3R - 068

2013 AGWMR

04 / 03 / 2014

MWH

BUILDING A BETTER WORLD

March 4, 2014

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

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

Dear Mr. von Gonten

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

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

Sincerely,

David C. Wombacher
Principal Engineer

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

P:\Word Processing\EL PASO\NEW MEXICO\SAN JUAN RIVER BASIN PROGRAM\PIT SITES\LTR-03-14-2013 ANNUAL REPORT SUBMITTALS\Ltr-03-14-von Gonten-2013 Annual Report Submittals.docx

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Des Moines, IA 50322-7904
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TABLE 1

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

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

2013 ANNUAL GROUNDWATER REPORT

Fogelson 4-1 Com #14
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

SITE BACKGROUND

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

Fogelson 4-1 Com #14 (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 (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 production has been observed and periodically removed. Currently groundwater sampling is conducted on a semi-annual basis and free product was not observed in 2013.

SUMMARY OF 2013 ACTIVITIES

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

On June 4, September 9, and December 13, 2013, water levels were gauged at MW-1, MW-2, and MW-3 and groundwater samples were collected from each well using a HydraSleeve™ (HydraSleeve); a disposable, no-purge passive groundwater sampling device. The HydraSleeves were set during the previous sampling event approximately 0.5 foot above termination depth of the monitoring wells using a suspension tether and weights to collect a sample from the screened interval. Groundwater samples were placed into laboratory supplied sample containers, packed on ice and shipped under standard chain of custody protocols to Test America Laboratories in Corpus Christi, Texas where they were analyzed for benzene, toluene, ethylbenzene, and total xylenes (BTEX). Additional field parameters were collected including dissolved oxygen, temperature, conductivity, pH, and ORP using a YSI multi-parameter instrument. The de minimis water remaining in HydraSleeves was combined in a waste container and transferred to an off-site 55-gallon drum for later disposal by Safety-Kleen.

SUMMARY TABLES

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

2013 ANNUAL GROUNDWATER REPORT

Fogelson 4-1 Com #14
Meter Code: 73220
T29N, R11W, Sec 4, Unit P

SITE MAPS

Groundwater analytical maps (Figures 1, 3, and 5) and groundwater elevation contour maps (Figures 2, 4, and 6) summarize the results of the 2013 groundwater sampling and gauging events.

ANALYTICAL LAB REPORTS

The groundwater analytical lab reports are included as Appendix A.

RESULTS

- The groundwater flow direction at the Site is generally to the west-southwest (see Figures 2, 4, and 6).

- Concentrations of benzene and total xylenes in groundwater collected from MW-1 remained above the New Mexico Water Quality Control Commission (NMWQCC) standards for all three 2013 sampling events. Toluene was not above standard during the three sampling events. Ethylbenzene was below standard in June and December, but was above standard during the September sampling event.

- BTEX constituents were either not detected or reported below the quantification limit (J-flagged values) in MW-2 and MW-3 during 2013.

PLANNED FUTURE ACTIVITIES

Following the completion of a Site access agreement with the current Site operator, installation of additional monitoring wells is planned, to further assess the extent of dissolved phase hydrocarbons and to confirm and/or further define the groundwater gradient at the Site. MW-1, MW-2, 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 Com #14								
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	-	-

TABLE 1 - GROUNDWATER ANALYTICAL RESULTS

Fogelson 4-1 Com #14								
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	-	-

TABLE 1 - GROUNDWATER ANALYTICAL RESULTS

Fogelson 4-1 Com #14								
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	-	-

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\2013 MAPS\Fogelson_GARM_2Q_2013.mxd

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

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	10/14/2013	CCL	CCL	DAW

TITLE:

FOGELSON 4-1 COM #14
GROUNDWATER ANALYTICAL RESULTS
SAMPLED JUNE 4, 2013

PROJECT:

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

MWH

Figure No.: **1**

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\FOGELSON 4-1 COM #14\2013 MAPS\Fogelson_GECM_2Q_2013.mxd

ENTERPRISE LINE

ENTERPRISE LINE

CONOCO PHILIPS LINE

METER HOUSE

FORMER TANKS

FORMER SEPARATOR

MW-1
5740.02

MW-1

MW-3

MW-3
5737.01

FORMER PIT

SEPARATOR

5740

5739.5

DAMAGED MW-

PROPANE TANK

5737

5737.5

5738

5738.5

5739

MW-2

MW-2
5738.49

SMA BENCHMARK

PUMP JACK

TANK

TANK

5735

5705

5710

5715

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	10/24/2013	CCL	CCL	DAW

TITLE:

FOGELSON 4-1 COM #14
GROUNDWATER ELEVATION MAP
SAMPLED JUNE 4, 2013

PROJECT:

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

MWH

Figure No.: **2**

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\FOGELSON 4-1 COM #14\2013 MAPS\Fogelson_GARM_3Q_2013.mxd

ENTERPRISE LINE

ENTERPRISE LINE

CONOCO PHILIPS LINE

METER HOUSE

FORMER TANKS

FORMER SEPARATOR

MW-1
B: **160**
T: 20
E: **760**
X: **3200**

MW-1

MW-3
B: <0.14
T: <0.30
E: <0.20
X: <0.23

MW-3

FORMER PIT

UNKNOWN LINE ABANDONED IN GROUND

SEPARATOR

DAMAGED MW

PROPANE TANK

TANK

TANK

MW-2

MW-2
B: <0.14
T: <0.30
E: <0.20
X: <0.23

SMA BENCHMARK

PUMP JACK

5790

5785

5795

5800

5805

LEGEND:

- 5795 — APPROX. GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- FORMER PIT
- UNDERGROUND CABLE
- BENCHMARK
- BOLLARD
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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	10/14/2013	CCL	CCL	DAW

TITLE:

FOGELSON 4-1 COM #14
GROUNDWATER ANALYTICAL RESULTS
SAMPLED SEPTEMBER 9, 2013

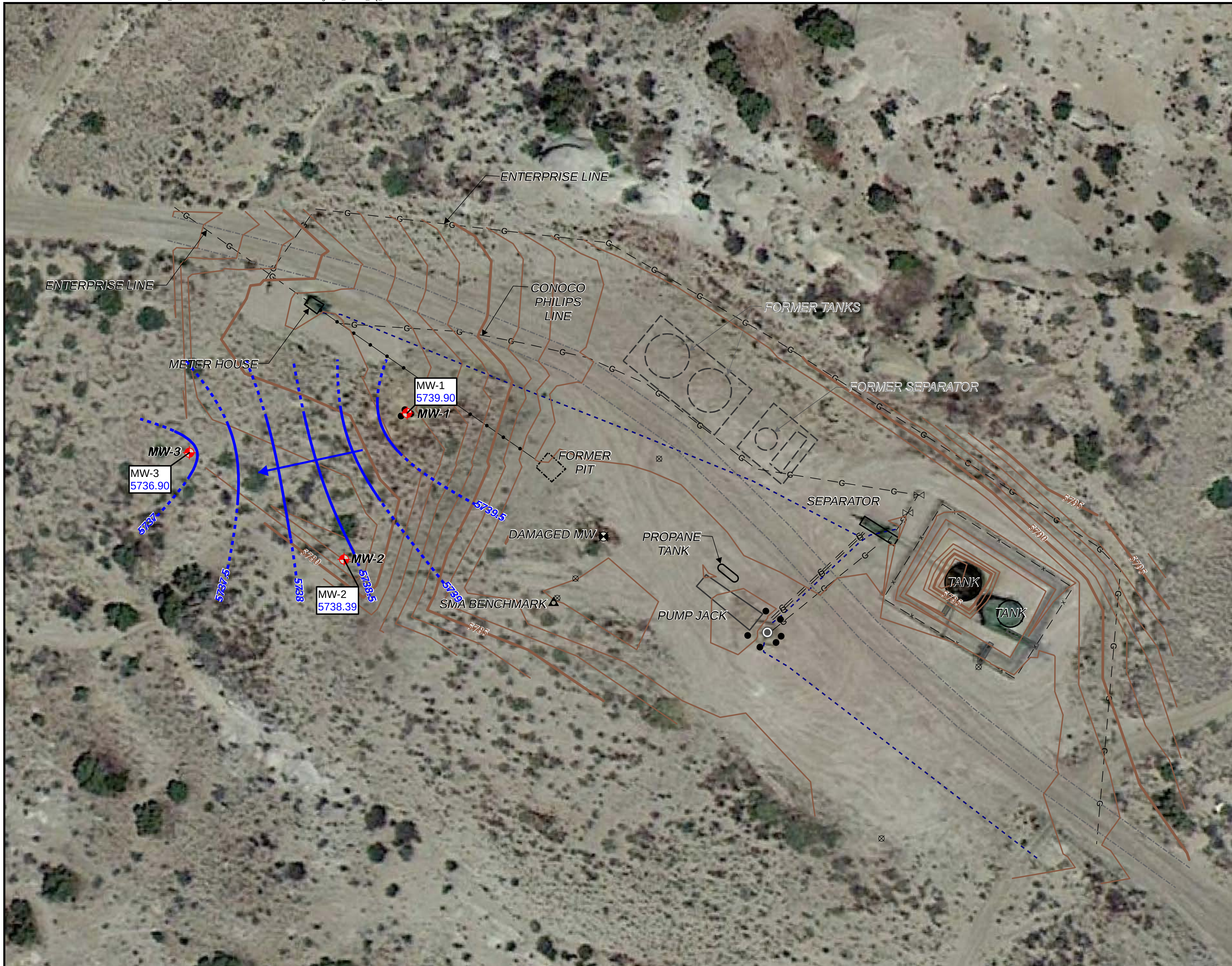
PROJECT:

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

MWH

Figure No.: **3**

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\FOGELSON 4-1 COM #14\2013 MAPS\Fogelson_GECM_3Q_2013.mxd



LEGEND:

- 5795 — APPROX. GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- FORMER PIT
- UNDERGROUND CABLE
- BENCHMARK
- BOLLARD
- MONITORING WELL
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DIRECTION OF GROUNDWATER FLOW

N

SCALE IN FEET

0 40 80

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
A	10/14/2013	CCL	CCL	DAW

TITLE:

FOGELSON 4-1 COM #14
GROUNDWATER ELEVATION MAP
SAMPLED SEPTEMBER 9, 2013

PROJECT:

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

MWH

Figure No.: 4

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\FOGELSON 4-1 COM #14\2013 MAPS\Fogelson_GARM_4Q_2013.mxd

ENTERPRISE LINE

ENTERPRISE LINE

CONOCO PHILIPS LINE

METER HOUSE

MW-1
B: **150**
T: 41
E: 630
X: **2700**

MW-1

MW-3
B: <0.20
T: 0.56J
E: <0.20
X: <0.65

MW-3

FORMER TANKS

FORMER SEPARATOR

FORMER PIT

UNKNOWN LINE ABANDONED IN GROUND

SEPARATOR

DAMAGED MW

PROPANE TANK

MW-2

MW-2
B: <0.20
T: 0.52J
E: 0.38J
X: 0.85J

SMA BENCHMARK

PUMP JACK

TANK

TANK

5795

5790

5785

5780

5775

LEGEND:

- 5795 — APPROX. GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- FORMER PIT
- UNDERGROUND CABLE
- BENCHMARK
- BOLLARD
- MONITORING WELL
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SCALE IN FEET
0 40 80

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
A	1/15/2014	CCL	CCL	DAW

TITLE:
FOGELSON 4-1 COM #14
GROUNDWATER ANALYTICAL RESULTS
SAMPLED DECEMBER 13, 2013

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

MWH

Figure No.:
5

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\FOGELSON 4-1 COM #14\2013 MAPS\Fogelson_GECM_4Q_2013.mxd

ENTERPRISE LINE

ENTERPRISE LINE

CONOCO PHILIPS LINE

METER HOUSE

FORMER TANKS

FORMER SEPARATOR

MW-1
5739.92

MW-1

MW-3

MW-3
5736.90

FORMER PIT

SEPARATOR

5739.5

5737

DAMAGED MW

PROPANE TANK

5730

MW-2

MW-2
5738.37

5738

5738.5

5739

SMA BENCHMARK

5735

PUMP JACK

TANK

TANK

5705

5700

5725

5735

LEGEND:

- 5795 — APPROX. GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
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NOTES:

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

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

DIRECTION OF GROUNDWATER FLOW

N

SCALE IN FEET

0 40 80

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
A	1/15/2014	CCL	CCL	DAW

TITLE:

FOGELSON 4-1 COM #14
GROUNDWATER ELEVATION MAP
SAMPLED DECEMBER 13, 2013

PROJECT:

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

MWH

Figure No.: 6

APPENDIX A

JUNE 4, 2013 GROUNDWATER SAMPLING ANALYTICAL REPORT
SEPTEMBER 9, 2013 GROUNDWATER SAMPLING ANALYTICAL REPORT
DECEMBER 13, 2013 GROUNDWATER SAMPLING ANALYTICAL REPORT

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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

TestAmerica Job ID: 560-40554-1
TestAmerica Sample Delivery Group: June 2013
Client Project/Site: Fogelson 4-1 com 4

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

Attn: Mr. Daniel Wade

Authorized for release by:
6/19/2013 9:28:55 AM

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

Qualifiers

GC/MS VOA

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

Glossary

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

Job ID: 560-40554-1

Laboratory: TestAmerica Corpus Christi

Narrative

Receipt

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

Detection Summary

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

TestAmerica Job ID: 560-40554-1
SDG: June 2013

Client Sample ID: MW-1 — Lab Sample ID: 560-40554-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.20		0.010	0.0014	mg/L	10		8260B	Total/NA
Ethylbenzene	0.65		0.010	0.0020	mg/L	10		8260B	Total/NA
Toluene	0.0093	J	0.010	0.0030	mg/L	10		8260B	Total/NA
Xylenes, Total	2.4		0.030	0.0023	mg/L	10		8260B	Total/NA

Client Sample ID: MW-2 — Lab Sample ID: 560-40554-2

No Detections.

Client Sample ID: MW-3 — Lab Sample ID: 560-40554-3

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-1

Lab Sample ID: 560-40554-1

Date Collected: 06/10/13 14:15

Matrix: Water

Date Received: 06/12/13 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.20**		0.010	0.0014	mg/L			06/17/13 14:13	10
Ethylbenzene	**0.65**		0.010	0.0020	mg/L			06/17/13 14:13	10
Toluene	**0.0093**	**J**	0.010	0.0030	mg/L			06/17/13 14:13	10
Xylenes, Total	**2.4**		0.030	0.0023	mg/L			06/17/13 14:13	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*106*		*70 - 130*		*06/17/13 14:13*	*10*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*		*06/17/13 14:13*	*10*
Dibromofluoromethane (Surr)	*97*		*70 - 130*		*06/17/13 14:13*	*10*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 130*		*06/17/13 14:13*	*10*

Client Sample ID: MW-2

Lab Sample ID: 560-40554-2

Date Collected: 06/10/13 14:10

Matrix: Water

Date Received: 06/12/13 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00014		0.0010	0.00014	mg/L			06/16/13 16:32	1
Ethylbenzene	<0.00020		0.0010	0.00020	mg/L			06/16/13 16:32	1
Toluene	<0.00030		0.0010	0.00030	mg/L			06/16/13 16:32	1
Xylenes, Total	<0.00023		0.0030	0.00023	mg/L			06/16/13 16:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*70 - 130*		*06/16/13 16:32*	*1*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*		*06/16/13 16:32*	*1*
Dibromofluoromethane (Surr)	*108*		*70 - 130*		*06/16/13 16:32*	*1*
1,2-Dichloroethane-d4 (Surr)	*104*		*70 - 130*		*06/16/13 16:32*	*1*

Client Sample ID: MW-3

Lab Sample ID: 560-40554-3

Date Collected: 06/10/13 14:00

Matrix: Water

Date Received: 06/12/13 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00014		0.0010	0.00014	mg/L			06/16/13 16:57	1
Ethylbenzene	<0.00020		0.0010	0.00020	mg/L			06/16/13 16:57	1
Toluene	<0.00030		0.0010	0.00030	mg/L			06/16/13 16:57	1
Xylenes, Total	<0.00023		0.0030	0.00023	mg/L			06/16/13 16:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*103*		*70 - 130*		*06/16/13 16:57*	*1*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*		*06/16/13 16:57*	*1*
Dibromofluoromethane (Surr)	*106*		*70 - 130*		*06/16/13 16:57*	*1*
1,2-Dichloroethane-d4 (Surr)	*104*		*70 - 130*		*06/16/13 16:57*	*1*

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

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

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

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

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

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

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

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

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

Lab Sample ID: MB 560-89169/8
Matrix: Water
Analysis Batch: 89169

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00014		0.0010	0.00014	mg/L			06/17/13 12:32	1
Ethylbenzene	<0.00020		0.0010	0.00020	mg/L			06/17/13 12:32	1
Toluene	<0.00030		0.0010	0.00030	mg/L			06/17/13 12:32	1
Xylenes, Total	<0.00023		0.0030	0.00023	mg/L			06/17/13 12:32	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*103*		*70 - 130*		*06/17/13 12:32*	*1*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*		*06/17/13 12:32*	*1*
Dibromofluoromethane (Surr)	*110*		*70 - 130*		*06/17/13 12:32*	*1*
1,2-Dichloroethane-d4 (Surr)	*105*		*70 - 130*		*06/17/13 12:32*	*1*

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

Lab Sample ID: LCS 560-89169/3
Matrix: Water
Analysis Batch: 89169

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.0250	0.0276		mg/L		110	70 - 130		
Ethylbenzene			0.0250	0.0245		mg/L		98	70 - 130		
Toluene			0.0250	0.0278		mg/L		111	70 - 130		
Xylenes, Total			0.0750	0.0736		mg/L		98	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*103*		*70 - 130*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*
Dibromofluoromethane (Surr)	*103*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*96*		*70 - 130*

Lab Chronicle

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

TestAmerica Job ID: 560-40554-1
SDG: June 2013

Client Sample ID: MW-1

Lab Sample ID: 560-40554-1

Date Collected: 06/10/13 14:15

Matrix: Water

Date Received: 06/12/13 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		10	89169	06/17/13 14:13	RT	TAL CC

Client Sample ID: MW-2

Lab Sample ID: 560-40554-2

Date Collected: 06/10/13 14:10

Matrix: Water

Date Received: 06/12/13 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	89164	06/16/13 16:32	RT	TAL CC

Client Sample ID: MW-3

Lab Sample ID: 560-40554-3

Date Collected: 06/10/13 14:00

Matrix: Water

Date Received: 06/12/13 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	89164	06/16/13 16:57	RT	TAL CC

Laboratory References:

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

Certification Summary

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

TestAmerica Job ID: 560-40554-1
SDG: June 2013

Laboratory: TestAmerica Corpus Christi

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Kansas	NELAP	7	E-10362	10-31-13
Oklahoma	State Program	6	9968	08-31-13
Texas	NELAP	6	T104704210-12-8	03-31-14
USDA	Federal		P330-11-00060	02-03-14

Method Summary

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

TestAmerica Job ID: 560-40554-1
SDG: June 2013

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

Protocol References:

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

Laboratory References:

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

Sample Summary

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

TestAmerica Job ID: 560-40554-1
SDG: June 2013

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
560-40554-1	MW-1	Water	06/10/13 14:15	06/12/13 10:00
560-40554-2	MW-2	Water	06/10/13 14:10	06/12/13 10:00
560-40554-3	MW-3	Water	06/10/13 14:00	06/12/13 10:00

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

No. 40554

CHAIN OF CUSTODY RECORD

Loc: 560
40554

560-40554 Chain of Custody

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

ANALYSIS/METHOD REQUEST

SAMPLE NO.	SAMPLE DESCRIPTION	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	CONTAINER	PRESERV.	NUMBER	RS 8260	REMARKS/PRECAUTIONS.
	MW-1	6/10/13	1415	GW	VOA	HCL	3	X	
	MW-2	6/10/13	1410	GW	VOA	HCL	3	X	
	MW-3	6/10/13	1400	GW	VOA	HCL	3	X	

SEAL INTACT Y
TEMP C 3.3
CORR TEMP C 2.5
IR GUN ID 4
INITIAL/DATE VM 06/13

SAMPLER: Daniel Wade
SHIPMENT METHOD: FedEx
AIRBILL NO.: 8022 4442 6456

REQUIRED TURNAROUND: [X] ROUTINE TAT (10 BUSINESS DAYS) [ ] RUSH TAT (MAY REQUIRE SURCHARGE)

1. RELINQUISHED BY: Daniel Wade	DATE	2. RELINQUISHED BY:	DATE	3. RELINQUISHED BY:	DATE
SIGNATURE: 6/11	6/10/13 DW	SIGNATURE:		SIGNATURE:	
PRINTED NAME/COMPANY: MWH 1000	TIME 1730 DW	PRINTED NAME/COMPANY:	TIME	PRINTED NAME/COMPANY:	TIME
1. RECEIVED BY:	DATE 06/12/13	2. RECEIVED BY:	DATE	3. RECEIVED BY:	DATE
SIGNATURE:		SIGNATURE:		SIGNATURE:	
PRINTED NAME/COMPANY:	TIME 1000	PRINTED NAME/COMPANY:	TIME	PRINTED NAME/COMPANY:	TIME

TAL-8222-560 (0412)

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

Login Sample Receipt Checklist

Client: MWH Americas Inc

Job Number: 560-40554-1
SDG Number: June 2013

Login Number: 40554
List Number: 1
Creator: McDermott, Vivian

List Source: TestAmerica Corpus Christi

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

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: 560-42545-1
TestAmerica Sample Delivery Group: September 2013
Client Project/Site: FogelsonGroundwater Analysis

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

Attn: Mr. Daniel Wade

Authorized for release by:
10/3/2013 11:30:31 AM
Lindy Maingot, Project Manager I
lindy.maingot@testamericainc.com

Designee for

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

Qualifiers

GC/MS VOA

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

Glossary

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

Job ID: 560-42545-1

Laboratory: TestAmerica Corpus Christi

Narrative

Job Narrative
560-42545-1

Comments
No additional comments.

Receipt
The samples were received on 9/14/2013 10:05 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.4° C.

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

Organic Prep
No analytical or quality issues were noted.

Detection Summary

Client: MWH Americas Inc
Project/Site: FogelsonGroundwater Analysis

TestAmerica Job ID: 560-42545-1
SDG: September 2013

Client Sample ID: MW-1 — Lab Sample ID: 560-42545-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.16		0.030	0.0042	mg/L	30		8260B	Total/NA
Ethylbenzene	0.76		0.030	0.0060	mg/L	30		8260B	Total/NA
Toluene	0.020	J	0.030	0.0090	mg/L	30		8260B	Total/NA
Xylenes, Total	3.2		0.090	0.0068	mg/L	30		8260B	Total/NA

Client Sample ID: MW-2 — Lab Sample ID: 560-42545-2

No Detections.

Client Sample ID: MW-3 — Lab Sample ID: 560-42545-3

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-1

Lab Sample ID: 560-42545-1

Date Collected: 09/09/13 15:55
Matrix: Water
Date Received: 09/14/13 10:05

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.16**		0.030	0.0042	mg/L			09/18/13 19:12	30
Ethylbenzene	**0.76**		0.030	0.0060	mg/L			09/18/13 19:12	30
Toluene	**0.020**	**J**	0.030	0.0090	mg/L			09/18/13 19:12	30
Xylenes, Total	**3.2**		0.090	0.0068	mg/L			09/18/13 19:12	30

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*94*		*70 - 130*		*09/18/13 19:12*	*30*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*		*09/18/13 19:12*	*30*
Dibromofluoromethane (Surr)	*92*		*70 - 130*		*09/18/13 19:12*	*30*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 140*		*09/18/13 19:12*	*30*

Client Sample ID: MW-2

Lab Sample ID: 560-42545-2

Date Collected: 09/09/13 15:45
Matrix: Water
Date Received: 09/14/13 10:05

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00014		0.0010	0.00014	mg/L			09/18/13 19:37	1
Ethylbenzene	<0.00020		0.0010	0.00020	mg/L			09/18/13 19:37	1
Toluene	<0.00030		0.0010	0.00030	mg/L			09/18/13 19:37	1
Xylenes, Total	<0.00023		0.0030	0.00023	mg/L			09/18/13 19:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*96*		*70 - 130*		*09/18/13 19:37*	*1*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*		*09/18/13 19:37*	*1*
Dibromofluoromethane (Surr)	*96*		*70 - 130*		*09/18/13 19:37*	*1*
1,2-Dichloroethane-d4 (Surr)	*104*		*70 - 140*		*09/18/13 19:37*	*1*

Client Sample ID: MW-3

Lab Sample ID: 560-42545-3

Date Collected: 09/09/13 15:50
Matrix: Water
Date Received: 09/14/13 10:05

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00014		0.0010	0.00014	mg/L			09/18/13 20:02	1
Ethylbenzene	<0.00020		0.0010	0.00020	mg/L			09/18/13 20:02	1
Toluene	<0.00030		0.0010	0.00030	mg/L			09/18/13 20:02	1
Xylenes, Total	<0.00023		0.0030	0.00023	mg/L			09/18/13 20:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*95*		*70 - 130*		*09/18/13 20:02*	*1*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*		*09/18/13 20:02*	*1*
Dibromofluoromethane (Surr)	*96*		*70 - 130*		*09/18/13 20:02*	*1*
1,2-Dichloroethane-d4 (Surr)	*105*		*70 - 140*		*09/18/13 20:02*	*1*

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

Lab Sample ID: MB 560-92892/8
Matrix: Water
Analysis Batch: 92892

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00014		0.0010	0.00014	mg/L			09/18/13 18:46	1
Ethylbenzene	<0.00020		0.0010	0.00020	mg/L			09/18/13 18:46	1
Toluene	<0.00030		0.0010	0.00030	mg/L			09/18/13 18:46	1
Xylenes, Total	<0.00023		0.0030	0.00023	mg/L			09/18/13 18:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*93*		*70 - 130*		*09/18/13 18:46*	*1*
4-Bromofluorobenzene (Surr)	*87*		*70 - 130*		*09/18/13 18:46*	*1*
Dibromofluoromethane (Surr)	*94*		*70 - 130*		*09/18/13 18:46*	*1*
1,2-Dichloroethane-d4 (Surr)	*104*		*70 - 140*		*09/18/13 18:46*	*1*

Lab Sample ID: LCS 560-92892/3
Matrix: Water
Analysis Batch: 92892

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.0250	0.0235		mg/L		94	70 - 130
Ethylbenzene	0.0250	0.0248		mg/L		99	70 - 130
Toluene	0.0250	0.0221		mg/L		89	70 - 130
Xylenes, Total	0.0750	0.0747		mg/L		100	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*96*		*70 - 130*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*
Dibromofluoromethane (Surr)	*97*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 140*

Lab Sample ID: 560-42545-1 MS
Matrix: Water
Analysis Batch: 92892

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	0.16		0.750	0.900		mg/L		98	70 - 130
Ethylbenzene	0.76		0.750	1.55		mg/L		106	70 - 130
Toluene	0.020	J	0.750	0.711		mg/L		92	70 - 130
Xylenes, Total	3.2		2.25	5.58		mg/L		105	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Toluene-d8 (Surr)	*96*		*70 - 130*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*
Dibromofluoromethane (Surr)	*98*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 140*

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

Lab Sample ID: 560-42545-1 MSD
Matrix: Water
Analysis Batch: 92892

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	0.16		0.750	0.861		mg/L		93	70 - 130	4	20
Ethylbenzene	0.76		0.750	1.54		mg/L		104	70 - 130	1	20
Toluene	0.020	J	0.750	0.708		mg/L		92	70 - 130	0	20
Xylenes, Total	3.2		2.25	5.49		mg/L		101	70 - 130	2	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*96*		*70 - 130*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*
Dibromofluoromethane (Surr)	*97*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*98*		*70 - 140*

Certification Summary

Client: MWH Americas Inc
Project/Site: FogelsonGroundwater Analysis

TestAmerica Job ID: 560-42545-1
SDG: September 2013

Laboratory: TestAmerica Corpus Christi

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Kansas	NELAP	7	E-10362	10-31-13
Oklahoma	State Program	6	9968	08-31-14
Texas	NELAP	6	T104704210-12-8	03-31-14
USDA	Federal		P330-11-00060	02-03-14

Method Summary

Client: MWH Americas Inc
Project/Site: FogelsonGroundwater Analysis

TestAmerica Job ID: 560-42545-1
SDG: September 2013

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

Protocol References:

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

Laboratory References:

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

Sample Summary

Client: MWH Americas Inc
Project/Site: FogelsonGroundwater Analysis

TestAmerica Job ID: 560-42545-1
SDG: September 2013

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
560-42545-1	MW-1	Water	09/09/13 15:55	09/14/13 10:05
560-42545-2	MW-2	Water	09/09/13 15:45	09/14/13 10:05
560-42545-3	MW-3	Water	09/09/13 15:50	09/14/13 10:05

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

Chain of Custo

560-42545 Chain of Custody

TestAmerica
Loc: 560
42545

Client Information		
Client Contact: Mr. Daniel Wade	Sampler: DAW	Lab PM: Kellogg, Timothy L
Company: MWH Americas Inc	Phone: 303-912-2625	E-Mail: tim.kellogg@testamericainc.com
Address: 1801 California Street Suite 2900	Due Date Requested:	
City: Denver	TAT Requested (days): Standard	
State, Zip: CO, 80202		
Phone: 713-420-3414(Tel)	PO #: Purchase Order not required	
Email: Daniel.A.Wade@us.mwhglobal.com	WO #: TWO # C-STLI-	
Project Name: San Juan River Basin Pit Sites	Project #: 56000058	
Site: Fogelson	SSOW#:	

COC No: 560-10718-1157
Page: Page 1 of 1
Job #:

Analysis Requested

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	9/9/13	1555	G	Water			X		
MW-2	9/9/13	1545	G	Water			X		
MW-3	9/9/13	1550	G	Water			X		
				Water					
				Water					
				Water					
				Water					
				Water					
				Water					
				Water					
				Water					

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:

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: FedEx Sat	
Relinquished by: [signature]	Date/Time: 9/13/13 1200	Company		Received by: [signature]		Date/Time: 09/14/13 1005	Company: TACC
Relinquished by:	Date/Time:	Company		Received by:		Date/Time:	Company
Relinquished by:	Date/Time:	Company		Received by:		Date/Time:	Company

Custody Seals Intact: [X] Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: Obs 1.5 Cor 1.4 IR4

Login Sample Receipt Checklist

Client: MWH Americas Inc

Job Number: 560-42545-1
SDG Number: September 2013

Login Number: 42545
List Number: 1
Creator: Wing, Randi

List Source: TestAmerica Corpus Christi

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

TestAmerica

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: 560-44352-1
TestAmerica Sample Delivery Group: December 2013
Client Project/Site: Folgelson 4-1 Com #14 Groundwater

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

Attn: Mr. Cary Ruble

Authorized for release by:
12/30/2013 7:10:23 PM

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

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)

Case Narrative

Client: MWH Americas Inc
Project/Site: Folgelson 4-1 Com #14 Groundwater

TestAmerica Job ID: 560-44352-1
SDG: December 2013

Job ID: 560-44352-1

Laboratory: TestAmerica Corpus Christi

Narrative

Receipt

The samples were received on 12/17/2013 10:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.1° C. No analytical or quality issues were noted.

Detection Summary

Client: MWH Americas Inc
Project/Site: Folgelson 4-1 Com #14 Groundwater

TestAmerica Job ID: 560-44352-1
SDG: December 2013

Client Sample ID: MW-1 — Lab Sample ID: 560-44352-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.15		0.020	0.0020	mg/L	10		8021B	Total/NA
Toluene	0.041		0.020	0.0038	mg/L	10		8021B	Total/NA
Ethylbenzene	0.63		0.020	0.0020	mg/L	10		8021B	Total/NA
Xylenes, Total	2.7		0.020	0.0065	mg/L	10		8021B	Total/NA

Client Sample ID: MW-2 — Lab Sample ID: 560-44352-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Toluene	0.00052	J	0.0020	0.00038	mg/L	1		8021B	Total/NA
Ethylbenzene	0.00038	J	0.0020	0.00020	mg/L	1		8021B	Total/NA
Xylenes, Total	0.00085	J	0.0020	0.00065	mg/L	1		8021B	Total/NA

Client Sample ID: MW-3 — Lab Sample ID: 560-44352-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Toluene	0.00056	J	0.0020	0.00038	mg/L	1		8021B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-1

Lab Sample ID: 560-44352-1

Date Collected: 12/13/13 14:45
Matrix: Water
Date Received: 12/17/13 10:40

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.15**		0.020	0.0020	mg/L			12/22/13 04:27	10
Toluene	**0.041**		0.020	0.0038	mg/L			12/22/13 04:27	10
Ethylbenzene	**0.63**		0.020	0.0020	mg/L			12/22/13 04:27	10
Xylenes, Total	**2.7**		0.020	0.0065	mg/L			12/22/13 04:27	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*58 - 129*		*12/22/13 04:27*	*10*
Trifluorotoluene (Surr)	*90*		*54 - 130*		*12/22/13 04:27*	*10*

Client Sample ID: MW-2

Lab Sample ID: 560-44352-2

Date Collected: 12/13/13 14:40
Matrix: Water
Date Received: 12/17/13 10:40

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00020		0.0020	0.00020	mg/L			12/22/13 04:54	1
Toluene	**0.00052**	**J**	0.0020	0.00038	mg/L			12/22/13 04:54	1
Ethylbenzene	**0.00038**	**J**	0.0020	0.00020	mg/L			12/22/13 04:54	1
Xylenes, Total	**0.00085**	**J**	0.0020	0.00065	mg/L			12/22/13 04:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*82*		*58 - 129*		*12/22/13 04:54*	*1*
Trifluorotoluene (Surr)	*90*		*54 - 130*		*12/22/13 04:54*	*1*

Client Sample ID: MW-3

Lab Sample ID: 560-44352-3

Date Collected: 12/13/13 14:35
Matrix: Water
Date Received: 12/17/13 10:40

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00020		0.0020	0.00020	mg/L			12/22/13 05:21	1
Toluene	**0.00056**	**J**	0.0020	0.00038	mg/L			12/22/13 05:21	1
Ethylbenzene	<0.00020		0.0020	0.00020	mg/L			12/22/13 05:21	1
Xylenes, Total	<0.00065		0.0020	0.00065	mg/L			12/22/13 05:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*82*		*58 - 129*		*12/22/13 05:21*	*1*
Trifluorotoluene (Surr)	*87*		*54 - 130*		*12/22/13 05:21*	*1*

Method: 8021B - Volatile Organic Compounds (GC)

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

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

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

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

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

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.0400	0.0355		mg/L		89	70 - 130
Toluene	0.0400	0.0358		mg/L		90	70 - 130
Ethylbenzene	0.0400	0.0361		mg/L		90	70 - 130
Xylenes, Total	0.120	0.106		mg/L		88	70 - 130

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

Lab Chronicle

Client: MWH Americas Inc
Project/Site: Folgelson 4-1 Com #14 Groundwater

TestAmerica Job ID: 560-44352-1
SDG: December 2013

Client Sample ID: MW-1

Lab Sample ID: 560-44352-1

Date Collected: 12/13/13 14:45
Matrix: Water
Date Received: 12/17/13 10:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		10	96483	12/22/13 04:27	RQH	TAL CC

Client Sample ID: MW-2

Lab Sample ID: 560-44352-2

Date Collected: 12/13/13 14:40
Matrix: Water
Date Received: 12/17/13 10:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	96483	12/22/13 04:54	RQH	TAL CC

Client Sample ID: MW-3

Lab Sample ID: 560-44352-3

Date Collected: 12/13/13 14:35
Matrix: Water
Date Received: 12/17/13 10:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	96483	12/22/13 05:21	RQH	TAL CC

Laboratory References:

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

Certification Summary

Client: MWH Americas Inc
Project/Site: Folgelson 4-1 Com #14 Groundwater

TestAmerica Job ID: 560-44352-1
SDG: December 2013

Laboratory: TestAmerica Corpus Christi

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Kansas	NELAP	7	E-10362	10-31-14
Oklahoma	State Program	6	9968	08-31-14
Texas	NELAP	6	T104704210-12-8	03-31-14
USDA	Federal		P330-11-00060	02-03-14

Method Summary

Client: MWH Americas Inc
Project/Site: Folgelson 4-1 Com #14 Groundwater

TestAmerica Job ID: 560-44352-1
SDG: December 2013

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: Folgelson 4-1 Com #14 Groundwater

TestAmerica Job ID: 560-44352-1
SDG: December 2013

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
560-44352-1	MW-1	Water	12/13/13 14:45	12/17/13 10:40
560-44352-2	MW-2	Water	12/13/13 14:40	12/17/13 10:40
560-44352-3	MW-3	Water	12/13/13 14:35	12/17/13 10:40

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

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: CCL	Lab PM: Kellogg, Timothy L.	Carrier Tracking No(s):	COC No: 560-11604-1157.1
Client Contact: ~~Mr. Daniel Wade~~ Christopher Lee	Phone: 303 291 2242	E-Mail: tim.kellogg@testamericainc.com		Page: Page 1 of
Company: MWH Americas Inc				Job #: Loc: 560 44352
Address: 1801 California Street Suite 2900	Due Date Requested:			
City: Denver	TAT Requested (days): STANDARD			
State, Zip: CO, 80202				
Phone: 713-420-3414(Tel)	PO #: Purchase Order not required			
Email: christopher.c.lee@mwhglobal.com Daniel.A.Wade@us.mwhglobal.com	WO #: TWO # C-STLI-			
Project Name: San Juan River Basin Pit Sites	Project #: 56000058			
Site: Fogelson 4-1 Com #14	SSOW#:			

Analysis Requested

Preservation Codes: A - HCL; B - NaOH; C - Zn Acet.; 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	12/13/13	1445	G	Water			X		
MW-2	12/13/13	1440	G	Water			X		
MW-3	12/13/13	1435	G	Water			X		
				Water					
				Water					
				Water					
				Water					
Trip Blank				Water					

560-44352 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
	Relinquished by:	12/16/13 0900			12-17-13 10:40	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: 1.9/2.1 IR/Seal

Page 11 of 12

12/30/2013

Login Sample Receipt Checklist

Client: MWH Americas Inc

Job Number: 560-44352-1
SDG Number: December 2013

Login Number: 44352
List Number: 1
Creator: Rood, Vivian R

List Source: TestAmerica Corpus Christi

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