2015 ANNUAL GROUNDWATER REPORT

Fogelson 4-1
NMOCD Case#: 3RP-068-0
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)

Environmental Remediation activities at the Fogelson 4-1 (Site) are 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 product has been observed and periodically removed. Currently groundwater sampling is conducted on a semi-annual basis and free product was observed in MW-1 in 2015.

SUMMARY OF 2015 ACTIVITIES

On May 30 and November 18, 2015, water levels were gauged at MW-1, MW-2, and MW-3. Groundwater samples were collected from each well that did not contain free product 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 TestAmerica Laboratories, Inc. in Pensacola, Florida where they were analyzed for benzene, toluene, ethylbenzene, and total xylenes (BTEX). Additional field parameters are collected from the excess sample water recovered by the HydraSleeve. Excess sample water is poured into a YSI multi-parameter instrument sample cup and analyzed. Field parameters include dissolved oxygen, temperature, conductivity, pH, and oxidation-reduction potential. Field parameters are not collected if free product is present. The unused sample water is combined in a waste container and taken to Basin Disposal, Inc. for disposal.

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SUMMARY TABLES

Historic analytical and water level data are summarized in Table 1 and Table 2, respectively. When free product was present, static water level elevations were corrected for measurable thicknesses of free product (specific gravity of 0.75).

SITE MAPS

Groundwater analytical maps (Figures 1 and 3) and groundwater elevation contour maps (Figures 2 and 4) summarize results of the 2015 groundwater sampling and gauging events.

ANALYTICAL LAB REPORTS

The groundwater analytical lab reports are included as Appendix A.

GROUNDWATER RESULTS

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

- A trace amount of free product was observed in MW-1 in the November 2015 sampling event. No sample was collected.

- The groundwater sample collected in 2015 from MW-1 exceeded the New Mexico Water Quality Control Commission (NMWQCC) standard (10 micrograms per liter [µg/L]) for benzene in groundwater. Concentrations of benzene in monitoring wells MW-2 and MW-3 were not detected.

- All site monitoring wells that were sampled in 2015 were either below the NMWQCC standard for toluene in groundwater or not detected.

- The groundwater sample collected in 2015 from MW-1, exceeded the NMWQCC standard (750 µg/L) for ethylbenzene in groundwater. Concentrations of ethylbenzene in monitoring wells MW-2 and MW-3 were not detected

- The groundwater sample collected in 2015 from MW-1 exceeded the NMWQCC standard (600 µg/L) for total xylenes in groundwater. Concentrations of total xylenes in monitoring wells MW-2 and MW-3 were not detected.

PLANNED FUTURE ACTIVITIES

Future installation of additional monitoring wells is planned at the Site. 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. Groundwater monitoring events will be conducted on a semi-annual basis. The 2016 Annual Report will be submitted in early 2017.

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TABLE

TABLE 1 - GROUNDWATER ANALYTICAL RESULTS

Fogelson 4-1					
Location	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
NMWQCC Standards:		10	750	750	620
MW-1	11/06/95	1520	1050	907	9180
MW-1	12/06/96	1110	388	713	7730
MW-1	03/10/97	1240	318	850	9050
MW-1	06/06/97	1080	268	747	7700
MW-1	03/30/98	1070	522	789	8430
MW-1	06/04/98	1090	627	837	8880
MW-1	06/15/99	1000	550	770	7800
MW-1	06/19/00	790	280	1100	9300
MW-1	10/02/00	580	600	950	8000
MW-1	12/05/00	420	610	770	6000
MW-1	05/30/01	340	470	710	4800
MW-1	11/26/01	420	330	760	3400
MW-1	05/15/02	430	230	900	6000
MW-1	06/10/02	NS	NS	NS	NS
MW-1	11/04/02	625	370	862	5210
MW-1	05/21/03	339	296	723	4730
MW-1	11/15/03	401	308	755	4700
MW-1	11/16/04	185	59.9	550	2800
MW-1	11/08/05	174	34.3	675	2440
MW-1	11/08/06	206	41.6	694	2460
MW-1	11/29/07	NS	NS	NS	NS
MW-1	01/25/08	NS	NS	NS	NS
MW-1	08/12/08	NS	NS	NS	NS
MW-1	11/07/08	NS	NS	NS	NS
MW-1	02/06/09	NS	NS	NS	NS
MW-1	05/04/09	NS	NS	NS	NS
MW-1	08/26/09	NS	NS	NS	NS
MW-1	11/03/09	230	24.2 J	901	3290
MW-1	02/11/10	NS	NS	NS	NS
MW-1	05/25/10	NS	NS	NS	NS
MW-1	09/24/10	NS	NS	NS	NS
MW-1	11/09/10	198	23.5	840	3170
MW-1	02/01/11	NS	NS	NS	NS
MW-1	05/03/11	NS	NS	NS	NS
MW-1	09/27/11	NS	NS	NS	NS
MW-1	11/16/11	171	3.8 J	818	2770
MW-1	02/16/12	NS	NS	NS	NS
MW-1	05/07/12	NS	NS	NS	NS
MW-1	06/04/13	20	9.3 J	650	2400
MW-1	09/09/13	160	20	760	3200
MW-1	12/13/13	150	41	630	2700
MW-1	04/05/14	4.3	<0.38	20	76
MW-1	10/21/14	200	11	770	3600
MW-1	05/30/15	160	38	810	3700
MW-1	11/18/15	NS	NS	NS	NS

TABLE 1 - GROUNDWATER ANALYTICAL RESULTS

Fogelson 4-1					
Location	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
NMWQCC Standards:		10	750	750	620
MW-2	07/27/00	<0.5	<0.5	8.8	<0.5
MW-2	05/30/01	<0.5	<0.5	7.5	1
MW-2	05/15/02	<0.5	<0.5	2	<1
MW-2	11/04/02	NS	NS	NS	NS
MW-2	05/21/03	NS	NS	NS	NS
MW-2	11/15/03	NS	NS	NS	NS
MW-2	11/16/04	NS	NS	NS	NS
MW-2	11/08/05	NS	NS	NS	NS
MW-2	11/08/06	NS	NS	NS	NS
MW-2	11/29/07	NS	NS	NS	NS
MW-2	08/12/08	NS	NS	NS	NS
MW-2	11/07/08	NS	NS	NS	NS
MW-2	02/06/09	NS	NS	NS	NS
MW-2	05/04/09	NS	NS	NS	NS
MW-2	08/26/09	NS	NS	NS	NS
MW-2	11/03/09	NS	NS	NS	NS
MW-2	02/11/10	NS	NS	NS	NS
MW-2	05/25/10	NS	NS	NS	NS
MW-2	09/24/10	NS	NS	NS	NS
MW-2	11/09/10	<2	<2	<2	<6
MW-2	02/01/11	NS	NS	NS	NS
MW-2	05/03/11	NS	NS	NS	NS
MW-2	09/27/11	NS	NS	NS	NS
MW-2	11/16/11	<1	<1	<1	<3
MW-2	02/16/12	NS	NS	NS	NS
MW-2	05/07/12	NS	NS	NS	NS
MW-2	06/04/13	<0.14	<0.30	<0.20	<0.23
MW-2	09/09/13	<0.14	<0.30	<0.20	<0.23
MW-2	12/13/13	<0.20	0.52 J	0.38 J	0.85 J
MW-2	04/05/14	<0.20	<0.38	<0.20	<0.65
MW-2	10/21/14	<0.38	<0.70	<0.50	<1.6
MW-2	05/30/15	<1.0	<5.0	<1.0	<5.0
MW-2	11/18/15	<1.0	<1.0	<1.0	<3.0

TABLE 1 - GROUNDWATER ANALYTICAL RESULTS

Fogelson 4-1					
Location	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
NMWQCC Standards:		10	750	750	620
MW-3	07/27/00	27	35	170	520
MW-3	05/30/01	1.3	<0.5	40	2.8
MW-3	05/15/02	0.64	<0.5	17	1.2
MW-3	11/04/02	NS	NS	NS	NS
MW-3	05/21/03	<1	<1	18.2	<3
MW-3	11/15/03	NS	NS	NS	NS
MW-3	11/16/04	NS	NS	NS	NS
MW-3	11/08/05	NS	NS	NS	NS
MW-3	11/08/06	NS	NS	NS	NS
MW-3	11/29/07	NS	NS	NS	NS
MW-3	08/12/08	NS	NS	NS	NS
MW-3	11/07/08	NS	NS	NS	NS
MW-3	02/06/09	NS	NS	NS	NS
MW-3	05/04/09	NS	NS	NS	NS
MW-3	08/26/09	NS	NS	NS	NS
MW-3	11/03/09	NS	NS	NS	NS
MW-3	02/11/10	NS	NS	NS	NS
MW-3	05/25/10	NS	NS	NS	NS
MW-3	09/24/10	NS	NS	NS	NS
MW-3	11/09/10	<2	<2	1.9 J	<6
MW-3	02/01/11	NS	NS	NS	NS
MW-3	05/03/11	NS	NS	NS	NS
MW-3	09/27/11	NS	NS	NS	NS
MW-3	11/16/11	<1	<1	0.77 J	<3
MW-3	02/16/12	NS	NS	NS	NS
MW-3	05/07/12	NS	NS	NS	NS
MW-3	06/04/13	<0.14	<0.30	<0.20	<0.23
MW-3	09/09/13	<0.14	<0.30	<0.20	<0.23
MW-3	12/13/13	<0.20	0.56 J	<0.20	<0.65
MW-3	04/05/14	<0.20	<0.38	<0.20	<0.65
MW-3	10/21/14	<0.38	<0.70	0.96 J	<1.6
MW-3	05/30/15	<1.0	<5.0	<1.0	<5.0
MW-3	11/18/15	<1.0	<1.0	<1.0	<3.0

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

TABLE-2 GROUNDWATER ELEVATION RESULTS

Fogelson 4-1						
Location	Date	TOC	Depth to Water (ft.)	Depth to LNAPL (ft.)	LNAPL Thickness (ft.)	GW Elevation (ft.)
MW-1	11/06/95	5784.77	39.99	NR		5744.78
MW-1	12/06/96	5784.77	40.74	NR		5744.03
MW-1	03/10/97	5784.77	41.23	NR		5743.54
MW-1	06/06/97	5784.77	41.44	NR		5743.33
MW-1	03/30/98	5784.77	41.08	NR		5743.69
MW-1	06/04/98	5784.77	41.02	NR		5743.75
MW-1	06/15/99	5784.77	41.88	NR		5742.89
MW-1	06/19/00	5784.77	40.17	NR		5744.60
MW-1	10/02/00	5784.77	40.22	NR		5744.55
MW-1	12/05/00	5784.77	40.09	NR		5744.68
MW-1	05/30/01	5784.77	40.54	NR		5744.23
MW-1	11/26/01	5784.77	41.00	NR		5743.77
MW-1	05/15/02	5784.77	41.37	NR		5743.40
MW-1	06/10/02	5784.77	41.54	NR		5743.23
MW-1	11/04/02	5784.77	41.90	NR		5742.88
MW-1	05/21/03	5784.77	41.57	ND		5743.20
MW-1	11/15/03	5784.77	41.00	ND		5743.77
MW-1	11/16/04	5784.77	40.10	ND		5744.67
MW-1	11/08/05	5784.77	40.68	ND		5744.09
MW-1	11/08/06	5784.77	42.16	ND		5742.61
MW-1	11/29/07	5784.77	42.16	ND		5742.61
MW-1	01/25/08	5784.77	43.10	43.00	0.10	5741.75
MW-1	08/12/08	5784.77	43.14	ND		5741.63
MW-1	11/07/08	5784.77	43.32	43.24	0.08	5741.51
MW-1	02/06/09	5784.77	43.12	ND		5741.65
MW-1	05/04/09	5784.77	43.22	ND		5741.55
MW-1	08/26/09	5784.77	43.53	43.46	0.07	5741.29
MW-1	11/03/09	5784.77	43.52	ND		5741.25
MW-1	02/11/10	5784.77	43.64	ND		5741.13
MW-1	05/25/10	5784.77	43.75	ND		5741.02
MW-1	09/24/10	5784.77	43.95	ND		5740.82
MW-1	11/09/10	5784.77	43.89	43.88	0.01	5740.89
MW-1	02/01/11	5784.77	44.03	ND		5740.74
MW-1	05/03/11	5784.77	44.14	ND		5740.63
MW-1	09/27/11	5784.77	44.30	ND		5740.47
MW-1	11/16/11	5784.77	44.33	ND		5740.44
MW-1	02/16/12	5784.77	44.43	ND		5740.34
MW-1	05/07/12	5784.77	44.50	ND		5740.27
MW-1	06/04/13	5784.77	44.75	ND		5740.02
MW-1	09/09/13	5784.77	44.87	ND		5739.90
MW-1	12/13/13	5784.77	44.85	ND		5739.92
MW-1	04/05/14	5784.77	44.75	ND		5740.02
MW-1	10/21/14	5784.77	44.86	ND		5739.91
MW-1	05/30/15	5784.77	44.81	ND		5739.96
MW-1	11/18/15	5784.77	44.91	44.91	0.00	5739.86

TABLE-2 GROUNDWATER ELEVATION RESULTS

Fogelson 4-1						
Location	Date	TOC	Depth to Water (ft.)	Depth to LNAPL (ft.)	LNAPL Thickness (ft.)	GW Elevation (ft.)
MW-2	07/27/00	5780.03	38.25	NR		5741.78
MW-2	05/30/01	5780.03	38.17	NR		5741.86
MW-2	05/15/02	5780.03	38.56	NR		5741.47
MW-2	11/04/02	5780.03	38.99	NR		5741.05
MW-2	05/21/03	5780.03	39.24	ND		5740.79
MW-2	11/15/03	5780.03	38.70	ND		5741.34
MW-2	11/16/04	5780.03	37.40	ND		5742.63
MW-2	11/08/05	5780.03	37.76	ND		5742.27
MW-2	11/08/06	5780.03	38.65	ND		5741.38
MW-2	11/29/07	5780.03	39.67	ND		5740.36
MW-2	08/12/08	5780.03	39.75	ND		5740.28
MW-2	11/07/08	5780.03	39.97	ND		5740.06
MW-2	02/06/09	5780.03	39.73	ND		5740.30
MW-2	05/04/09	5780.03	39.83	ND		5740.20
MW-2	08/26/09	5780.03	40.19	ND		5739.84
MW-2	11/03/09	5780.03	40.32	ND		5739.71
MW-2	02/11/10	5780.03	40.17	ND		5739.86
MW-2	05/25/10	5780.03	40.40	ND		5739.63
MW-2	09/24/10	5780.03	40.74	ND		5739.29
MW-2	11/09/10	5780.03	40.35	ND		5739.68
MW-2	02/01/11	5780.03	40.39	ND		5739.64
MW-2	05/03/11	5780.03	40.96	ND		5739.07
MW-2	09/27/11	5780.03	41.05	ND		5738.98
MW-2	11/16/11	5780.03	41.07	ND		5738.96
MW-2	02/16/12	5780.03	41.15	ND		5738.88
MW-2	05/07/12	5780.03	41.15	ND		5738.88
MW-2	06/04/13	5780.03	41.54	ND		5738.49
MW-2	09/09/13	5780.03	41.64	ND		5738.39
MW-2	12/13/13	5780.03	41.66	ND		5738.37
MW-2	04/05/14	5780.03	41.64	ND		5738.39
MW-2	10/21/14	5780.03	41.93	ND		5738.10
MW-2	05/30/15	5780.03	42.10	ND		5737.93
MW-2	11/18/15	5780.03	42.03	ND		5738.00

TABLE-2 GROUNDWATER ELEVATION RESULTS

Fogelson 4-1						
Location	Date	TOC	Depth to Water (ft.)	Depth to LNAPL (ft.)	LNAPL Thickness (ft.)	GW Elevation (ft.)
MW-3	07/27/00	5780.83	41.21	NR		5739.62
MW-3	05/30/01	5780.83	40.77	NR		5740.06
MW-3	05/15/02	5780.83	41.14	NR		5739.69
MW-3	11/04/02	5780.83	41.48	NR		5739.35
MW-3	05/21/03	5780.83	41.71	ND		5739.12
MW-3	11/15/03	5780.83	41.30	ND		5739.53
MW-3	11/16/04	5780.83	40.10	ND		5740.73
MW-3	11/08/05	5780.83	40.71	ND		5740.12
MW-3	11/08/06	5780.83	41.47	ND		5739.36
MW-3	11/29/07	5780.83	43.10	43.01	0.09	5737.80
MW-3	08/12/08	5780.83	42.47	ND		5738.36
MW-3	11/07/08	5780.83	42.69	ND		5738.14
MW-3	02/06/09	5780.83	42.47	ND		5738.36
MW-3	05/04/09	5780.83	42.50	ND		5738.33
MW-3	08/26/09	5780.83	42.90	ND		5737.93
MW-3	11/03/09	5780.83	43.03	ND		5737.80
MW-3	02/11/10	5780.83	42.79	ND		5738.04
MW-3	05/25/10	5780.83	42.97	ND		5737.86
MW-3	09/24/10	5780.83	43.25	ND		5737.58
MW-3	11/09/10	5780.83	42.97	ND		5737.86
MW-3	02/01/11	5780.83	42.82	ND		5738.01
MW-3	05/03/11	5780.83	43.41	ND		5737.42
MW-3	09/27/11	5780.83	43.40	ND		5737.43
MW-3	11/16/11	5780.83	43.36	ND		5737.47
MW-3	02/16/12	5780.83	43.41	ND		5737.42
MW-3	05/07/12	5780.83	43.46	ND		5737.37
MW-3	06/04/13	5780.83	43.82	ND		5737.01
MW-3	09/09/13	5780.83	43.93	ND		5736.90
MW-3	12/13/13	5780.83	43.93	ND		5736.90
MW-3	04/05/14	5780.83	43.88	ND		5736.95
MW-3	10/21/14	5780.83	44.16	ND		5736.67
MW-3	05/30/15	5780.83	44.31	ND		5736.52
MW-3	11/18/15	5780.83	44.18	ND		5736.65

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

FIGURES

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\FOGELSON 4-1 COM #14\2015 MAPS\Fogelson_GARM_1SA_2015.mxd

ENTERPRISE LINE

ENTERPRISE LINE

METER HOUSE

CONOCO PHILIPS LINE

FORMER TANKS

FORMER SEPARATOR

MW-1
B: **160**
T: 38
E: **810**
X: **3700**

MW-1

MW-3

MW-3
B: <1.0
T: <5.0
E: <1.0
X: <5.0

FORMER EPC PIT

UNKNOWN LINE ABANDONED IN GROUND

FORMER SEPARATOR

FORMER TANK

FORMER TANK

DAMAGED MW

FORMER PROPANE TANK

MW-2

MW-2
B: <1.0
T: <5.0
E: <1.0
X: <5.0

SMA BENCHMARK

FORMER PUMP JACK

5795

5795

5795

5795

5795

LEGEND:

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

EXPLANATION OF ANALYTES AND APPLICABLE STANDARDS:

RESULTS IN **BOLDFACE** TYPE INDICATE CONCENTRATION IN EXCESS OF THE STANDARD FOR THAT ANALYTE.
µg/L = MICROGRAMS PER LITER
<1 = BELOW METHOD DETECTION LIMIT

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

N

SCALE IN FEET

0 40 80

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
A	2/10/2016	CCL	CCL	SRV

TITLE:

GROUNDWATER ANALYTICAL RESULTS
MAY 30, 2015

PROJECT:

FOGELSON 4-1
SAN JUAN RIVER BASIN
SAN JUAN COUNTY, NEW MEXICO

MWH

Figure No.: 1

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\FOGELSON 4-1 COM #14\2015 MAPS\Fogelson_GECM_1SA_2015.mxd

ENTERPRISE LINE

ENTERPRISE LINE

CONOCO PHILIPS LINE

METER HOUSE

MW-1
5739.96
MW-1

MW-3
5736.52
MW-3

FORMER PIT

FORMER TANKS

FORMER SEPARATOR

FORMER SEPARATOR

FORMER TANK

FORMER TANK

DAMAGED MW

FORMER PROPANE TANK

FORMER PUMP JACK

SMA BENCHMARK

MW-2
5737.93
MW-2

5737

5738

5739

5740

5705

5710

5705

5705

LEGEND:

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

NOTES:

5739.96 GROUNDWATER ELEVATION. (FEET ABOVE MEAN SEA LEVEL)

5739.5 WATER LEVEL ELEVATION CONTOUR DASHED WHERE INFERRED (FEET ABOVE MEAN SEA LEVEL, 0.5 FOOT CONTOUR INTERVAL)

DIRECTION OF APPARENT GROUNDWATER FLOW

N

SCALE IN FEET

0 40 80

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
A	2/10/2016	CCL	CCL	SRV

TITLE:

GROUNDWATER ELEVATION MAP
MAY 30, 2015

PROJECT:

FOGELSON 4-1
SAN JUAN RIVER BASIN
SAN JUAN COUNTY, NEW MEXICO

MWH

Figure No.: **2**

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\FOGELSON 4-1 COM #14\2015 MAPS\Fogelson_GARM_2SA_2015.mxd

ENTERPRISE LINE

ENTERPRISE LINE

CONOCO PHILIPS LINE

METER HOUSE

MW-1
NS
MW-1

MW-3
MW-3
B: <1.0
T: <1.0
E: <1.0
X: <3.0

FORMER PIT

UNKNOWN LINE ABANDONED IN GROUND

DAMAGED MW

MW-2
MW-2
B: <1.0
T: <1.0
E: <1.0
X: <3.0

SMA BENCHMARK

FORMER PROPANE TANK

FORMER PUMP JACK

FORMER TANKS

FORMER SEPARATOR

FORMER SEPARATOR

FORMER TANK

FORMER TANK

5795

5790

5785

5780

LEGEND:

- 5795 — APPROX. GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- FORMER EPC PIT
- GAS — GAS LINE
- UNDERGROUND CABLE
- DAMAGED MONITORING WELL
- MONITORING WELL
- MONITORING WELL WITH MEASUREABLE FREE PRODUCT
- GAS VALVE
- RIG ANCHOR
- SMA BENCHMARK

EXPLANATION OF ANALYTES AND APPLICABLE STANDARDS:

RESULTS IN **BOLDFACE** TYPE INDICATE CONCENTRATION IN EXCESS OF THE STANDARD FOR THAT ANALYTE.
NS = NOT SAMPLED
µg/L = MICROGRAMS PER LITER
<1 = BELOW METHOD DETECTION LIMIT

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

N

SCALE IN FEET
0 40 80

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
	2/10/2016	CCL	CCL	SRV

TITLE:

GROUNDWATER ANALYTICAL RESULTS
NOVEMBER 18, 2015

PROJECT:

FOGELSON 4-1
SAN JUAN RIVER BASIN
SAN JUAN COUNTY, NEW MEXICO

MWH

Figure No.:
3

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\FOGELSON 4-1 COM #14\2015 MAPS\Fogelson_GECM_2SA_2015.mxd

ENTERPRISE LINE

ENTERPRISE LINE

CONOCO PHILIPS LINE

METER HOUSE

FORMER TANKS

FORMER SEPARATOR

5738.6

5739.6

5737.6

MW-1
5739.86
MW-1

MW-3
MW-3
5736.65

FORMER PIT

FORMER SEPARATOR

FORMER TANK

FORMER TANK

DAMAGED MW

FORMER PROPANE TANK

MW-2
MW-2
5738.00

SMA BENCHMARK

FORMER PUMP JACK

5705

5710

5705

5705

5710

5705

LEGEND:

- 5795 — APPROX. GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- FORMER EPC PIT
- GAS — GAS LINE
- UNDERGROUND CABLE
- DAMAGED MONITORING WELL
- MONITORING WELL
- MONITORING WELL WITH MEASUREABLE FREE PRODUCT
- GAS VALVE
- RIG ANCHOR
- SMA BENCHMARK

NOTES:

5739.86 — GROUNDWATER ELEVATION CORRECTED FOR PRODUCT THICKNESS. FEET ABOVE MEAN SEA LEVEL

5739.6 — CORRECTED WATER LEVEL ELEVATION CONTOUR DASHED WHERE INFERRED (FEET ABOVE MEAN SEA LEVEL, 1 FOOT CONTOUR INTERVAL)

DIRECTION OF APPARENT GROUNDWATER FLOW

N

SCALE IN FEET

0 40 80

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
	2/10/2016	CCL	CCL	SRV

TITLE:

GROUNDWATER ELEVATION MAP
NOVEMBER 18, 2015

PROJECT:

FOGELSON 4-1
SAN JUAN RIVER BASIN
SAN JUAN COUNTY, NEW MEXICO

MWH

Figure No.: 4

APPENDIX A

JUNE 15, 2015 GROUNDWATER SAMPLING ANALYTICAL REPORT
DECEMBER 14, 2015 GROUNDWATER SAMPLING ANALYTICAL REPORT

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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

TestAmerica Job ID: 400-106463-1
Client Project/Site: NM-GW Pits, Fogelson 4-1 COM#14

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

Attn: Ms. Sarah Gardner

Authorized for release by:
6/16/2015 4:55:30 PM

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

Table of Contents

Client: MWH Americas Inc
Project/Site: NM-GW Pits, Fogelson 4-1 COM#14

TestAmerica Job ID: 400-106463-1

Glossary

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

Job ID: 400-106463-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-106463-1

Comments
No additional comments.

Receipt
The samples were received on 6/2/2015 9:37 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.6º C.

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

Detection Summary

Client: MWH Americas Inc
Project/Site: NM-GW Pits, Fogelson 4-1 COM#14

TestAmerica Job ID: 400-106463-1

Client Sample ID: FOGELSON 4-1 COM #14 MW-1 — Lab Sample ID: 400-106463-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	160		5.0	2.8	ug/L	5		8021B	Total/NA
Ethylbenzene	810		5.0	3.2	ug/L	5		8021B	Total/NA
Toluene	38		25	4.9	ug/L	5		8021B	Total/NA
Xylenes, Total	3700		25	8.5	ug/L	5		8021B	Total/NA

Client Sample ID: FOGELSON 4-1 COM #14 MW-2 — Lab Sample ID: 400-106463-2

No Detections.

Client Sample ID: FOGELSON 4-1 COM #14 MW-3 — Lab Sample ID: 400-106463-3

No Detections.

Client Sample ID: FOGELSON 4-1 COM #14 TRIP BLANK — Lab Sample ID: 400-106463-4

No Detections.

This Detection Summary does not include radiochemical test results.

Sample Summary

Client: MWH Americas Inc
Project/Site: NM-GW Pits, Fogelson 4-1 COM#14

TestAmerica Job ID: 400-106463-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-106463-1	FOGELSON 4-1 COM #14 MW-1	Water	05/30/15 13:20	06/02/15 09:37
400-106463-2	FOGELSON 4-1 COM #14 MW-2	Water	05/30/15 13:30	06/02/15 09:37
400-106463-3	FOGELSON 4-1 COM #14 MW-3	Water	05/30/15 13:35	06/02/15 09:37
400-106463-4	FOGELSON 4-1 COM #14 TRIP BLANK	Water	05/30/15 13:15	06/02/15 09:37

Client: MWH Americas Inc
Project/Site: NM-GW Pits, Fogelson 4-1 COM#14

TestAmerica Job ID: 400-106463-1

Client Sample ID: FOGELSON 4-1 COM #14 MW-1
Date Collected: 05/30/15 13:20
Date Received: 06/02/15 09:37

Lab Sample ID: 400-106463-1
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	160		5.0	2.8	ug/L			06/06/15 23:26	5
Ethylbenzene	810		5.0	3.2	ug/L			06/06/15 23:26	5
Toluene	38		25	4.9	ug/L			06/06/15 23:26	5
Xylenes, Total	3700		25	8.5	ug/L			06/06/15 23:26	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*80*		*78 - 124*		*06/06/15 23:26*	*5*

Client: MWH Americas Inc
Project/Site: NM-GW Pits, Fogelson 4-1 COM#14

TestAmerica Job ID: 400-106463-1

Client Sample ID: FOGELSON 4-1 COM #14 MW-2
Date Collected: 05/30/15 13:30
Date Received: 06/02/15 09:37

Lab Sample ID: 400-106463-2
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0	0.56	ug/L			06/06/15 08:42	1
Ethylbenzene	<1.0		1.0	0.64	ug/L			06/06/15 08:42	1
Toluene	<5.0		5.0	0.98	ug/L			06/06/15 08:42	1
Xylenes, Total	<5.0		5.0	1.7	ug/L			06/06/15 08:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*90*		*78 - 124*		*06/06/15 08:42*	*1*

Client: MWH Americas Inc
Project/Site: NM-GW Pits, Fogelson 4-1 COM#14

TestAmerica Job ID: 400-106463-1

Client Sample ID: FOGELSON 4-1 COM #14 MW-3
Date Collected: 05/30/15 13:35
Date Received: 06/02/15 09:37

Lab Sample ID: 400-106463-3
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0	0.56	ug/L			06/06/15 09:14	1
Ethylbenzene	<1.0		1.0	0.64	ug/L			06/06/15 09:14	1
Toluene	<5.0		5.0	0.98	ug/L			06/06/15 09:14	1
Xylenes, Total	<5.0		5.0	1.7	ug/L			06/06/15 09:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*96*		*78 - 124*		*06/06/15 09:14*	*1*

Client: MWH Americas Inc
Project/Site: NM-GW Pits, Fogelson 4-1 COM#14

TestAmerica Job ID: 400-106463-1

Client Sample ID: FOGELSON 4-1 COM #14 TRIP BLANK
Lab Sample ID: 400-106463-4
Date Collected: 05/30/15 13:15
Matrix: Water
Date Received: 06/02/15 09:37

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0	0.56	ug/L			06/06/15 07:39	1
Ethylbenzene	<1.0		1.0	0.64	ug/L			06/06/15 07:39	1
Toluene	<5.0		5.0	0.98	ug/L			06/06/15 07:39	1
Xylenes, Total	<5.0		5.0	1.7	ug/L			06/06/15 07:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*99*		*78 - 124*		*06/06/15 07:39*	*1*

QC Association Summary

Client: MWH Americas Inc
Project/Site: NM-GW Pits, Fogelson 4-1 COM#14

TestAmerica Job ID: 400-106463-1

GC VOA

Analysis Batch: 260177

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-106334-A-14 MS	Matrix Spike	Total/NA	Water	8021B	
400-106334-A-14 MSD	Matrix Spike Duplicate	Total/NA	Water	8021B	
400-106463-2	FOGELSON 4-1 COM #14 MW-2	Total/NA	Water	8021B	
400-106463-3	FOGELSON 4-1 COM #14 MW-3	Total/NA	Water	8021B	
400-106463-4	FOGELSON 4-1 COM #14 TRIP BLANK	Total/NA	Water	8021B	
LCS 400-260177/1001	Lab Control Sample	Total/NA	Water	8021B	
MB 400-260177/2	Method Blank	Total/NA	Water	8021B	

Analysis Batch: 260178

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-106463-1	FOGELSON 4-1 COM #14 MW-1	Total/NA	Water	8021B	
400-106465-A-1 MS	Matrix Spike	Total/NA	Water	8021B	
400-106465-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8021B	
LCS 400-260178/1034	Lab Control Sample	Total/NA	Water	8021B	
MB 400-260178/35	Method Blank	Total/NA	Water	8021B	

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 400-260177/2
Matrix: Water
Analysis Batch: 260177

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0	0.56	ug/L			06/05/15 19:32	1
Ethylbenzene	<1.0		1.0	0.64	ug/L			06/05/15 19:32	1
Toluene	<5.0		5.0	0.98	ug/L			06/05/15 19:32	1
Xylenes, Total	<5.0		5.0	1.7	ug/L			06/05/15 19:32	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*99*		*78 - 124*		*06/05/15 19:32*	*1*

Lab Sample ID: LCS 400-260177/1001
Matrix: Water
Analysis Batch: 260177

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	51.5		ug/L		103	85 - 115		
Ethylbenzene			50.0	51.7		ug/L		103	85 - 115		
Toluene			50.0	51.3		ug/L		103	85 - 115		
Xylenes, Total			150	152		ug/L		101	85 - 115		

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

Lab Sample ID: 400-106334-A-14 MS
Matrix: Water
Analysis Batch: 260177

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	11.5		50.0	69.9		ug/L		117	44 - 150		
Ethylbenzene	2.78		50.0	61.6		ug/L		118	70 - 142		
Toluene	7.16		50.0	65.7		ug/L		117	69 - 136		
Xylenes, Total	15.8		150	190		ug/L		116	68 - 142		

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

Lab Sample ID: 400-106334-A-14 MSD
Matrix: Water
Analysis Batch: 260177

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	11.5		50.0	69.2		ug/L		115	44 - 150	1	16
Ethylbenzene	2.78		50.0	61.0		ug/L		116	70 - 142	1	16
Toluene	7.16		50.0	64.8		ug/L		115	69 - 136	1	16
Xylenes, Total	15.8		150	188		ug/L		115	68 - 142	1	15

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

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

Lab Sample ID: MB 400-260178/35
Matrix: Water
Analysis Batch: 260178

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0	0.56	ug/L			06/06/15 12:55	1
Ethylbenzene	<1.0		1.0	0.64	ug/L			06/06/15 12:55	1
Toluene	<5.0		5.0	0.98	ug/L			06/06/15 12:55	1
Xylenes, Total	<5.0		5.0	1.7	ug/L			06/06/15 12:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*99*		*78 - 124*		*06/06/15 12:55*	*1*

Lab Sample ID: LCS 400-260178/1034
Matrix: Water
Analysis Batch: 260178

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	53.2		ug/L		106	85 - 115		
Ethylbenzene			50.0	53.2		ug/L		106	85 - 115		
Toluene			50.0	52.8		ug/L		106	85 - 115		
Xylenes, Total			150	156		ug/L		104	85 - 115		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
a,a,a-Trifluorotoluene (pid)	*98*		*78 - 124*

Lab Sample ID: 400-106465-A-1 MS
Matrix: Water
Analysis Batch: 260178

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	<1.0		50.0	59.1		ug/L		118	44 - 150		
Ethylbenzene	<1.0		50.0	59.7		ug/L		119	70 - 142		
Toluene	<5.0		50.0	59.0		ug/L		118	69 - 136		
Xylenes, Total	<5.0		150	176		ug/L		117	68 - 142		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
a,a,a-Trifluorotoluene (pid)	*98*		*78 - 124*

Lab Sample ID: 400-106465-A-1 MSD
Matrix: Water
Analysis Batch: 260178

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<1.0		50.0	59.0		ug/L		118	44 - 150	0	16
Ethylbenzene	<1.0		50.0	60.4		ug/L		121	70 - 142	1	16
Toluene	<5.0		50.0	59.5		ug/L		119	69 - 136	1	16
Xylenes, Total	<5.0		150	178		ug/L		119	68 - 142	1	15

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
a,a,a-Trifluorotoluene (pid)	*98*		*78 - 124*

Lab Chronicle

Client: MWH Americas Inc
Project/Site: NM-GW Pits, Fogelson 4-1 COM#14

TestAmerica Job ID: 400-106463-1

Client Sample ID: FOGELSON 4-1 COM #14 MW-1
Lab Sample ID: 400-106463-1
Date Collected: 05/30/15 13:20
Matrix: Water
Date Received: 06/02/15 09:37

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		5	5 mL	5 mL	260178	06/06/15 23:26	MKA	TAL PEN
	Instrument ID: CH_PAULA									

Client Sample ID: FOGELSON 4-1 COM #14 MW-2
Lab Sample ID: 400-106463-2
Date Collected: 05/30/15 13:30
Matrix: Water
Date Received: 06/02/15 09:37

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	260177	06/06/15 08:42	MKA	TAL PEN
	Instrument ID: CH_PAULA									

Client Sample ID: FOGELSON 4-1 COM #14 MW-3
Lab Sample ID: 400-106463-3
Date Collected: 05/30/15 13:35
Matrix: Water
Date Received: 06/02/15 09:37

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	260177	06/06/15 09:14	MKA	TAL PEN
	Instrument ID: CH_PAULA									

Client Sample ID: FOGELSON 4-1 COM #14 TRIP BLANK
Lab Sample ID: 400-106463-4
Date Collected: 05/30/15 13:15
Matrix: Water
Date Received: 06/02/15 09:37

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	260177	06/06/15 07:39	MKA	TAL PEN
	Instrument ID: CH_PAULA									

Laboratory References:

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

Certification Summary

Client: MWH Americas Inc
Project/Site: NM-GW Pits, Fogelson 4-1 COM#14

TestAmerica Job ID: 400-106463-1

Laboratory: TestAmerica Pensacola

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

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

* Certification renewal pending - certification considered valid.

Method Summary

Client: MWH Americas Inc
Project/Site: NM-GW Pits, Fogelson 4-1 COM#14

TestAmerica Job ID: 400-106463-1

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

Protocol References:

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

Laboratory References:

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

400-106463

SERIAL NUMBER: 80201

400-106463 COC

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

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

QUOTE NO.

BOTTLE ORDER NO.

ORDER - LOG-IN NO.: C

CLIENT: MWH

ADDRESS: 1560 Broadway Suite 1800 Denver CO 80202

PAGE: 1 OF 1

PROJECT NAME: NM-pitsites Fogelson 4-1 Com #14

PROJECT NO.: 40005479

CLIENT PROJECT MANAGER: Steve Varsa

PROJECT LOC. (STATE): NM

SAMPLED BY: Sarah Gardner/Chris Lee

CONTRACT / P.O. NO.

CLIENT PHONE: 303 291 2239

CLIENT E-MAIL OR FAX: sarah.gardner@mwhglobal.com

TAT REQUESTED: RUSH NEEDS LAB PREAPPROVAL ☐ NORMAL ☑ 10 BUSINESS DAYS

☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ 5 DAYS ☐ 20 DAYS (Package) ☐ OTHER:

SAMPLE DISPOSAL: ☐ RETURN TO CLIENT ☑ DISPOSAL BY LAB

☐ SEE CONTRACT ☐ OTHER:

REQUESTED ANALYSIS

POSSIBLE HAZARD IDENTIFICATION

☒ NON-HAZARD
△ FLAMMABLE
△ RADIOACTIVE
△ POISON B
△ UNKNOWN
△ OTHER:

NO. OF COOLERS PER SHIPMENT:

LAB USE ONLY - SAMPLE NUMBER

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION		PRESERVATIVE: No Preservative	HCL - Hydrochloric Acid	HNO3 - Nitric Acid	H2SO4 - Sulfuric Acid or H3PO4	NAOH - Sodium Hydroxide	CH3OH - Methanol	NAHSO4 - Sodium Bisulfate	NA2S2O3 - Sodium Thiosulfate	Other:	MATRIX: Drinking Water	Aqueous GW, SW, WW	Solid, Semisolid, Sediment	Air	NonAqueous (Oil, Solvent, etc.)	NUMBER OF CONTAINERS SUBMITTED: BTEX - 8021B	SPECIAL INSTRUCTIONS/ CONDITIONS OF RECEIPT
5/30/15	1320	Fogelson 4-1 com #14	MW-1		X									X				2	Hold - contact PM
5/30/15	1330	Fogelson 4-1 com #14	MW-2		X									X				2	
5/30/15	1335	Fogelson 4-1 com #14	MW-3		X									X				2	
5/30/15	1315	Fogelson 4-1 com #14	TRIP BLANK		X									X				2	

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
EMPTY CONTAINERS				6/1/15	1345			
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME
EMPTY CONTAINERS								

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY:	DATE	TIME	CUSTODY INTACT?	CUSTODY SEAL NO.	REMARKS:
	6/2/15	0937	△ YES △ NO		IR 6 0.6°C

TAL-8251 (1207)

Login Sample Receipt Checklist

Client: MWH Americas Inc

Job Number: 400-106463-1

Login Number: 106463
List Number: 1
Creator: Crawford, Lauren E

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.6°C IR-6
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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

TestAmerica Job ID: 400-114168-1
Client Project/Site: FOGELSON 4-1 C

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

Attn: Ms. Sarah Gardner

Authorized for release by:
11/30/2015 8:35:58 PM

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

Table of Contents

Definitions/Glossary

Client: MWH Americas Inc
Project/Site: FOGELSON 4-1 C

TestAmerica Job ID: 400-114168-1

Glossary

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

Job ID: 400-114168-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-114168-1

Comments
No additional comments.

Receipt
The samples were received on 11/20/2015 8:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.0º C.

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

Detection Summary

Client: MWH Americas Inc
Project/Site: FOGELSON 4-1 C

TestAmerica Job ID: 400-114168-1

Client Sample ID: MW-2 — Lab Sample ID: 400-114168-1

No Detections.

Client Sample ID: MW-3 — Lab Sample ID: 400-114168-2

No Detections.

Client Sample ID: TRIP BLANK — Lab Sample ID: 400-114168-3

No Detections.

This Detection Summary does not include radiochemical test results.

Sample Summary

Client: MWH Americas Inc
Project/Site: FOGELSON 4-1 C

TestAmerica Job ID: 400-114168-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-114168-1	MW-2	Water	11/18/15 14:15	11/20/15 08:20
400-114168-2	MW-3	Water	11/18/15 14:10	11/20/15 08:20
400-114168-3	TRIP BLANK	Water	11/18/15 14:40	11/20/15 08:20

Client: MWH Americas Inc
Project/Site: FOGELSON 4-1 C

TestAmerica Job ID: 400-114168-1

Client Sample ID: MW-2
Date Collected: 11/18/15 14:15
Date Received: 11/20/15 08:20

Lab Sample ID: 400-114168-1
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0		ug/L			11/29/15 04:46	1
Toluene	<1.0		1.0		ug/L			11/29/15 04:46	1
Ethylbenzene	<1.0		1.0		ug/L			11/29/15 04:46	1
Xylenes, Total	<3.0		3.0		ug/L			11/29/15 04:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*105*		*50 - 150*		*11/29/15 04:46*	*1*

Client: MWH Americas Inc
Project/Site: FOGELSON 4-1 C

TestAmerica Job ID: 400-114168-1

Client Sample ID: MW-3
Date Collected: 11/18/15 14:10
Date Received: 11/20/15 08:20

Lab Sample ID: 400-114168-2
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0		ug/L			11/28/15 20:56	1
Toluene	<1.0		1.0		ug/L			11/28/15 20:56	1
Ethylbenzene	<1.0		1.0		ug/L			11/28/15 20:56	1
Xylenes, Total	<3.0		3.0		ug/L			11/28/15 20:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*111*		*50 - 150*		*11/28/15 20:56*	*1*

Client Sample ID: TRIP BLANK
Date Collected: 11/18/15 14:40
Date Received: 11/20/15 08:20

Lab Sample ID: 400-114168-3
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0		ug/L			11/28/15 17:47	1
Toluene	<1.0		1.0		ug/L			11/28/15 17:47	1
Ethylbenzene	<1.0		1.0		ug/L			11/28/15 17:47	1
Xylenes, Total	<3.0		3.0		ug/L			11/28/15 17:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*98*		*50 - 150*		*11/28/15 17:47*	*1*

QC Association Summary

Client: MWH Americas Inc
Project/Site: FOGELSON 4-1 C

TestAmerica Job ID: 400-114168-1

GC VOA

Analysis Batch: 302291

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-114168-1	MW-2	Total/NA	Water	8021B	
400-114168-2	MW-3	Total/NA	Water	8021B	
400-114168-3	TRIP BLANK	Total/NA	Water	8021B	
LCS 490-302291/3	Lab Control Sample	Total/NA	Water	8021B	
LCSD 490-302291/4	Lab Control Sample Dup	Total/NA	Water	8021B	
MB 490-302291/19	Method Blank	Total/NA	Water	8021B	
MB 490-302291/6	Method Blank	Total/NA	Water	8021B	

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 490-302291/19
Matrix: Water
Analysis Batch: 302291

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

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0		ug/L			11/28/15 23:33	1
Toluene	<1.0		1.0		ug/L			11/28/15 23:33	1
Ethylbenzene	<1.0		1.0		ug/L			11/28/15 23:33	1
Xylenes, Total	<3.0		3.0		ug/L			11/28/15 23:33	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*100*		*50 - 150*		*11/28/15 23:33*	*1*

Lab Sample ID: MB 490-302291/6
Matrix: Water
Analysis Batch: 302291

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

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0		ug/L			11/28/15 16:45	1
Toluene	<1.0		1.0		ug/L			11/28/15 16:45	1
Ethylbenzene	<1.0		1.0		ug/L			11/28/15 16:45	1
Xylenes, Total	<3.0		3.0		ug/L			11/28/15 16:45	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*101*		*50 - 150*		*11/28/15 16:45*	*1*

Lab Sample ID: LCS 490-302291/3
Matrix: Water
Analysis Batch: 302291

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			100	99.5		ug/L		99	69 - 129		
Toluene			100	101		ug/L		101	66 - 127		
Ethylbenzene			100	105		ug/L		105	70 - 130		
Xylenes, Total			300	312		ug/L		104	69 - 123		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
a,a,a-Trifluorotoluene	*102*		*50 - 150*

Lab Sample ID: LCSD 490-302291/4
Matrix: Water
Analysis Batch: 302291

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			100	101		ug/L		101	69 - 129	2	33
Toluene			100	103		ug/L		103	66 - 127	1	34
Ethylbenzene			100	106		ug/L		106	70 - 130	1	35
Xylenes, Total			300	316		ug/L		105	69 - 123	1	37

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
a,a,a-Trifluorotoluene	*104*		*50 - 150*

Lab Chronicle

Client: MWH Americas Inc
Project/Site: FOGELSON 4-1 C

TestAmerica Job ID: 400-114168-1

Client Sample ID: MW-2

Lab Sample ID: 400-114168-1
Matrix: Water
Date Collected: 11/18/15 14:15
Date Received: 11/20/15 08:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	302291	11/29/15 04:46	BK	TAL NSH
	Instrument ID: HP62									

Client Sample ID: MW-3

Lab Sample ID: 400-114168-2
Matrix: Water
Date Collected: 11/18/15 14:10
Date Received: 11/20/15 08:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	302291	11/28/15 20:56	BK	TAL NSH
	Instrument ID: HP62									

Client Sample ID: TRIP BLANK

Lab Sample ID: 400-114168-3
Matrix: Water
Date Collected: 11/18/15 14:40
Date Received: 11/20/15 08:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	302291	11/28/15 17:47	BK	TAL NSH
	Instrument ID: HP62									

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Certification Summary

Client: MWH Americas Inc
Project/Site: FOGELSON 4-1 C

TestAmerica Job ID: 400-114168-1

Laboratory: TestAmerica Pensacola

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

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

Laboratory: TestAmerica Nashville

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

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	A2LA		NA: NELAP & A2LA	12-31-15
A2LA	ISO/IEC 17025		0453.07	12-31-15
Alaska (UST)	State Program	10	UST-087	07-24-16
Arizona	State Program	9	AZ0473	05-05-16
Arkansas DEQ	State Program	6	88-0737	04-25-16
California	State Program	9	2938	10-31-16
Connecticut	State Program	1	PH-0220	12-31-15
Florida	NELAP	4	E87358	06-30-16
Georgia	State Program	4	N/A	06-30-16
Illinois	NELAP	5	200010	12-09-15 *
Iowa	State Program	7	131	04-01-16
Kansas	NELAP	7	E-10229	01-31-16
Kentucky (UST)	State Program	4	19	06-30-16
Kentucky (WW)	State Program	4	90038	12-31-15
Louisiana	NELAP	6	30613	06-30-16
Maine	State Program	1	TN00032	11-03-17
Maryland	State Program	3	316	03-31-16
Massachusetts	State Program	1	M-TN032	06-30-16
Minnesota	NELAP	5	047-999-345	12-31-16
Mississippi	State Program	4	N/A	06-30-16

* Certification renewal pending - certification considered valid.

Certification Summary

Client: MWH Americas Inc
Project/Site: FOGELSON 4-1 C

TestAmerica Job ID: 400-114168-1

Laboratory: TestAmerica Nashville (Continued)

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Montana (UST)	State Program	8	NA	02-24-20
Nevada	State Program	9	TN00032	07-31-16
New Hampshire	NELAP	1	2963	10-09-16
New Jersey	NELAP	2	TN965	11-30-15 *
New York	NELAP	2	11342	03-31-16
North Carolina (WW/SW)	State Program	4	387	12-31-15
North Dakota	State Program	8	R-146	06-30-16
Ohio VAP	State Program	5	CL0033	07-10-17
Oklahoma	State Program	6	9412	08-31-16
Oregon	NELAP	10	TN200001	04-27-16
Pennsylvania	NELAP	3	68-00585	06-30-16
Rhode Island	State Program	1	LAO00268	12-30-15
South Carolina	State Program	4	84009 (001)	02-28-16
South Carolina (Do Not Use - DW)	State Program	4	84009 (002)	12-16-17
Tennessee	State Program	4	2008	02-23-17
Texas	NELAP	6	T104704077	08-31-16
USDA	Federal		S-48469	10-30-16
Utah	NELAP	8	TN00032	07-31-16
Virginia	NELAP	3	460152	06-14-16
Washington	State Program	10	C789	07-19-16
West Virginia DEP	State Program	3	219	02-28-16
Wisconsin	State Program	5	998020430	08-31-16
Wyoming (UST)	A2LA	8	453.07	12-31-15

* Certification renewal pending - certification considered valid.

Method Summary

Client: MWH Americas Inc
Project/Site: FOGELSON 4-1 C

TestAmerica Job ID: 400-114168-1

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

Protocol References:

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

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Phone (850) 474-1001 Fax (850) 478-2671

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Chris Lee	Lab PM: Edwards, Marty P	Carrier Tracking No(s):	COC No: 400-50145-21698.1
Client Contact: Ms. Sarah Gardner	Phone:	E-Mail: marty.edwards@testamericainc.com		Page: Page 1 of 1
Company: MWH Americas Inc				Job #:

Address: 1560 Broadway Suite 1800	Due Date Requested:	Analysis Requested	Preservation Codes:
City: Denver	TAT Requested (days): STANDARD		A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)
State, Zip: CO, 80202			
Phone: 303-291-2239(Tel)	PO #: Purchase Order Requested		
Email: sarah.gardner@mwhglobal.com	WO #:		Other:
Project Name: Fogelson 4-1 C	Project #: 40005479		
Site: FOGELSON	SSOW#:		

400-114168 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)	8021B - BTEX 8021	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A		
MW-2	11/18/15	1415	G	Water			X		
MW-3	11/18/15	1410	G	Water			X		
TRIP	11/18/15	1440	G	Water			X		
				Water					

Possible Hazard Identification
[X] Non-Hazard [ ] Flammable [ ] Skin Irritant [ ] Poison B [ ] Unknown [ ] Radiological

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

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

Special Instructions/QC Requirements:

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

Relinquished by: Chris Lee	Date/Time: 11/19/15 1200	Company: MWH	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 11/20/15 0820	Company

Custody Seals Intact: [ ] Yes [ ] No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: IRS, 0.0C

11/30/2015

Login Sample Receipt Checklist

Client: MWH Americas Inc

Job Number: 400-114168-1

Login Number: 114168
List Number: 1
Creator: Menoher, Rachel C

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.0°C IR-5
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	

Login Sample Receipt Checklist

Client: MWH Americas Inc

Job Number: 400-114168-1

Login Number: 114168
List Number: 2
Creator: Huskey, Adam

List Source: TestAmerica Nashville
List Creation: 11/24/15 09:17 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
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.	N/A	
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	