2014 ANNUAL GROUNDWATER REPORT

Fogelson 4-1
Meter Code: 73220
T29N, R11W, Sec 4, Unit P

SITE DETAILS

Site Location: Latitude: 36.750660 N, Longitude: -107.991560 W
Land Type: Federal
Operator: Burlington Resources Oil & Gas Company, LP

SITE BACKGROUND

- **Site Assessment:** 3/94
- **Excavation:** 4/94 (65 cy)
- **Nutrient Injection:** 8/01 (Oxygen Release Compound)

Fogelson 4-1 (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 Burlington Resources Oil & Gas Company, LP and is active.

The Site is located on Federal land. Various site investigations have occurred since 1994. Monitoring wells were installed in 1995 (MW-1, MW-2, and MW-3). Free product has been observed and periodically removed. Currently, groundwater sampling is conducted on a semi-annual basis and free product was not observed in 2014.

SUMMARY OF 2014 ACTIVITIES

On April 5 and October 21, 2014, water levels 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. The water remaining in the HydraSleeves was combined in a waste container and taken to Basin Disposal, Inc. for disposal.

SUMMARY TABLES

Historic analytical and water level data are summarized in Table 1.

2014 ANNUAL GROUNDWATER REPORT

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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 at the Site is generally to the west-southwest (see Figures 2 and 4).

- Concentrations of benzene, ethylbenzene, and total xylenes in groundwater collected from MW-1 were below the New Mexico Water Quality Control Commission (NMWQCC) standards in April, but above standards in October 2014. Toluene was not detected in April and below the standard in October 2014.

- Benzene, toluene, and total xylenes were not detected in MW-2 and MW-3 during the 2014 sampling events.

- Ethylbenzene was not detected in MW-2 during 2014. At MW-3, ethylbenzene was not detected in April and was reported below the quantification limit (J-flagged) during the October 2014 sampling event.

PLANNED FUTURE ACTIVITIES

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

TABLE

TABLE 1 – GROUNDWATER ANALYTICAL AND WATER LEVEL RESULTS

TABLE 1 - GROUNDWATER ANALYTICAL RESULTS

Fogelson 4-1								
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	11/06/95	1520	1050	907	9180	39.99	-	-
MW-1	12/06/96	1110	388	713	7730	40.74	-	-
MW-1	03/10/97	1240	318	850	9050	41.23	-	-
MW-1	06/06/97	1080	268	747	7700	41.44	-	-
MW-1	03/30/98	1070	522	789	8430	41.08	-	-
MW-1	06/04/98	1090	627	837	8880	41.02	-	-
MW-1	06/15/99	1000	550	770	7800	41.88	-	-
MW-1	06/19/00	790	280	1100	9300	40.17	-	-
MW-1	10/02/00	580	600	950	8000	40.22	-	-
MW-1	12/05/00	420	610	770	6000	40.09	-	-
MW-1	05/30/01	340	470	710	4800	40.54	-	-
MW-1	11/26/01	420	330	760	3400	41.00	-	-
MW-1	05/15/02	430	230	900	6000	41.37	-	-
MW-1	06/10/02					41.54	-	-
MW-1	11/04/02	625	370	862	5210	41.90	-	-
MW-1	05/21/03	339	296	723	4730	41.57	-	-
MW-1	11/15/03	401	308	755	4700	41.00	-	-
MW-1	11/16/04	185	59.9	550	2800	40.10	-	-
MW-1	11/08/05	174	34.3	675	2440	40.68	-	-
MW-1	11/08/06	206	41.6	694	2460	42.16	-	-
MW-1	11/29/07					42.16	-	-
MW-1	01/25/08					43.10	43.00	0.10
MW-1	08/12/08					43.14	-	-
MW-1	11/07/08					43.32	43.24	0.08
MW-1	02/06/09					43.12	-	-
MW-1	05/04/09					43.22	-	-
MW-1	08/26/09					43.53	43.46	0.07
MW-1	11/03/09	230	24.2 J	901	3290	43.52	-	-
MW-1	02/11/10					43.64	-	-
MW-1	05/25/10					43.75	-	-
MW-1	09/24/10					43.95	-	-
MW-1	11/09/10	198	23.5	840	3170	43.89	43.88	0.01
MW-1	02/01/11					44.03	-	-
MW-1	05/03/11					44.14	-	-
MW-1	09/27/11					44.30	-	-
MW-1	11/16/11	171	3.8 J	818	2770	44.33	-	-
MW-1	02/16/12					44.43	-	-
MW-1	05/07/12					44.50	-	-
MW-1	06/04/13	20.0	9.3 J	650	2400	44.75	-	-
MW-1	09/09/13	160.0	20	760	3200	44.87	-	-
MW-1	12/13/13	150	41	630	2700	44.85	-	-
MW-1	04/05/14	4.3	<0.38	20	76	44.75	-	-
MW-1	10/21/14	200.0	11	770	3600	44.86	-	-

TABLE 1 - GROUNDWATER ANALYTICAL RESULTS

Fogelson 4-1								
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	07/27/00	<0.5	<0.5	8.8	<0.5	38.25	-	-
MW-2	05/30/01	<0.5	<0.5	7.5	1	38.17	-	-
MW-2	05/15/02	<0.5	<0.5	2	<1	38.56	-	-
MW-2	11/04/02					38.99	-	-
MW-2	05/21/03					39.24	-	-
MW-2	11/15/03					38.70	-	-
MW-2	11/16/04					37.40	-	-
MW-2	11/08/05					37.76	-	-
MW-2	11/08/06					38.65	-	-
MW-2	11/29/07					39.67	-	-
MW-2	08/12/08					39.75	-	-
MW-2	11/07/08					39.97	-	-
MW-2	02/06/09					39.73	-	-
MW-2	05/04/09					39.83	-	-
MW-2	08/26/09					40.19	-	-
MW-2	11/03/09					40.32	-	-
MW-2	02/11/10					40.17	-	-
MW-2	05/25/10					40.40	-	-
MW-2	09/24/10					40.74	-	-
MW-2	11/09/10	<2	<2	<2	<6	40.35	-	-
MW-2	02/01/11					40.39	-	-
MW-2	05/03/11					40.96	-	-
MW-2	09/27/11					41.05	-	-
MW-2	11/16/11	<1	<1	<1	<3	41.07	-	-
MW-2	02/16/12					41.15	-	-
MW-2	05/07/12					41.15	-	-
MW-2	06/04/13	<0.14	<0.30	<0.20	<0.23	41.54	-	-
MW-2	09/09/13	<0.14	<0.30	<0.20	<0.23	41.64	-	-
MW-2	12/13/13	<0.20	0.52 J	0.38 J	0.85 J	41.66	-	-
MW-2	04/05/14	<0.20	<0.38	<0.20	<0.65	41.64	-	-
MW-2	10/21/14	<0.38	<0.70	<0.50	<1.6	41.93	-	-

TABLE 1 - GROUNDWATER ANALYTICAL RESULTS

Fogelson 4-1								
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	07/27/00	27	35	170	520	41.21	-	-
MW-3	05/30/01	1.3	<0.5	40	2.8	40.77	-	-
MW-3	05/15/02	0.64	<0.5	17	1.2	41.14	-	-
MW-3	11/04/02					41.48	-	-
MW-3	05/21/03	<1	<1	18.2	<3	41.71	-	-
MW-3	11/15/03					41.30	-	-
MW-3	11/16/04					40.10	-	-
MW-3	11/08/05					40.71	-	-
MW-3	11/08/06					41.47	-	-
MW-3	11/29/07					43.10	43.01	0.09
MW-3	08/12/08					42.47	-	-
MW-3	11/07/08					42.69	-	-
MW-3	02/06/09					42.47	-	-
MW-3	05/04/09					42.50	-	-
MW-3	08/26/09					42.90	-	-
MW-3	11/03/09					43.03	-	-
MW-3	02/11/10					42.79	-	-
MW-3	05/25/10					42.97	-	-
MW-3	09/24/10					43.25	-	-
MW-3	11/09/10	<2	<2	1.9 J	<6	42.97	-	-
MW-3	02/01/11					42.82	-	-
MW-3	05/03/11					43.41	-	-
MW-3	09/27/11					43.40	-	-
MW-3	11/16/11	<1	<1	0.77 J	<3	43.36	-	-
MW-3	02/16/12					43.41	-	-
MW-3	05/07/12					43.46	-	-
MW-3	06/04/13	<0.14	<0.30	<0.20	<0.23	43.82	-	-
MW-3	09/09/13	<0.14	<0.30	<0.20	<0.23	43.93	-	-
MW-3	12/13/13	<0.20	0.56 J	<0.20	<0.65	43.93	-	-
MW-3	04/05/14	<0.20	<0.38	<0.20	<0.65	43.88	-	-
MW-3	10/21/14	<0.38	<0.70	0.96 J	<1.6	44.16	-	-

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\FOGELSON 4-1 COM #14\2014 MAPS\Fogelson_GARM_1SA_2014.mxd

ENTERPRISE LINE

ENTERPRISE LINE

CONOCO PHILIPS LINE

FORMER TANKS

METER HOUSE

MW-1
B: 4.3
T: <0.38
E: 20
X: 76

MW-1

FORMER SEPARATOR

MW-3
B: <0.20
T: <0.38
E: <0.20
X: <0.65

MW-3

FORMER PIT

UNKNOWN LINE ABANDONED IN GROUND

SEPARATOR

DAMAGED MW

PROPANE TANK

MW-2

MW-2
B: <0.20
T: <0.38
E: <0.20
X: <0.65

SMA BENCHMARK

PUMP JACK

TANK

TANK

5795

5790

5785

5780

5775

5770

LEGEND:

- 5795 — APPROX. GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- FORMER PIT
- UNDERGROUND CABLE
- BENCHMARK
- BOLLARD
- MONITORING WELL
- DAMAGED MONITORING WELL
- RIG ANCHOR
- GAS VALVE

EXPLANATION OF ANALYTES AND APPLICABLE STANDARDS:

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

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

N

SCALE IN FEET
0 40 80

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

TITLE:

FOGELSON 4-1
GROUNDWATER ANALYTICAL RESULTS
SAMPLED APRIL 5, 2014

PROJECT:

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

MWH

Figure No.: 1

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\FOGELSON 4-1 COM #1\2014 MAPS\Fogelson_GECM_1SA_2014.mxd

ENTERPRISE LINE

ENTERPRISE LINE

CONOCO PHILIPS LINE

METER HOUSE

FORMER TANKS

FORMER SEPARATOR

MW-1
5740.02
MW-1

MW-3
MW-3
5736.95

FORMER PIT

SEPARATOR

5740

5739.5

DAMAGED MW

PROPANE TANK

MW-2

MW-2
5738.39

5737.5

5738

5738.5

5739

SMA BENCHMARK

PUMP JACK

TANK

TANK

5737

5737.5

5738

5738.5

5739

5739.5

5740

5735

5736

5737

5738

5739

5740

5741

5742

5743

5744

5745

LEGEND:

- 5795 — APPROX. GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- FORMER PIT
- UNDERGROUND CABLE
- BENCHMARK
- BOLLARD
- MONITORING WELL
- DAMAGED MONITORING WELL
- RIG ANCHOR
- GAS VALVE

NOTES:

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

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

DIRECTION OF GROUNDWATER FLOW

N

SCALE IN FEET

0 40 80

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

TITLE:

FOGELSON 4-1
GROUNDWATER ELEVATION MAP
SAMPLED APRIL 5, 2014

PROJECT:

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

MWH

Figure No.:

2

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\FOGELSON 4-1 COM #14\2014 MAPS\Fogelson_GARM_2SA_2014.mxd

ENTERPRISE LINE

ENTERPRISE LINE

CONOCO PHILIPS LINE

METER HOUSE

MW-1
B: **200**
T: 11
E: **770**
X: **3600**

MW-1

MW-3

MW-3
B: <0.38
T: <0.70
E: 0.96 J
X: <1.6

FORMER PIT

UNKNOWN LINE ABANDONED IN GROUND

FORMER TANKS

FORMER SEPARATOR

SEPARATOR

DAMAGED MW

PROPANE TANK

MW-2

MW-2
B: <0.38
T: <0.70
E: <0.50
X: <1.6

SMA BENCHMARK

PUMP JACK

TANK

TANK

5790

5785

5795

5800

5805

5810

LEGEND:

- 5795 — APPROX. GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
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RESULTS IN **BOLDFACE** TYPE INDICATE CONCENTRATION IN EXCESS OF THE STANDARD FOR THAT ANALYTE.
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MDL = METHOD DETECTION LIMIT
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ANALYTE	NMWQCC STANDARDS
B = Benzene	10 µg/L
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E = Ethylbenzene	750 µg/L
X = Total Xylenes	620 µg/L

N

SCALE IN FEET
0 40 80

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

TITLE:

FOGELSON 4-1
GROUNDWATER ANALYTICAL RESULTS
SAMPLED OCTOBER 21, 2014

PROJECT:

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

MWH

Figure No.:

3

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\FOGELSON 4-1 COM #114\2014 MAPS\Fogelson_GECM_2SA_2014.mxd

ENTERPRISE LINE

ENTERPRISE LINE

CONOCO PHILIPS LINE

METER HOUSE

FORMER TANKS

FORMER SEPARATOR

MW-1
MW-1
5739.91

MW-3
MW-3
5736.67

FORMER PIT

SEPARATOR

DAMAGED MW

PROPANE TANK

MW-2
MW-2
5738.10

SMA BENCHMARK

PUMP JACK

TANK

TANK

5739.5
5737
5737.5
5738
5738.5
5739
5739.5
5740
5740.5
5741
5741.5
5742
5742.5
5743
5743.5
5744
5744.5
5745
5745.5
5746
5746.5
5747
5747.5

LEGEND:

- 5795 — APPROX. GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- FORMER PIT
- UNDERGROUND CABLE
- BENCHMARK
- BOLLARD
- MONITORING WELL
- DAMAGED MONITORING WELL
- RIG ANCHOR
- GAS VALVE

NOTES:

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

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

DIRECTION OF GROUNDWATER FLOW

N

SCALE IN FEET

0 40 80

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

TITLE:

FOGELSON 4-1
GROUNDWATER ELEVATION MAP
SAMPLED OCTOBER 21, 2014

PROJECT:

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

MWH

Figure No.: 4

APPENDIX A

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

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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

TestAmerica Job ID: 560-46612-1
Client Project/Site: Fogelson 4-1 Com #14, 4/5/14 BTEX

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

Attn: Ms. Sarah Gardner

Authorized for release by:
4/22/2014 10:09:54 AM

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

Glossary

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

Case Narrative

Client: MWH Americas Inc
Project/Site: Fogelson 4-1 Com #14, 4/5/14 BTEX

TestAmerica Job ID: 560-46612-1

Job ID: 560-46612-1

Laboratory: TestAmerica Corpus Christi

Narrative

Job Narrative
560-46612-1

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 1.9º C.

GC VOA
Method(s) 8021B: The following sample(s) were collected in properly preserved vials for analysis of volatile organic compounds (VOCs).
However, the pH was outside the required criteria when verified by the laboratory, and corrective action was not possible: (pH>2)

8021
Batch 100888

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: Fogelson 4-1 Com #14, 4/5/14 BTEX

TestAmerica Job ID: 560-46612-1

Client Sample ID: MW-1 — Lab Sample ID: 560-46612-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	4.3		2.0	0.20	ug/L	1		8021B	Total/NA
Ethylbenzene	20		2.0	0.20	ug/L	1		8021B	Total/NA
Xylenes, Total	76		2.0	0.65	ug/L	1		8021B	Total/NA

Client Sample ID: MW-2 — Lab Sample ID: 560-46612-2

No Detections.

Client Sample ID: MW-3 — Lab Sample ID: 560-46612-3

No Detections.

This Detection Summary does not include radiochemical test results.

Client: MWH Americas Inc
Project/Site: Fogelson 4-1 Com #14, 4/5/14 BTEX

TestAmerica Job ID: 560-46612-1

Client Sample ID: MW-1

Lab Sample ID: 560-46612-1

Date Collected: 04/05/14 09:15
Date Received: 04/08/14 09:45

Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**4.3**		2.0	0.20	ug/L			04/16/14 17:46	1
Toluene	<0.38		2.0	0.38	ug/L			04/16/14 17:46	1
Ethylbenzene	**20**		2.0	0.20	ug/L			04/16/14 17:46	1
Xylenes, Total	**76**		2.0	0.65	ug/L			04/16/14 17:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*58 - 129*		*04/16/14 17:46*	*1*
Trifluorotoluene (Surr)	*91*		*54 - 130*		*04/16/14 17:46*	*1*

Client Sample ID: MW-2

Lab Sample ID: 560-46612-2

Date Collected: 04/05/14 09:10
Date Received: 04/08/14 09:45

Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.20		2.0	0.20	ug/L			04/16/14 18:14	1
Toluene	<0.38		2.0	0.38	ug/L			04/16/14 18:14	1
Ethylbenzene	<0.20		2.0	0.20	ug/L			04/16/14 18:14	1
Xylenes, Total	<0.65		2.0	0.65	ug/L			04/16/14 18:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*58 - 129*		*04/16/14 18:14*	*1*
Trifluorotoluene (Surr)	*94*		*54 - 130*		*04/16/14 18:14*	*1*

Client Sample ID: MW-3

Lab Sample ID: 560-46612-3

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

Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.20		2.0	0.20	ug/L			04/16/14 18:42	1
Toluene	<0.38		2.0	0.38	ug/L			04/16/14 18:42	1
Ethylbenzene	<0.20		2.0	0.20	ug/L			04/16/14 18:42	1
Xylenes, Total	<0.65		2.0	0.65	ug/L			04/16/14 18:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*58 - 129*		*04/16/14 18:42*	*1*
Trifluorotoluene (Surr)	*89*		*54 - 130*		*04/16/14 18:42*	*1*

Client: MWH Americas Inc
Project/Site: Fogelson 4-1 Com #14, 4/5/14 BTEX

TestAmerica Job ID: 560-46612-1

Method: 8021B - Volatile Organic Compounds (GC)

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		

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: Fogelson 4-1 Com #14, 4/5/14 BTEX

TestAmerica Job ID: 560-46612-1

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: Fogelson 4-1 Com #14, 4/5/14 BTEX

TestAmerica Job ID: 560-46612-1

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: Fogelson 4-1 Com #14, 4/5/14 BTEX

TestAmerica Job ID: 560-46612-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
560-46612-1	MW-1	Water	04/05/14 09:15	04/08/14 09:45
560-46612-2	MW-2	Water	04/05/14 09:10	04/08/14 09:45
560-46612-3	MW-3	Water	04/05/14 09:05	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): Fed ex ~~718~~ 803645796188	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
Company: MWH Americas Inc				Job #: Loc: 560 46612
Address: 1801 California Street Suite 2900	Due Date Requested:			
City: Denver	TAT Requested (days):			
State, Zip: CO, 80202				
Phone: ~~713-420-3414(Tel)~~ 303 291-2239	PO #: Purchase Order not required			
Email: Sarah.gardner ~~Daniel.A.Wade~~@us.mwhglobal.com	WO #: TWO # C-STLI-			
Project Name: San Juan River Basin Pit Sites	Project #: 56000058			
Site: Fogelson 4-1 Com #14	SSOW#:			

Analysis Requested

Preser
A - HCl
B - NaOH
C - Zn
D - Nitric
E - NaHSO4
F - MeOH
G - Amchlor
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA
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	4/5/14	915		Water			X	3	
MW-2	4/5/14	910		Water			X	3	
mw-3	4/5/14	905		Water			X	3	
				Water					
				Water					
				Water					
				Water					
				Water					
				Water					
				Water					
				Water					

560-46612 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	TAC
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
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: obs 1.7°C cor 1.9°C IR#1 Seal

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4/22/2014

Login Sample Receipt Checklist

Client: MWH Americas Inc

Job Number: 560-46612-1
SDG Number:

Login Number: 46612
List Number: 1
Creator: Rood, Vivian R

List Source: TestAmerica Corpus Christi

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	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: 400-97668-1
Client Project/Site: KM Fogelson 4-1

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

Attn: Ms. Sarah Gardner

Authorized for release by:
11/6/2014 12:44:22 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

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time
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)

Client: MWH Americas Inc
Project/Site: KM Fogelson 4-1

TestAmerica Job ID: 400-97668-1

Job ID: 400-97668-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-97668-1

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
Method(s) 8260B: The following sample (400-97668-1), MW-1 (400-97668-1) was analyzed outside of holding time due to the pH being out of range. The sample was marked as preserved when received at the lab. The holding time expired on 10-28-14 and the sample was analyzed on 10-29-14.

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.

Sample Summary

Client: MWH Americas Inc
Project/Site: KM Fogelson 4-1

TestAmerica Job ID: 400-97668-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-97668-1	MW-1	Water	10/21/14 14:00	10/28/14 09:39
400-97668-2	MW-2	Water	10/21/14 13:55	10/28/14 09:39
400-97668-3	MW-3	Water	10/21/14 13:50	10/28/14 09:39
400-97668-4	TRIP BLANK	Water	10/21/14 14:10	10/28/14 09:39

Client Sample ID: MW-1

Lab Sample ID: 400-97668-1

Date Collected: 10/21/14 14:00

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	**200**	**H**	10	3.8	ug/L			10/29/14 16:08	10
Ethylbenzene	**770**	**H**	10	5.0	ug/L			10/29/14 16:08	10
Toluene	**11**	**H**	10	7.0	ug/L			10/29/14 16:08	10
Xylenes, Total	**3600**	**H**	100	16	ug/L			10/29/14 16:08	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*95*		*78 - 118*		*10/29/14 16:08*	*10*
Dibromofluoromethane	*98*		*81 - 121*		*10/29/14 16:08*	*10*
Toluene-d8 (Surr)	*103*		*80 - 120*		*10/29/14 16:08*	*10*

Client Sample ID: MW-2

Lab Sample ID: 400-97668-2

Date Collected: 10/21/14 13:55

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 17:25	1
Ethylbenzene	<0.50		1.0	0.50	ug/L			10/30/14 17:25	1
Toluene	<0.70		1.0	0.70	ug/L			10/30/14 17:25	1
Xylenes, Total	<1.6		10	1.6	ug/L			10/30/14 17:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*94*		*78 - 118*		*10/30/14 17:25*	*1*
Dibromofluoromethane	*105*		*81 - 121*		*10/30/14 17:25*	*1*
Toluene-d8 (Surr)	*94*		*80 - 120*		*10/30/14 17:25*	*1*

Client Sample ID: MW-3

Lab Sample ID: 400-97668-3

Date Collected: 10/21/14 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			10/30/14 17:49	1
Ethylbenzene	**0.96**	**J**	1.0	0.50	ug/L			10/30/14 17:49	1
Toluene	<0.70		1.0	0.70	ug/L			10/30/14 17:49	1
Xylenes, Total	<1.6		10	1.6	ug/L			10/30/14 17:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*94*		*78 - 118*		*10/30/14 17:49*	*1*
Dibromofluoromethane	*107*		*81 - 121*		*10/30/14 17:49*	*1*
Toluene-d8 (Surr)	*95*		*80 - 120*		*10/30/14 17:49*	*1*

Client Sample ID: TRIP BLANK

Lab Sample ID: 400-97668-4

Date Collected: 10/21/14 14:10

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 18:14	1
Ethylbenzene	<0.50		1.0	0.50	ug/L			10/30/14 18:14	1
Toluene	<0.70		1.0	0.70	ug/L			10/30/14 18:14	1

Client: MWH Americas Inc
Project/Site: KM Fogelson 4-1

TestAmerica Job ID: 400-97668-1

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

Lab Sample ID: 400-97668-4
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Xylenes, Total	<1.6		10	1.6	ug/L			10/30/14 18:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*96*		*78 - 118*		*10/30/14 18:14*	*1*
Dibromofluoromethane	*106*		*81 - 121*		*10/30/14 18:14*	*1*
Toluene-d8 (Surr)	*94*		*80 - 120*		*10/30/14 18:14*	*1*

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

Lab Sample ID: MB 400-234691/4
Matrix: Water
Analysis Batch: 234691

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			10/29/14 09:55	1
Ethylbenzene	<0.50		1.0	0.50	ug/L			10/29/14 09:55	1
Toluene	<0.70		1.0	0.70	ug/L			10/29/14 09:55	1
Xylenes, Total	<1.6		10	1.6	ug/L			10/29/14 09:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*94*		*78 - 118*		*10/29/14 09:55*	*1*
Dibromofluoromethane	*99*		*81 - 121*		*10/29/14 09:55*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*10/29/14 09:55*	*1*

Lab Sample ID: LCS 400-234691/1002
Matrix: Water
Analysis Batch: 234691

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	53.3		ug/L		107	79 - 120
Ethylbenzene	50.0	52.2		ug/L		104	80 - 120
Toluene	50.0	49.9		ug/L		100	80 - 120
Xylenes, Total	100	103		ug/L		103	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*92*		*78 - 118*
Dibromofluoromethane	*104*		*81 - 121*
Toluene-d8 (Surr)	*97*		*80 - 120*

Lab Sample ID: MB 400-234848/4
Matrix: Water
Analysis Batch: 234848

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 09:43	1
Ethylbenzene	<0.50		1.0	0.50	ug/L			10/30/14 09:43	1
Toluene	<0.70		1.0	0.70	ug/L			10/30/14 09:43	1
Xylenes, Total	<1.6		10	1.6	ug/L			10/30/14 09:43	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*95*		*78 - 118*		*10/30/14 09:43*	*1*
Dibromofluoromethane	*104*		*81 - 121*		*10/30/14 09:43*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*		*10/30/14 09:43*	*1*

Lab Sample ID: LCS 400-234848/1002
Matrix: Water
Analysis Batch: 234848

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	51.1		ug/L		102	79 - 120
Ethylbenzene	50.0	47.9		ug/L		96	80 - 120

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

Lab Sample ID: LCS 400-234848/1002
Matrix: Water
Analysis Batch: 234848

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	46.4		ug/L		93	80 - 120		
Xylenes, Total			100	95.4		ug/L		95	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*92*		*78 - 118*
Dibromofluoromethane	*106*		*81 - 121*
Toluene-d8 (Surr)	*97*		*80 - 120*

Lab Chronicle

Client: MWH Americas Inc
Project/Site: KM Fogelson 4-1

TestAmerica Job ID: 400-97668-1

Client Sample ID: MW-1

Lab Sample ID: 400-97668-1

Date Collected: 10/21/14 14:00

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		10	234691	10/29/14 16:08	CLN	TAL PEN

Client Sample ID: MW-2

Lab Sample ID: 400-97668-2

Date Collected: 10/21/14 13:55

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	234848	10/30/14 17:25	WPD	TAL PEN

Client Sample ID: MW-3

Lab Sample ID: 400-97668-3

Date Collected: 10/21/14 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	234848	10/30/14 17:49	WPD	TAL PEN

Client Sample ID: TRIP BLANK

Lab Sample ID: 400-97668-4

Date Collected: 10/21/14 14:10

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	234848	10/30/14 18:14	WPD	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 Fogelson 4-1

TestAmerica Job ID: 400-97668-1

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: 560-15208-1505.1
Client Contact: Ms. Sarah Gardner	Phone: 303 291-2242	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 Fogelson 4-1	Project #: 56004959
Site:	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 - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

400-97668 COC

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 - (MOD) BTEX/MTBE	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A		
MW-1	10/21/14	1400	G	Water			X		
MW-2	10/21/14	1355	G	Water			X		
MW-3	10/21/14	1350	G	Water			X		
TRIP BLANK	10/21/14	1410	G	Water			X		

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: Chris Lee	Date/Time: 10/27/14 915	Company: MWH	Received by:	Date/Time: 10-28-14 933	Company: TA-C
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
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: 3.0°C IR-2