christi, Texas where they were analyzed for benzene, toluene, ethylbenzene, and total xylenes (BTEX). Additional field parameters were collected including dissolved oxygen, temperature, conductivity, pH, and oxidation-reduction potential (ORP) using a YSI multi-parameter instrument, if free product was not present. The water remaining in the HydraSleeves was combined in a waste container and taken to Basin Disposal, Inc. for disposal.

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SUMMARY TABLES

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

SITE MAPS

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

ANALYTICAL LAB REPORTS

The groundwater analytical lab reports are included as Appendix A.

RESULTS

- The groundwater flow direction has historically been to the southwest at the Site, though groundwater elevations indicate a flow direction to the southeast (see Figures 2 and 4).

- Approximately 0.78 foot of free product was detected in MW-1 during the April 2014 sampling event and was not sampled.

- For MW-2, benzene was reported as non-detect, or below the laboratory quantification limit (J-flagged) in 2014. Toluene, ethylbenzene, and xylene constituents were not detected at MW-2 during 2014.

- The benzene concentration in groundwater samples collected from MW-3 remained above the New Mexico Water Quality Control Commission standard for both sampling events. Toluene, ethylbenzene, and total xylene concentrations were reported as non-detect or below the laboratory quantification limit (J-flagged) during 2014.

PLANNED FUTURE ACTIVITIES

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

TABLE

TABLE 1 – GROUNDWATER ANALYTICAL AND WATER LEVEL RESULTS

TABLE 1 - GROUNDWATER ANALYTICAL RESULTS

Canada Mesa #2								
Location	**Date**	**Benzene (µg/L)**	**Toluene (µg/L)**	**Ethylbenzene (µg/L)**	**Total Xylenes (µg/L)**	**Depth to Water (ft.)**	**Depth to LNAPL (ft.)**	**LNAPL Thickness (ft.)**
NMWQCC Standards:		10	750	750	620	NA	NA	NA
MW-1	11/04/96	5520	8880	469	3920	34.42	33.67	0.75
MW-1	02/05/97	3450	5200	214	1770	34.35	33.64	0.71
MW-1	05/07/97	4650	8440	317	2580	34.24	33.61	0.63
MW-1	01/09/00					33.93	33.79	0.14
MW-1	01/26/00					35.22	35.03	0.19
MW-1	02/15/00					35.11	34.93	0.18
MW-1	10/06/00					34.11	33.82	0.29
MW-1	11/14/00					33.98	33.81	0.17
MW-1	01/03/01					33.96	33.83	0.13
MW-1	01/15/01					33.93	33.78	0.15
MW-1	01/22/01					33.81	-	-
MW-1	01/30/01					33.83	33.82	0.01
MW-1	02/13/01					33.80	-	-
MW-1	02/20/01					33.81	-	-
MW-1	02/28/01					33.81	-	-
MW-1	06/04/01					34.13	33.81	0.32
MW-1	07/03/01					34.09	33.96	0.13
MW-1	08/06/01					34.08	34.07	0.01
MW-1	08/20/01					34.10	34.09	0.01
MW-1	08/31/01					34.17	-	-
MW-1	09/14/01					34.14	34.13	0.01
MW-1	09/26/01					34.15	34.14	0.01
MW-1	10/02/01					34.17	34.15	0.02
MW-1	10/10/01					34.18	34.16	0.02
MW-1	12/05/01					34.26	34.25	0.01
MW-1	12/14/01					34.27	-	-
MW-1	12/21/01					34.24	-	-
MW-1	12/28/01					34.22	-	-
MW-1	01/02/02					34.23	-	-
MW-1	01/07/02					34.25	34.23	0.02
MW-1	01/23/02					34.42	34.37	0.05
MW-1	01/30/02					34.51	34.50	0.01
MW-1	02/07/02					34.50	34.49	0.01
MW-1	02/14/02					34.42	34.41	0.01
MW-1	02/20/02					35.00	34.99	0.01
MW-1	02/26/02					34.25	-	-
MW-1	03/07/02					34.25	34.24	0.01
MW-1	03/12/02					34.25	34.24	0.01
MW-1	03/28/02					34.27	-	-
MW-1	04/03/02					34.26	-	-
MW-1	04/25/02					34.45	-	-
MW-1	05/21/02					34.30	-	-
MW-1	06/10/02					34.32	-	-
MW-1	09/23/02					34.50	-	-
MW-1	03/25/03					34.50	-	-
MW-1	06/22/03					34.55	34.48	0.07
MW-1	09/15/03					34.97	34.65	0.32
MW-1	12/15/03					34.98	34.41	0.57
MW-1	03/17/04					34.80	34.24	0.56
MW-1	03/22/04					34.49	34.29	0.20
MW-1	06/03/04					34.44	34.30	0.14
MW-1	06/04/04					34.30	34.20	0.10
MW-1	09/13/04					35.30	34.64	0.66
MW-1	09/14/04					34.95	34.65	0.30
MW-1	12/15/04					35.32	34.74	0.58
MW-1	03/22/05					35.01	34.36	0.65
MW-1	06/24/05					34.97	34.39	0.58

TABLE 1 - GROUNDWATER ANALYTICAL RESULTS

Canada Mesa #2								
Location	**Date**	**Benzene (µg/L)**	**Toluene (µg/L)**	**Ethylbenzene (µg/L)**	**Total Xylenes (µg/L)**	**Depth to Water (ft.)**	**Depth to LNAPL (ft.)**	**LNAPL Thickness (ft.)**
NMWQCC Standards:		10	750	750	620	NA	NA	NA
MW-1	09/14/05					35.65	34.60	1.05
MW-1	12/14/05					35.05	34.74	0.31
MW-1	03/28/06					35.14	34.59	0.55
MW-1	06/07/06					35.11	34.52	0.59
MW-1	09/29/06					35.14	34.85	0.29
MW-1	12/26/06					34.85	34.44	0.41
MW-1	03/26/07					34.60	34.35	0.25
MW-1	06/13/07					35.39	34.20	1.19
MW-1	09/28/07					35.12	34.86	0.26
MW-1	12/18/07					34.34	34.18	0.16
MW-1	03/05/08					34.17	34.15	0.02
MW-1	06/16/08					34.17	-	-
MW-1	09/10/08					34.35	-	-
MW-1	12/10/08					34.30	-	-
MW-1	03/02/09					34.22	-	-
MW-1	06/10/09					35.14	-	-
MW-1	08/25/09					34.50	-	-
MW-1	11/03/09	1970	6020	359	6110	34.57	-	-
MW-1	02/16/10					34.57	34.54	0.03
MW-1	06/02/10					34.58	34.34	0.24
MW-1	09/27/10					35.26	34.71	0.55
MW-1	11/08/10	571	9070	1370	27200	34.98	34.73	0.25
MW-1	02/01/11					34.97	34.63	0.34
MW-1	05/02/11					-	35.52	-
MW-1	09/23/11					35.40	34.93	0.47
MW-1	11/10/11	1340	9510	1260	20800	35.21	34.95	0.26
MW-1	02/22/12					34.98	-	-
MW-1	05/15/12					35.04	-	-
MW-1	06/05/13	720	2200	92	4000	39.13	-	-
MW-1	09/10/13	570	1700	63	2900	36.50	-	-
MW-1	12/10/13	190	740	40	1000	35.45	35.35	0.10
MW-1	04/04/14					35.78	35.00	0.78
MW-1	10/22/14					36.25	35.37	0.88

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Canada Mesa #2								
Location	**Date**	**Benzene (µg/L)**	**Toluene (µg/L)**	**Ethylbenzene (µg/L)**	**Total Xylenes (µg/L)**	**Depth to Water (ft.)**	**Depth to LNAPL (ft.)**	**LNAPL Thickness (ft.)**
NMWQCC Standards:		10	750	750	620	NA	NA	NA
MW-2	11/16/00	3200	330	1200	1100	34.90	-	-
MW-2	06/04/01					34.97	-	-
MW-2	07/03/01					35.07	-	-
MW-2	08/06/01					35.14	-	-
MW-2	08/31/01					35.19	-	-
MW-2	09/14/01					35.21	-	-
MW-2	03/19/02	22	<5	150	14	35.36	-	-
MW-2	12/24/02	12.1	2.1	129	16.4	35.52	-	-
MW-2	03/25/03					35.54	-	-
MW-2	06/22/03					35.60	-	-
MW-2	09/15/03					35.60	-	-
MW-2	12/15/03	10	11.7	55.3	29.7	35.63	-	-
MW-2	03/22/04					35.41	-	-
MW-2	06/04/04					35.31	-	-
MW-2	09/14/04					35.80	-	-
MW-2	12/15/04	6.3	3.8	8	5.9	35.79	-	-
MW-2	03/22/05					35.63	-	-
MW-2	06/24/05					35.60	-	-
MW-2	09/14/05					35.92	-	-
MW-2	12/14/05					35.85	-	-
MW-2	12/15/05	12.1	30.9	5.6	61.9	35.85	-	-
MW-2	03/28/06					35.73	-	-
MW-2	06/07/06					35.73	-	-
MW-2	09/29/06					35.91	-	-
MW-2	12/26/06	5.3	5	1.8	7.1	35.63	-	-
MW-2	03/26/07					35.41	-	-
MW-2	06/13/07					35.32	-	-
MW-2	09/28/07					35.93	-	-
MW-2	12/18/07	<2	<2	<2	<6	35.32	-	-
MW-2	03/05/08					35.22	-	-
MW-2	06/16/08					35.15	-	-
MW-2	09/10/08					35.45	-	-
MW-2	12/10/08	1.2	2.7	1.7	4.9	35.37	-	-
MW-2	03/02/09					35.27	-	-
MW-2	06/10/09					35.23	-	-
MW-2	08/25/09					35.58	-	-
MW-2	11/03/09	0.68 J	<1	<1	1.5 J	35.65	-	-
MW-2	02/16/10					35.65	-	-
MW-2	06/02/10					35.48	-	-
MW-2	09/27/10					35.85	-	-
MW-2	11/08/10	<2	<2	<2	<6	35.85	-	-
MW-2	02/01/11					35.75	-	-
MW-2	09/23/11					36.07	-	-
MW-2	11/10/11	1.1	<1	<1	1.4 J	36.08	-	-
MW-2	02/22/12					36.97	-	-
MW-2	05/15/12					36.10	-	-
MW-2	06/05/13	<0.140	<0.30	<0.20	<0.23	36.18	-	-
MW-2	09/10/13	0.22	<0.30	<0.020	<0.23	36.58	-	-
MW-2	12/10/13	0.24 J	<0.38	<0.20	<0.65	36.44	-	-
MW-2	04/04/14	0.46 J	<0.38	<0.20	<0.65	35.25	-	-
MW-2	10/22/14	<0.38	<0.70	<0.50	<1.6	36.65	-	-

TABLE 1 - GROUNDWATER ANALYTICAL RESULTS

Canada Mesa #2								
Location	**Date**	**Benzene (µg/L)**	**Toluene (µg/L)**	**Ethylbenzene (µg/L)**	**Total Xylenes (µg/L)**	**Depth to Water (ft.)**	**Depth to LNAPL (ft.)**	**LNAPL Thickness (ft.)**
NMWQCC Standards:		10	750	750	620	NA	NA	NA
MW-3	11/16/00	880	1300	420	3700	34.46	-	-
MW-3	06/04/01					34.64	-	-
MW-3	07/03/01					34.66	-	-
MW-3	08/06/01					34.74	-	-
MW-3	08/31/01					34.79	-	-
MW-3	09/14/01					34.81	-	-
MW-3	03/19/02	1100	29	360	3700	34.92	-	-
MW-3	06/10/02					34.98	-	-
MW-3	09/23/02					35.11	-	-
MW-3	12/24/02	1430	95	483	2359	35.15	-	-
MW-3	03/25/03					35.12	-	-
MW-3	06/22/03					35.17	-	-
MW-3	09/15/03					35.41	-	-
MW-3	12/15/03	503 J	79.7 J	148 J	891 J	35.17	-	-
MW-3	03/22/04					34.95	-	-
MW-3	06/04/04					34.88	-	-
MW-3	09/14/04					35.39	-	-
MW-3	12/15/04	410	54.9	88.7	420	35.17	-	-
MW-3	03/22/05					35.17	-	-
MW-3	06/24/05					35.21	-	-
MW-3	09/14/05					35.51	-	-
MW-3	12/15/05	482	32.7	74.1	399	35.40	-	-
MW-3	03/28/06					35.27	-	-
MW-3	06/07/06					35.32	-	-
MW-3	09/29/06					35.47	-	-
MW-3	12/26/06	679	78.9	106	565	35.16	-	-
MW-3	03/26/07					34.96	-	-
MW-3	06/13/07					34.88	-	-
MW-3	09/28/07					35.51	-	-
MW-3	12/18/07	412	39.4	31.5	207	34.88	-	-
MW-3	03/05/08					34.79	-	-
MW-3	06/16/08					34.75	-	-
MW-3	09/10/08					35.13	-	-
MW-3	12/10/08	653	63.2	55.5	253	34.95	-	-
MW-3	03/02/09					34.83	-	-
MW-3	06/10/09					34.83	-	-
MW-3	08/25/09					35.18	-	-
MW-3	11/03/09	715	220	80	570	35.23	-	-
MW-3	02/16/10					35.23	-	-
MW-3	06/02/10					35.05	-	-
MW-3	09/27/10					35.43	-	-
MW-3	11/08/10	426	15	22.1	85.1	35.43	-	-
MW-3	02/01/11					35.31	-	-
MW-3	09/23/11					35.70	-	-
MW-3	11/10/11	167	5.3	16.5	54.3	35.66	-	-
MW-3	02/22/12					35.60	-	-
MW-3	05/15/12					35.67	-	-
MW-3	06/05/13	340	1.3	31.0	47.0	35.79	-	-
MW-3	09/10/13	340	0.9	12.0	4.2 J	36.20	-	-
MW-3	12/10/13	220	13	6.3	2.6 J	36.00	-	-
MW-3	04/04/14	320	5.4 J	<0.80	<2.6	35.81	-	-
MW-3	10/22/14	240	<0.70	0.52 J	<1.6	36.20	-	-

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

FIGURES

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\CANADA MESA #2\2014 MAPS\Canada_Mesa#2_GARM_1SA_2014.mxd

AERIAL IMAGERY FROM GOOGLE EARTH, DATED 9/17/2012

LEGEND:

- 6508 — APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
- 6288.95 — CORRECTED GROUNDWATER ELEVATION CONTOUR
- ACCESS ROAD
- GAS — NATURAL GAS LINE
- MONITORING WELL
- SMA BENCHMARK

EXPLANATION OF ANALYTES AND APPLICABLE STANDARDS:

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

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

N

SCALE IN FEET
0 30 60

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

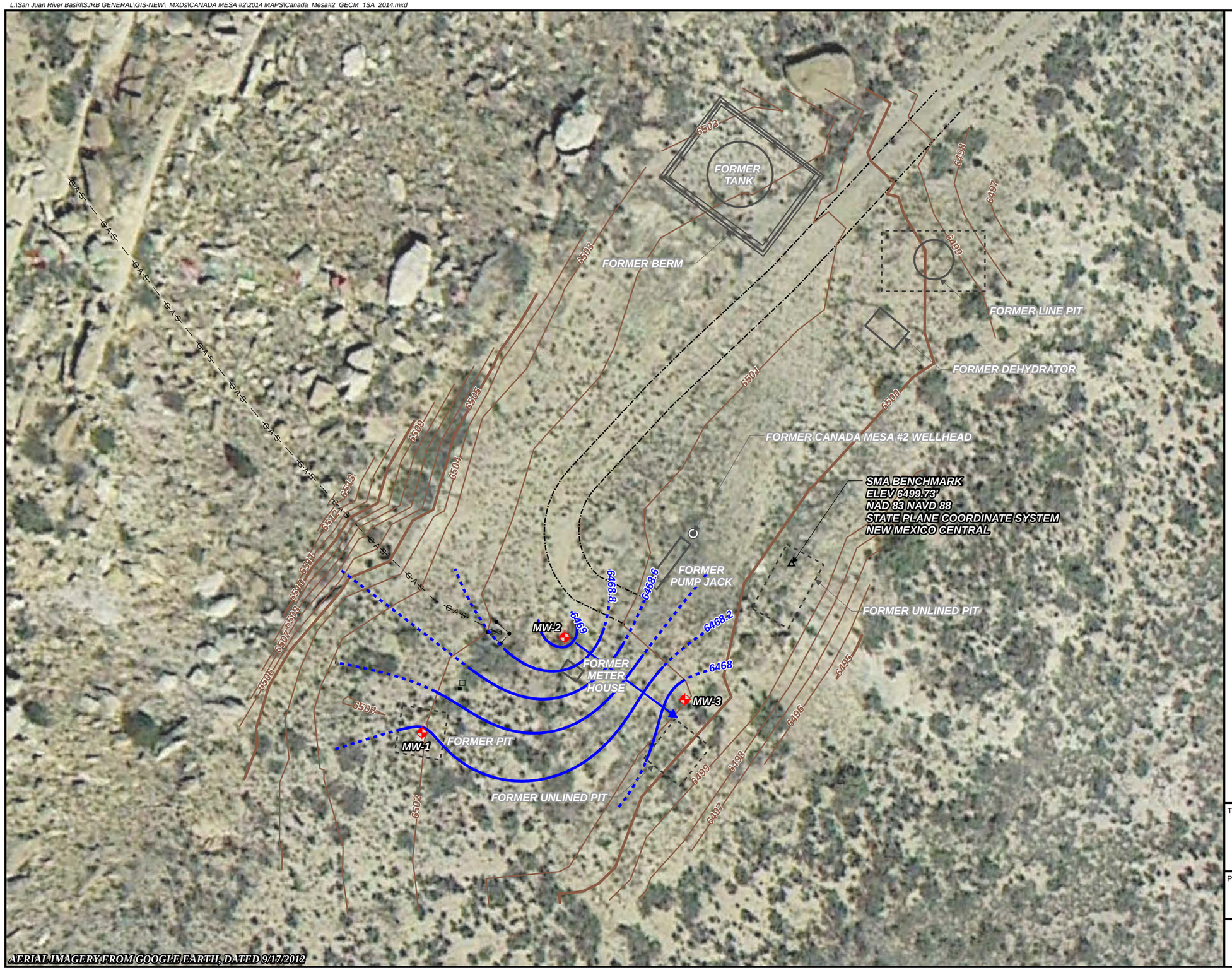
TITLE:
CANADA MESA #2
GROUNDWATER ANALYTICAL RESULTS
SAMPLED APRIL 4, 2014

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

MWH

Figure No.: 1

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\CANADA MESA #2\2014 MAPS\Canada_Mesa#2_GECM_1SA_2014.mxd



AERIAL IMAGERY FROM GOOGLE EARTH, DATED 9/17/2012

LEGEND:

- 6508 — APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
- 6288.95 — CORRECTED GROUNDWATER ELEVATION CONTOUR
- ACCESS ROAD
- GAS — NATURAL GAS LINE
- MONITORING WELL
- SMA BENCHMARK

NOTES:

6467.4 GROUNDWATER ELEVATION CORRECTED FOR PRODUCT THICKNESS. FEET ABOVE MEAN SEA LEVEL

6467.3 CORRECTED WATER LEVEL ELEVATION CONTOUR DASHED WHERE INFERRED (FEET ABOVE MEAN SEA LEVEL, 0.1 FOOT CONTOUR INTERVAL)

DIRECTION OF GROUNDWATER FLOW

N

SCALE IN FEET

0 30 60

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

TITLE:

CANADA MESA #2
GROUNDWATER ELEVATION MAP
GAUGED APRIL 4, 2014

PROJECT:

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

MWH

Figure No.: 2

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\CANADA MESA #2\2014 MAPS\Canada_Mesa#2_GARM_2SA_2014.mxd

AERIAL IMAGERY FROM GOOGLE EARTH, DATED 9/17/2012

LEGEND:

- 6503 — APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
- 6288.95 — CORRECTED GROUNDWATER ELEVATION CONTOUR
- ACCESS ROAD
- G A S — NATURAL GAS LINE
- MONITORING WELL
- SMA BENCHMARK

EXPLANATION OF ANALYTES AND APPLICABLE STANDARDS:

RESULTS IN **BOLDFACE** TYPE INDICATE CONCENTRATION IN EXCESS OF THE STANDARD FOR THAT ANALYTE.
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MDL = METHOD DETECTION LIMIT
RL = REPORTING LIMIT OR REQUESTED LIMIT (RADIOCHEMISTRY)

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

N

SCALE IN FEET
0 30 60

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
A	12/30/2014	CCL	CCL	DAW

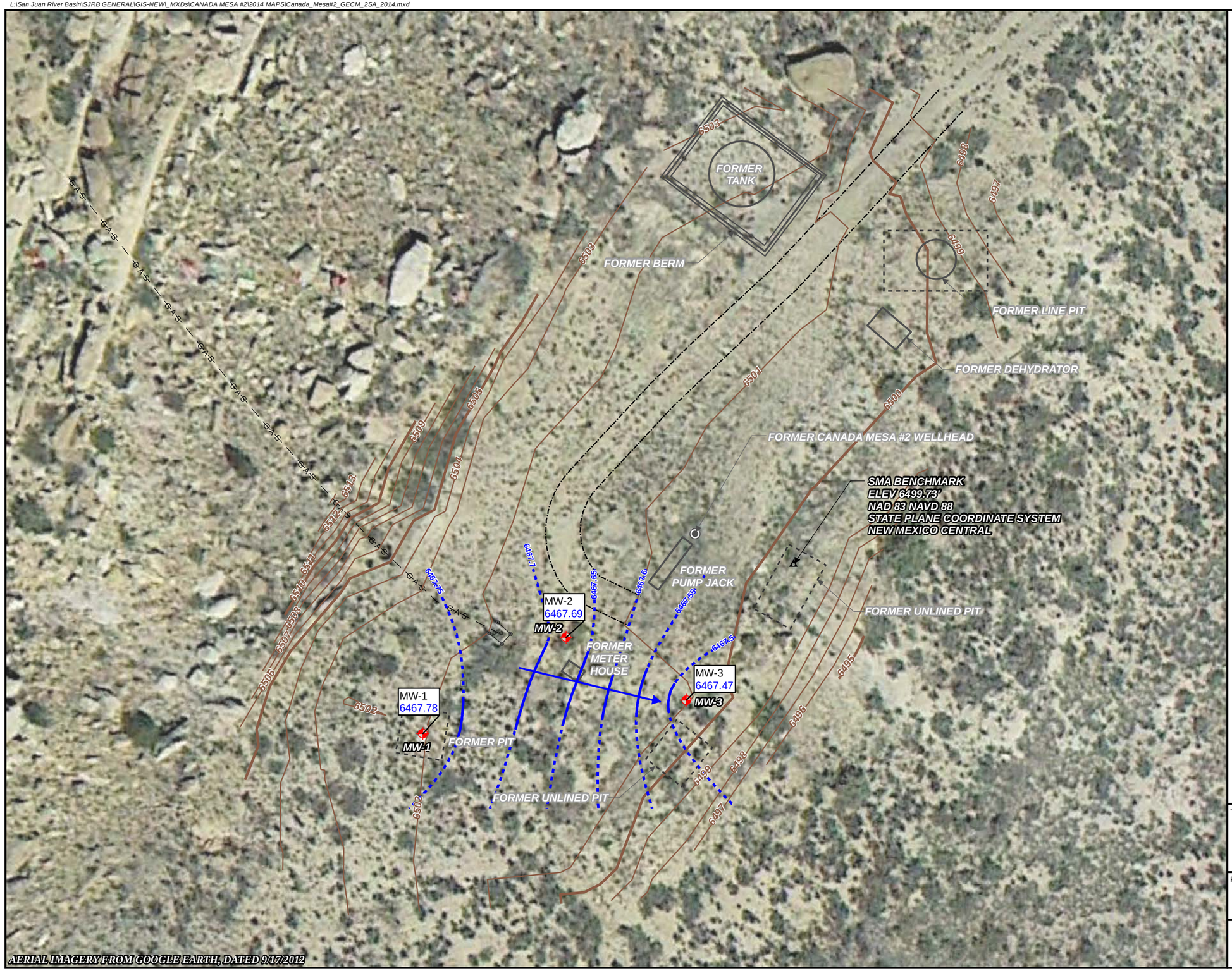
TITLE:
CANADA MESA #2
GROUNDWATER ANALYTICAL RESULTS
SAMPLED OCTOBER 22, 2014

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

MWH

Figure No.: 3

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\CANADA MESA #2\2014 MAPS\Canada_Mesa#2_GECM_2SA_2014.mxd



AERIAL IMAGERY FROM GOOGLE EARTH, DATED 9/17/2012

LEGEND:

- 6503 — APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
- 6288.95 — CORRECTED GROUNDWATER ELEVATION CONTOUR
- ACCESS ROAD
- GAS — NATURAL GAS LINE
- MONITORING WELL
- SMA BENCHMARK

NOTES:

- 6467.4 — GROUNDWATER ELEVATION CORRECTED FOR PRODUCT THICKNESS. FEET ABOVE MEAN SEA LEVEL
- 6467.3 — CORRECTED WATER LEVEL ELEVATION CONTOUR DASHED WHERE INFERRED (FEET ABOVE MEAN SEA LEVEL, 0.1 FOOT CONTOUR INTERVAL)
- DIRECTION OF GROUNDWATER FLOW

N

SCALE IN FEET

0 30 60

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
A	12/30/2014	CCL	CCL	DAW

TITLE:

CANADA MESA #2
GROUNDWATER ELEVATION MAP
GAUGED OCTOBER 22, 2014

PROJECT:

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

MWH

Figure No.: 4

APPENDIX A

APRIL 4, 2014 GROUNDWATER SAMPLING ANALYTICAL REPORT
OCTOBER 22, 2014 GROUNDWATER SAMPLING ANALYTICAL REPORT

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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

TestAmerica Job ID: 560-46608-1
Client Project/Site: Canada Mesa #2, 4/4/14 BTEX

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

Attn: Ms. Sarah Gardner

Authorized for release by:
4/22/2014 8:32:39 AM

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

Client: MWH Americas Inc
Project/Site: Canada Mesa #2, 4/4/14 BTEX

TestAmerica Job ID: 560-46608-1

Qualifiers

GC VOA

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

Glossary

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

Job ID: 560-46608-1

Laboratory: TestAmerica Corpus Christi

Narrative

Job Narrative
560-46608-1

Comments
No additional comments.

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

Except:

container "C" broken in log, sufficient volume remains

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

No other analytical or quality issues were noted.

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

Detection Summary

Client: MWH Americas Inc
Project/Site: Canada Mesa #2, 4/4/14 BTEX

TestAmerica Job ID: 560-46608-1

Client Sample ID: MW-2 — Lab Sample ID: 560-46608-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.46	J	2.0	0.20	ug/L	1		8021B	Total/NA

Client Sample ID: MW-3 — Lab Sample ID: 560-46608-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	320		8.0	0.80	ug/L	4		8021B	Total/NA
Toluene	5.4	J	8.0	1.5	ug/L	4		8021B	Total/NA

This Detection Summary does not include radiochemical test results.

Client: MWH Americas Inc
Project/Site: Canada Mesa #2, 4/4/14 BTEX

TestAmerica Job ID: 560-46608-1

Client Sample ID: MW-2

Lab Sample ID: 560-46608-1

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

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.46**	**J**	2.0	0.20	ug/L			04/14/14 21:37	1
Toluene	<0.38		2.0	0.38	ug/L			04/14/14 21:37	1
Ethylbenzene	<0.20		2.0	0.20	ug/L			04/14/14 21:37	1
Xylenes, Total	<0.65		2.0	0.65	ug/L			04/14/14 21:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*58 - 129*		*04/14/14 21:37*	*1*
Trifluorotoluene (Surr)	*107*		*54 - 130*		*04/14/14 21:37*	*1*

Client Sample ID: MW-3

Lab Sample ID: 560-46608-2

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

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**320**		8.0	0.80	ug/L			04/16/14 14:02	4
Toluene	**5.4**	**J**	8.0	1.5	ug/L			04/16/14 14:02	4
Ethylbenzene	<0.80		8.0	0.80	ug/L			04/16/14 14:02	4
Xylenes, Total	<2.6		8.0	2.6	ug/L			04/16/14 14:02	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*58 - 129*		*04/16/14 14:02*	*4*
Trifluorotoluene (Surr)	*108*		*54 - 130*		*04/16/14 14:02*	*4*

Method: 8021B - Volatile Organic Compounds (GC)

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

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

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

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

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

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

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

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

Lab Sample ID: MB 560-100888/3
Matrix: Water
Analysis Batch: 100888

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.20		2.0	0.20	ug/L			04/16/14 10:43	1
Toluene	<0.38		2.0	0.38	ug/L			04/16/14 10:43	1
Ethylbenzene	<0.20		2.0	0.20	ug/L			04/16/14 10:43	1
Xylenes, Total	<0.65		2.0	0.65	ug/L			04/16/14 10:43	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*58 - 129*		*04/16/14 10:43*	*1*
Trifluorotoluene (Surr)	*88*		*54 - 130*		*04/16/14 10:43*	*1*

Lab Sample ID: LCS 560-100888/2
Matrix: Water
Analysis Batch: 100888

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	40.0	40.0		ug/L		100	70 - 130
Toluene	40.0	41.1		ug/L		103	70 - 130
Ethylbenzene	40.0	40.9		ug/L		102	70 - 130
Xylenes, Total	120	118		ug/L		98	70 - 130

Client: MWH Americas Inc
Project/Site: Canada Mesa #2, 4/4/14 BTEX

TestAmerica Job ID: 560-46608-1

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

Lab Sample ID: LCS 560-100888/2
Matrix: Water
Analysis Batch: 100888

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

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	*109*		*58 - 129*
Trifluorotoluene (Surr)	*99*		*54 - 130*

Certification Summary

Client: MWH Americas Inc
Project/Site: Canada Mesa #2, 4/4/14 BTEX

TestAmerica Job ID: 560-46608-1

Laboratory: TestAmerica Corpus Christi

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

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

Method Summary

Client: MWH Americas Inc
Project/Site: Canada Mesa #2, 4/4/14 BTEX

TestAmerica Job ID: 560-46608-1

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

Protocol References:

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

Laboratory References:

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

Sample Summary

Client: MWH Americas Inc
Project/Site: Canada Mesa #2, 4/4/14 BTEX

TestAmerica Job ID: 560-46608-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
560-46608-1	MW-2	Water	04/04/14 09:05	04/08/14 09:45
560-46608-2	MW-3	Water	04/04/14 09:00	04/08/14 09:45

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

Chain of Custody Record

Client Information	Sampler: Sarah Gardner / Chris Lee	Lab PM: Kellogg, Timothy L.	Carrier Tracking No(s): Fedex 8945 2775 7342	COC No: 560-13131-1157
Client Contact: ~~Mr. Daniel Wade~~ Sarah Gardner	Phone: 303 291 2239	E-Mail: tim.kellogg@testamericainc.com		Page: Page 1 of 1
Company: MWH Americas Inc				Job #: Loc: 560 46608

Address: 1801 California Street Suite 2900	Due Date Requested:	Analysis Requested
City: Denver	TAT Requested (days):	
State, Zip: CO, 80202		
Phone: ~~713-420-3414(Tel)~~ 303 291 2239	PO #: Purchase Order not required	
Email: sarah.gardner ~~Daniel.A.Wade~~@us.mwhglobal.com	WO #: TWO # C-STLI-	
Project Name: San Juan River Basin Pit Sites	Project #: 56000058	
Site: Canada Mesa #2	SSOW#:	

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

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260B - BTEX	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A		
~~MW-1~~	~~4/4/14~~			Water					Not Sampled
MW-2	4/4/14	905		Water			X	3	
MW-3	4/4/14	900		Water			X	3	
				Water					
				Water					
				Water					
				Water					
				Water					
				Water					
				Water					
				Water					

560-46608 Chain of Custody

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

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

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

Special Instructions/QC Requirements:

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

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

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

Cooler Temperature(s) °C and Other Remarks: 0.1.6°C Cor 1.8°C IR Gun seal

Login Sample Receipt Checklist

Client: MWH Americas Inc

Job Number: 560-46608-1

Login Number: 46608

List Source: TestAmerica Corpus Christi

List Number: 1

Creator: Rood, Vivian R

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

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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

TestAmerica Job ID: 400-97671-1
Client Project/Site: KM Canada Mesa #2

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

Attn: Ms. Sarah Gardner

Authorized for release by:
11/6/2014 1:19:36 PM
Bernard Kirkland, Manager of Project Management
(912)354-7858 e.3238
bernard.kirkland@testamericainc.com

Designee for

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

Table of Contents

Definitions/Glossary

Client: MWH Americas Inc
Project/Site: KM Canada Mesa #2

TestAmerica Job ID: 400-97671-1

Qualifiers

GC/MS VOA

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
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: 400-97671-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-97671-1

Comments
No additional comments.

Receipt
The samples were received on 10/28/2014 9:39 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.0º C.

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

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

Sample Summary

Client: MWH Americas Inc
Project/Site: KM Canada Mesa #2

TestAmerica Job ID: 400-97671-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-97671-1	MW-2	Water	10/22/14 13:30	10/28/14 09:39
400-97671-2	MW-3	Water	10/22/14 13:35	10/28/14 09:39
400-97671-3	TRIP BLANK	Water	10/22/14 13:50	10/28/14 09:39

Client Sample ID: MW-2

Lab Sample ID: 400-97671-1

Date Collected: 10/22/14 13:30

Matrix: Water

Date Received: 10/28/14 09:39

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.38		1.0	0.38	ug/L			10/30/14 17:36	1
Ethylbenzene	<0.50		1.0	0.50	ug/L			10/30/14 17:36	1
Toluene	<0.70		1.0	0.70	ug/L			10/30/14 17:36	1
Xylenes, Total	<1.6		10	1.6	ug/L			10/30/14 17:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*95*		*78 - 118*		*10/30/14 17:36*	*1*
Dibromofluoromethane	*103*		*81 - 121*		*10/30/14 17:36*	*1*
Toluene-d8 (Surr)	*94*		*80 - 120*		*10/30/14 17:36*	*1*

Client Sample ID: MW-3

Lab Sample ID: 400-97671-2

Date Collected: 10/22/14 13:35

Matrix: Water

Date Received: 10/28/14 09:39

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**240**		1.0	0.38	ug/L			10/31/14 17:31	1
Ethylbenzene	**0.52**	**J**	1.0	0.50	ug/L			10/31/14 17:31	1
Toluene	<0.70		1.0	0.70	ug/L			10/31/14 17:31	1
Xylenes, Total	<1.6		10	1.6	ug/L			10/31/14 17:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*118*		*78 - 118*		*10/31/14 17:31*	*1*
Dibromofluoromethane	*98*		*81 - 121*		*10/31/14 17:31*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*10/31/14 17:31*	*1*

Client Sample ID: TRIP BLANK

Lab Sample ID: 400-97671-3

Date Collected: 10/22/14 13:50

Matrix: Water

Date Received: 10/28/14 09:39

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.38		1.0	0.38	ug/L			11/02/14 10:40	1
Ethylbenzene	<0.50		1.0	0.50	ug/L			11/02/14 10:40	1
Toluene	<0.70		1.0	0.70	ug/L			11/02/14 10:40	1
Xylenes, Total	<1.6		10	1.6	ug/L			11/02/14 10:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*103*		*78 - 118*		*11/02/14 10:40*	*1*
Dibromofluoromethane	*113*		*81 - 121*		*11/02/14 10:40*	*1*
Toluene-d8 (Surr)	*89*		*80 - 120*		*11/02/14 10:40*	*1*

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

Lab Sample ID: MB 400-234865/4
Matrix: Water
Analysis Batch: 234865

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.38		1.0	0.38	ug/L			10/30/14 10:51	1
Ethylbenzene	<0.50		1.0	0.50	ug/L			10/30/14 10:51	1
Toluene	<0.70		1.0	0.70	ug/L			10/30/14 10:51	1
Xylenes, Total	<1.6		10	1.6	ug/L			10/30/14 10:51	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*107*		*78 - 118*		*10/30/14 10:51*	*1*
Dibromofluoromethane	*97*		*81 - 121*		*10/30/14 10:51*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*		*10/30/14 10:51*	*1*

Lab Sample ID: LCS 400-234865/1002
Matrix: Water
Analysis Batch: 234865

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	40.9		ug/L		82	79 - 120
Ethylbenzene	50.0	43.6		ug/L		87	80 - 120
Toluene	50.0	42.3		ug/L		85	80 - 120
Xylenes, Total	100	85.5		ug/L		86	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*99*		*78 - 118*
Dibromofluoromethane	*106*		*81 - 121*
Toluene-d8 (Surr)	*99*		*80 - 120*

Lab Sample ID: MB 400-234868/4
Matrix: Water
Analysis Batch: 234868

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.38		1.0	0.38	ug/L			10/31/14 13:27	1
Ethylbenzene	<0.50		1.0	0.50	ug/L			10/31/14 13:27	1
Toluene	<0.70		1.0	0.70	ug/L			10/31/14 13:27	1
Xylenes, Total	<1.6		10	1.6	ug/L			10/31/14 13:27	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*95*		*78 - 118*		*10/31/14 13:27*	*1*
Dibromofluoromethane	*98*		*81 - 121*		*10/31/14 13:27*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*		*10/31/14 13:27*	*1*

Lab Sample ID: LCS 400-234868/1002
Matrix: Water
Analysis Batch: 234868

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	44.7		ug/L		89	79 - 120
Ethylbenzene	50.0	44.0		ug/L		88	80 - 120

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

Lab Sample ID: LCS 400-234868/1002
Matrix: Water
Analysis Batch: 234868

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	43.2		ug/L		86	80 - 120
Xylenes, Total	100	87.4		ug/L		87	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*96*		*78 - 118*
Dibromofluoromethane	*107*		*81 - 121*
Toluene-d8 (Surr)	*96*		*80 - 120*

Lab Sample ID: MB 400-235167/4
Matrix: Water
Analysis Batch: 235167

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.38		1.0	0.38	ug/L			11/02/14 10:13	1
Ethylbenzene	<0.50		1.0	0.50	ug/L			11/02/14 10:13	1
Toluene	<0.70		1.0	0.70	ug/L			11/02/14 10:13	1
Xylenes, Total	<1.6		10	1.6	ug/L			11/02/14 10:13	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*92*		*78 - 118*		*11/02/14 10:13*	*1*
Dibromofluoromethane	*105*		*81 - 121*		*11/02/14 10:13*	*1*
Toluene-d8 (Surr)	*89*		*80 - 120*		*11/02/14 10:13*	*1*

Lab Sample ID: LCS 400-235167/1002
Matrix: Water
Analysis Batch: 235167

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	55.0		ug/L		110	79 - 120
Ethylbenzene	50.0	49.5		ug/L		99	80 - 120
Toluene	50.0	48.8		ug/L		98	80 - 120
Xylenes, Total	100	99.2		ug/L		99	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*98*		*78 - 118*
Dibromofluoromethane	*112*		*81 - 121*
Toluene-d8 (Surr)	*94*		*80 - 120*

Lab Chronicle

Client: MWH Americas Inc
Project/Site: KM Canada Mesa #2

TestAmerica Job ID: 400-97671-1

Client Sample ID: MW-2

Lab Sample ID: 400-97671-1

Date Collected: 10/22/14 13:30

Matrix: Water

Date Received: 10/28/14 09:39

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	234865	10/30/14 17:36	ARM	TAL PEN

Client Sample ID: MW-3

Lab Sample ID: 400-97671-2

Date Collected: 10/22/14 13:35

Matrix: Water

Date Received: 10/28/14 09:39

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	234868	10/31/14 17:31	EAS	TAL PEN

Client Sample ID: TRIP BLANK

Lab Sample ID: 400-97671-3

Date Collected: 10/22/14 13:50

Matrix: Water

Date Received: 10/28/14 09:39

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	235167	11/02/14 10:40	EAS	TAL PEN

Laboratory References:

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

Method Summary

Client: MWH Americas Inc
Project/Site: KM Canada Mesa #2

TestAmerica Job ID: 400-97671-1

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

Protocol References:

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

Laboratory References:

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

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

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Chris Lee, Sarah Gardner	Lab PM: Salcher, Neal	Carrier Tracking No(s):	COC No: 560-15202-1502.1
Client Contact: Ms. Sarah Gardner	Phone:	E-Mail: neal.salcher@testamericainc.com		Page: Page 1 of 1
Company: MWH Americas Inc				Job #:
Address: 1801 California Street Suite 2900	Due Date Requested:			
City: Denver	TAT Requested (days):			
State, Zip: CO, 80202				
Phone: 303-291-2239(Tel)	PO #: Purchase Order Requested			
Email: sarah.gardner@mwhglobal.com	WO #: As per Enfos			
Project Name: KM Canada Mesa #2	Project #: 56004957			
Site:	SSOW#:			

Analysis Requested

400-97671 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 - Na2S2SO3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - ph 4-5
Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260B - BTEX	8260B_m (MOD)-BTEX/MTBE	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A	A		
MW-2	10/22/14	1330	G	Water			X			
MW-3	10/22/14	1335	G	Water			X			
TRIP BLANK	10/22/14	1350	G	Water			X			
				Water						

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

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

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

Special Instructions/QC Requirements: DO NOT SAMPLE MTBE 10-23-14

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

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	Chris Lee	10/27/14 915	MWH		10-23-14 915	
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 0830	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: 3.0°C IR-2