2016 ANNUAL GROUNDWATER REPORT

Miles Federal #1A
NMOCD CASE#: 3RP-223-0
Meter Code: 94810
T26N, R7W, Sec5, Unit F

SITE DETAILS

Site Location: Latitude: 36.515700 N, Longitude -107.601460 W
Land Type: Federal
Operator: Cross Timbers Energy, LLC

SITE BACKGROUND

- **Site Assessment:** 1/94
- **Excavation:** 6/94

Environmental Remediation activities at the Miles Federal #1A (Site) are managed pursuant to the procedures set forth in the document entitled, "Remediation Plan for Groundwater Encountered during Pit Closure Activities" (Remediation Plan, El Paso Natural Gas Company / El Paso Field Services Company, 1995). This Remediation Plan was conditionally approved by the New Mexico Oil Conservation Division (OCD) in correspondence dated November 30, 1995; and the OCD approval conditions were adopted into El Paso CGP Company (EPCGP's) program methods. Currently, the Site is operated by XTO Energy Inc. and is active.

The Site is located on Federal land. Several site investigations were conducted from 1994 to 2016. Monitoring wells were installed in 1994 (MW-1) and 1999 (MW-2 and MW-3). A temporary piezometer was installed in 1997 (PZ-1). Soil borings were advanced in 2016 (DP-1 and DP-2). Historically, free product recovery has been periodically encountered and recovered at the Site, but has not been observed since 2010. Currently, groundwater sampling is conducted on a semi-annual basis.

SOIL SAMPLING ACTIVITIES

In April 2016, soil boring locations were staked for permitting and utility locating purposes. Soil borings were advanced in accordance with the 2016 Soil Assessment Work Plan, submitted on May 4, 2016 (Work Plan)

Two soil borings (DP-1 and DP-2) were advanced in May 2016, to evaluate soil impacts in and near the former pit. Soil boring DP-1 was completed near MW-1 to evaluate remaining soil impacts in the vicinity of the former pit. DP-2 was completed to the southeast of the pit. Locations were measured in and converted to state plane coordinates. Pertinent site features and soil boring locations are shown in Figures 1-5. Boring logs are included as Appendix A.

During advancement of the soil borings, completed inMay 2016, the soil sample interval exhibiting the highest photoionization detector (PID) reading was collected and placed in a 4-ounce jar for laboratory analysis. Additional soil samples were retained from SB-1 to quantify petroleum hydrocarbon concentrations at additional intervals. Sample jars were stored in an ice-filled cooler and shipped under standard chain of custody to TestAmerica Laboratories, Inc. in Pensacola, Florida. Soil samples were analyzed for the presence of

benzene, toluene, ethylbenzene, and total xylenes (BTEX) according to United States Environmental Protection Agency (EPA) Method SW846 8021B, total petroleum hydrocarbons (TPH) using EPA Method 8015B-gasoline-range organics (GRO), diesel-range organics (DRO), and mineral oil range organics (MRO), and chlorides according to EPA Method 300. The soil analytical report is provided in Appendix B.

Two 5 gallon buckets of soil were generated from advancing DP-1 and DP-2. The soil was transported and combined with soil cuttings from drilling activities at the Lindrith B#24 Site. The drum was staged on Site for later disposal at Envirotech, Inc. (Envirotech), located south of Bloomfield, New Mexico. On May 25, 2016 Sierra Oilfield Services, Inc. removed 1 drum of soil cuttings from the Lindrith B#24 Site and delivered it to Envirotech. Disposal documentation is contained in Appendix C.

GROUNDWATER SAMPLING ACTIVITIES

On May 31 and October 15, 2016, water levels were gauged at MW-1, MW-2, and MW-3. Groundwater samples were collected from each well using HydraSleeve™ (HydraSleeve) no-purge groundwater sampling devices. The HydraSleeves were set during the previous sampling event approximately 0.5 foot above termination depth of the monitoring wells using a suspension tether and stainless steel weights to collect a sample from the screened interval. Groundwater samples were placed into laboratory-supplied sample containers, packed on ice, and shipped under standard chain-of-custody protocols to TestAmerica Laboratories, Inc. in Pensacola, Florida 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.

SUMMARY TABLES

Historic analytical and water level data are summarized in Table 1 and Table 2, respectively. Soil analytical results are summarized in Table 3.

SITE MAPS

Groundwater analytical maps (Figures 1 and 3) and groundwater elevation contour maps (Figures 2 and 4) summarize results of the 2016 groundwater sampling and gauging events. The soil analytical results are depicted on Figure 5.

ANALYTICAL LAB REPORTS

The soil and groundwater analytical lab reports are included as Appendices B and D,

respectively.

GROUNDWATER RESULTS

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

- The groundwater samples collected in 2016 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.

- Concentrations of toluene were either below the NMWQCC standard (750 µg/L) or not detected in the Site monitoring wells sampled in 2016.

- Concentrations of ethylbenzene were either below the NMWQCC standard (750 µg/L) or not detected in the Site monitoring wells sampled in 2016.

- The groundwater samples collected in 2016 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.

SOIL RESULTS

- Soil samples were collected from soil borings DP-1 and DP-2. For benzene, the soil sample results were non-detect with exception of DP-1(27-28') (0.23 milligrams per kilogram [mg/kg]). Total BTEX concentrations were below the applicable limit in the NMOCD 2013 Pit Rule Guidance (50 mg/kg) for the soil samples collected from DP-1 and DP-2.

- Total petroleum hydrocarbons (TPH) ranged from non-detect to 513 mg/kg in DP-1(27-28'). TPH concentrations exceeded the 2013 Pit Rule Guidance (100 mg/kg) at DP-1.

  Chloride ranged from 100 mg/kg (DP-2) to 640 mg/kg (DP-1(27-28')). The soil sample from DP-1(27-28') exceeded the applicable NMOCD standard (600 mg/kg).

PLANNED FUTURE ACTIVITIES

Groundwater monitoring events will be conducted on a semi-annual basis. For any additional site activates, a Work Plan will be submitted to the NMOCD. The 2017 Annual Report will be submitted in early 2018.

TABLES

TABLE 1 - GROUNDWATER ANALYTICAL RESULTS

Miles Fed 1A					
Location	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
NMWQCC Standards:		10	750	750	620
MW-1	11/05/96	1050	1630	391	2620
MW-1	02/07/97	671	809	439	2550
MW-1	05/06/97	300	350	320	1880
MW-1	04/11/01	NS	NS	NS	NS
MW-1	07/03/01	NS	NS	NS	NS
MW-1	09/04/01	NS	NS	NS	NS
MW-1	10/01/01	NS	NS	NS	NS
MW-1	01/02/02	NS	NS	NS	NS
MW-1	04/01/02	NS	NS	NS	NS
MW-1	07/15/02	NS	NS	NS	NS
MW-1	10/08/02	NS	NS	NS	NS
MW-1	01/27/03	NS	NS	NS	NS
MW-1	04/26/03	NS	NS	NS	NS
MW-1	07/17/03	NS	NS	NS	NS
MW-1	01/19/04	NS	NS	NS	NS
MW-1	07/27/04	NS	NS	NS	NS
MW-1	10/20/04	NS	NS	NS	NS
MW-1	01/25/05	NS	NS	NS	NS
MW-1	04/14/05	NS	NS	NS	NS
MW-1	07/19/05	NS	NS	NS	NS
MW-1	10/21/05	NS	NS	NS	NS
MW-1	01/23/06	NS	NS	NS	NS
MW-1	04/28/06	NS	NS	NS	NS
MW-1	07/26/06	NS	NS	NS	NS
MW-1	10/24/06	NS	NS	NS	NS
MW-1	01/17/07	NS	NS	NS	NS
MW-1	04/24/07	NS	NS	NS	NS
MW-1	07/31/07	NS	NS	NS	NS

TABLE 1 - GROUNDWATER ANALYTICAL RESULTS

Miles Fed 1A					
Location	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
MW-1	10/25/07	NS	NS	NS	NS
MW-1	01/25/08	NS	NS	NS	NS
MW-1	04/17/08	122	203	369	2550
MW-1	07/23/08	NS	NS	NS	NS
MW-1	10/08/08	NS	NS	NS	NS
MW-1	01/16/09	NS	NS	NS	NS
MW-1	04/06/09	104	199	596	1840
MW-1	08/25/09	NS	NS	NS	NS
MW-1	11/02/09	NS	NS	NS	NS
MW-1	02/16/10	NS	NS	NS	NS
MW-1	06/02/10	186	266	370	2320
MW-1	09/27/10	NS	NS	NS	NS
MW-1	11/01/10	NS	NS	NS	NS
MW-1	02/01/11	NS	NS	NS	NS
MW-1	05/09/11	14.6	19.3	86.9	236
MW-1	09/23/11	NS	NS	NS	NS
MW-1	11/02/11	NS	NS	NS	NS
MW-1	02/22/12	NS	NS	NS	NS
MW-1	05/15/12	60.9	79.9	136	602
MW-1	06/05/13	44	78	120	830
MW-1	09/10/13	300	510	250	2200
MW-1	12/11/13	21	37	21	230
MW-1	04/04/14	81	130	120	800
MW-1	10/24/14	73	32	95	1300
MW-1	05/31/15	68	79	95	940
MW-1	11/21/15	160	67	98	1200
MW-1	04/17/16	81	99	68	1100
MW-1	10/15/16	56	72	150	1300

TABLE 1 - GROUNDWATER ANALYTICAL RESULTS

Miles Fed 1A					
Location	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
MW-2	10/15/99	<0.5	2.1	5.5	2.8
MW-2	07/03/01	NS	NS	NS	NS
MW-2	09/04/01	NS	NS	NS	NS
MW-2	10/01/01	NS	NS	NS	NS
MW-2	07/15/02	<0.5	0.6	0.9	1.4
MW-2	10/08/02	NS	NS	NS	NS
MW-2	01/27/03	NS	NS	NS	NS
MW-2	04/26/03	NS	NS	NS	NS
MW-2	07/17/03	NS	NS	NS	NS
MW-2	01/19/04	NS	NS	NS	NS
MW-2	07/27/04	NS	NS	NS	NS
MW-2	10/20/04	NS	NS	NS	NS
MW-2	01/25/05	NS	NS	NS	NS
MW-2	04/14/05	NS	NS	NS	NS
MW-2	07/19/05	NS	NS	NS	NS
MW-2	10/21/05	NS	NS	NS	NS
MW-2	01/23/06	NS	NS	NS	NS
MW-2	04/28/06	NS	NS	NS	NS
MW-2	07/26/06	NS	NS	NS	NS
MW-2	10/24/06	NS	NS	NS	NS
MW-2	01/17/07	NS	NS	NS	NS
MW-2	04/24/07	NS	NS	NS	NS
MW-2	07/31/07	NS	NS	NS	NS
MW-2	10/25/07	NS	NS	NS	NS
MW-2	01/25/08	NS	NS	NS	NS
MW-2	04/17/08	<2	<2	<2	<6
MW-2	07/23/08	NS	NS	NS	NS
MW-2	10/08/08	NS	NS	NS	NS
MW-2	01/16/09	NS	NS	NS	NS
MW-2	04/06/09	<1	<1	<1	<2
MW-2	08/25/09	NS	NS	NS	NS
MW-2	11/02/09	NS	NS	NS	NS
MW-2	02/16/10	NS	NS	NS	NS
MW-2	06/02/10	<2	<2	<2	<6
MW-2	09/27/10	NS	NS	NS	NS
MW-2	11/01/10	NS	NS	NS	NS
MW-2	02/01/11	NS	NS	NS	NS
MW-2	05/09/11	<1	<1	<1	<3
MW-2	09/23/11	NS	NS	NS	NS
MW-2	11/02/11	NS	NS	NS	NS
MW-2	02/22/12	NS	NS	NS	NS
MW-2	05/15/12	<1	<1	<1	<3
MW-2	06/05/13	<0.14	<0.30	<0.20	<0.23
MW-2	09/10/13	<0.14	<0.30	<0.20	<0.23
MW-2	12/11/13	<2.0	<3.8	<2.0	<6.5
MW-2	04/04/14	<0.20	<0.38	<0.20	<0.65
MW-2	10/24/14	<0.38	<0.70	<0.50	<1.6
MW-2	05/31/15	<1.0	<5.0	<1.0	<5.0
MW-2	11/21/15	<1.0	<1.0	<1.0	<3.0
MW-2	04/17/16	<1.0	<5.0	<1.0	<5.0
MW-2	10/15/16	<1.0	<5.0	<1.0	<5.0

TABLE 1 - GROUNDWATER ANALYTICAL RESULTS

Miles Fed 1A					
Location	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
MW-3	10/15/99	<0.5	0.9	<0.5	3.1
MW-3	07/03/01	<0.5	<0.5	<0.5	<0.5
MW-3	09/04/01	NS	NS	NS	NS
MW-3	10/01/01	NS	NS	NS	NS
MW-3	07/15/02	NS	NS	NS	NS
MW-3	10/08/02	NS	NS	NS	NS
MW-3	01/27/03	NS	NS	NS	NS
MW-3	04/26/03	NS	NS	NS	NS
MW-3	07/17/03	NS	NS	NS	NS
MW-3	01/19/04	NS	NS	NS	NS
MW-3	07/27/04	NS	NS	NS	NS
MW-3	10/20/04	NS	NS	NS	NS
MW-3	01/25/05	NS	NS	NS	NS
MW-3	04/14/05	NS	NS	NS	NS
MW-3	07/19/05	NS	NS	NS	NS
MW-3	10/21/05	NS	NS	NS	NS
MW-3	01/23/06	NS	NS	NS	NS
MW-3	04/28/06	NS	NS	NS	NS
MW-3	07/26/06	NS	NS	NS	NS
MW-3	10/24/06	NS	NS	NS	NS
MW-3	01/17/07	NS	NS	NS	NS
MW-3	04/24/07	NS	NS	NS	NS
MW-3	07/31/07	NS	NS	NS	NS
MW-3	10/25/07	NS	NS	NS	NS
MW-3	01/25/08	NS	NS	NS	NS
MW-3	04/17/08	<2	<2	<2	<6
MW-3	07/23/08	NS	NS	NS	NS
MW-3	10/08/08	NS	NS	NS	NS
MW-3	01/16/09	NS	NS	NS	NS
MW-3	04/06/09	<1	<1	<1	<2

TABLE 1 - GROUNDWATER ANALYTICAL RESULTS

Miles Fed 1A					
Location	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
MW-3	08/25/09	NS	NS	NS	NS
MW-3	11/02/09	NS	NS	NS	NS
MW-3	02/16/10	NS	NS	NS	NS
MW-3	06/02/10	<2	<2	<2	<6
MW-3	09/27/10	NS	NS	NS	NS
MW-3	11/01/10	NS	NS	NS	NS
MW-3	02/01/11	NS	NS	NS	NS
MW-3	05/09/11	NS	NS	NS	NS
MW-3	09/23/11	NS	NS	NS	NS
MW-3	11/02/11	NS	NS	NS	NS
MW-3	02/22/12	NS	NS	NS	NS
MW-3	05/15/12	NS	NS	NS	NS
MW-3	06/05/13	<0.14	<0.30	<0.20	<0.23
MW-3	09/10/13	<0.14	<0.30	<0.20	<0.23
MW-3	12/11/13	<0.20	<0.38	<0.20	<0.65
MW-3	04/04/14	<0.20	<0.38	<0.20	<0.65
MW-3	10/24/14	<0.38	<0.70	<0.50	<1.6
MW-3	05/31/15	<1.0	<5.0	<1.0	<5.0
MW-3	11/21/15	<1.0	<1.0	<1.0	<3.0
MW-3	04/17/16	<1.0	<5.0	<1.0	<5.0
MW-3	10/15/16	<1.0	<5.0	<1.0	<5.0

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

TABLE 2 - GROUNDWATER ELEVATION RESULTS

Miles Fed 1A						
Location	Date	TOC	Depth to Water (ft.)	Depth to LNAPL (ft.)	LNAPL Thickness (ft.)	GW Elevation (ft.)
MW-1	11/05/96	6049.42	30.58	30.10	0.48	6019.20
MW-1	02/07/97	6049.42	30.05	29.91	0.14	6019.47
MW-1	05/06/97	6049.42	30.18	30.04	0.14	6019.34
MW-1	04/11/01	6049.42	31.81	30.61	1.20	6018.51
MW-1	07/03/01	6049.42	32.76	31.18	1.58	6017.84
MW-1	09/04/01	6049.42	31.80	30.68	1.12	6018.46
MW-1	10/01/01	6049.42	31.41	31.16	0.25	6018.19
MW-1	01/02/02	6049.42	32.17	31.20	0.97	6017.97
MW-1	04/01/02	6049.42	31.45	31.09	0.36	6018.24
MW-1	07/15/02	6049.42	32.35	31.43	0.92	6017.76
MW-1	10/08/02	6049.42	31.73	31.33	0.40	6017.99
MW-1	01/27/03	6049.42	31.59	31.21	0.38	6018.11
MW-1	04/26/03	6049.42	31.30	31.16	0.14	6018.22
MW-1	07/17/03	6049.42	32.31	31.73	0.58	6017.54
MW-1	01/19/04	6049.42	31.49	31.32	0.17	6018.05
MW-1	07/27/04	6049.42	32.47	31.89	0.58	6017.38
MW-1	10/20/04	6049.42	32.24	31.95	0.29	6017.39
MW-1	01/25/05	6049.42	31.91	31.75	0.16	6017.63
MW-1	04/14/05	6049.42	31.52	ND		6017.90
MW-1	07/19/05	6049.42	32.43	32.32	0.11	6017.07
MW-1	10/21/05	6049.42	32.02	ND		6017.40
MW-1	01/23/06	6049.42	31.93	31.92	0.01	6017.49
MW-1	04/28/06	6049.42	31.85	ND		6017.57
MW-1	07/26/06	6049.42	31.94	ND		6017.48
MW-1	10/24/06	6049.42	30.71	ND		6018.71
MW-1	01/17/07	6049.42	30.99	ND		6018.43
MW-1	04/24/07	6049.42	30.95	ND		6018.47
MW-1	07/31/07	6049.42	31.32	ND		6018.10

TABLE 2 - GROUNDWATER ELEVATION RESULTS

Miles Fed 1A						
Location	Date	TOC	Depth to Water (ft.)	Depth to LNAPL (ft.)	LNAPL Thickness (ft.)	GW Elevation (ft.)
MW-1	10/25/07	6049.42	31.40	ND		6018.02
MW-1	01/25/08	6049.42	31.12	ND		6018.30
MW-1	04/17/08	6049.42	31.04	ND		6018.38
MW-1	07/23/08	6049.42	31.23	ND		6018.19
MW-1	10/08/08	6049.42	31.77	ND		6017.65
MW-1	01/16/09	6049.42	31.74	31.66	0.08	6017.74
MW-1	04/06/09	6049.42	31.82	ND		6017.60
MW-1	08/25/09	6049.42	32.30	ND		6017.12
MW-1	11/02/09	6049.42	32.20	ND		6017.22
MW-1	02/16/10	6049.42	31.74	ND		6017.68
MW-1	06/02/10	6049.42	31.53	31.50	0.03	6017.91
MW-1	09/27/10	6049.42	31.89	ND		6017.53
MW-1	11/01/10	6049.42	31.76	ND		6017.66
MW-1	02/01/11	6049.42	31.63	ND		6017.79
MW-1	05/09/11	6049.42	31.60	ND		6017.82
MW-1	09/23/11	6049.42	32.40	ND		6017.02
MW-1	11/02/11	6049.42	32.27	ND		6017.15
MW-1	02/22/12	6049.42	31.99	ND		6017.43
MW-1	05/15/12	6049.42	32.08	ND		6017.34
MW-1	06/05/13	6049.42	31.80	ND		6017.62
MW-1	09/10/13	6049.42	31.30	ND		6018.12
MW-1	12/11/13	6049.42	31.16	ND		6018.26
MW-1	04/04/14	6049.42	31.22	ND		6018.20
MW-1	10/24/14	6049.42	31.50	ND		6017.92
MW-1	05/31/15	6049.42	31.36	ND		6018.06
MW-1	11/21/15	6049.42	31.01	ND		6018.41
MW-1	04/17/16	6049.42	30.23	ND		6019.19
MW-1	10/15/16	6049.42	31.11	ND		6018.31

TABLE 2 - GROUNDWATER ELEVATION RESULTS

Miles Fed 1A						
Location	Date	TOC	Depth to Water (ft.)	Depth to LNAPL (ft.)	LNAPL Thickness (ft.)	GW Elevation (ft.)
MW-2	10/15/99	6049.22	27.97	NR		6021.25
MW-2	07/03/01	6049.22	32.51	NR		6016.71
MW-2	09/04/01	6049.22	28.30	NR		6020.92
MW-2	10/01/01	6049.22	28.61	NR		6020.61
MW-2	07/15/02	6049.22	31.46	NR		6017.76
MW-2	10/08/02	6049.22	30.77	NR		6018.45
MW-2	01/27/03	6049.22	30.64	ND		6018.58
MW-2	04/26/03	6049.22	31.51	ND		6017.71
MW-2	07/17/03	6049.22	31.23	ND		6017.99
MW-2	01/19/04	6049.22	31.14	ND		6018.08
MW-2	07/27/04	6049.22	31.37	ND		6017.85
MW-2	10/20/04	6049.22	31.33	ND		6017.89
MW-2	01/25/05	6049.22	31.56	ND		6017.66
MW-2	04/14/05	6049.22	31.33	ND		6017.89
MW-2	07/19/05	6049.22	31.97	ND		6017.25
MW-2	10/21/05	6049.22	31.09	ND		6018.13
MW-2	01/23/06	6049.22	31.19	ND		6018.03
MW-2	04/28/06	6049.22	31.21	ND		6018.01
MW-2	07/26/06	6049.22	31.24	ND		6017.98
MW-2	10/24/06	6049.22	30.55	ND		6018.67
MW-2	01/17/07	6049.22	30.29	ND		6018.93
MW-2	04/24/07	6049.22	30.75	ND		6018.47
MW-2	07/31/07	6049.22	30.56	ND		6018.66
MW-2	10/25/07	6049.22	30.71	ND		6018.51
MW-2	01/25/08	6049.22	30.41	ND		6018.81
MW-2	04/17/08	6049.22	30.36	ND		6018.86
MW-2	07/23/08	6049.22	31.14	ND		6018.08
MW-2	10/08/08	6049.22	31.57	ND		6017.65
MW-2	01/16/09	6049.22	30.98	ND		6018.24
MW-2	04/06/09	6049.22	31.40	ND		6017.82
MW-2	08/25/09	6049.22	31.85	ND		6017.37
MW-2	11/02/09	6049.22	31.93	ND		6017.29
MW-2	02/16/10	6049.22	31.43	ND		6017.79
MW-2	06/02/10	6049.22	31.33	ND		6017.89
MW-2	09/27/10	6049.22	31.63	ND		6017.59
MW-2	11/01/10	6049.22	31.57	ND		6017.65
MW-2	02/01/11	6049.22	31.39	ND		6017.83
MW-2	05/09/11	6049.22	31.40	ND		6017.82
MW-2	09/23/11	6049.22	32.05	ND		6017.17
MW-2	11/02/11	6049.22	32.01	ND		6017.21
MW-2	02/22/12	6049.22	31.76	ND		6017.46
MW-2	05/15/12	6049.22	31.87	ND		6017.35
MW-2	06/05/13	6049.22	31.56	ND		6017.66
MW-2	09/10/13	6049.22	31.13	ND		6018.09
MW-2	12/11/13	6049.22	30.95	ND		6018.27
MW-2	04/04/14	6049.22	31.02	ND		6018.20
MW-2	10/24/14	6049.22	31.32	ND		6017.90
MW-2	05/31/15	6049.22	31.37	ND		6017.85
MW-2	11/21/15	6049.22	30.80	ND		6018.42
MW-2	04/17/16	6049.22	30.75	ND		6018.47
MW-2	10/15/16	6049.22	30.89	ND		6018.33

TABLE 2 - GROUNDWATER ELEVATION RESULTS

Miles Fed 1A						
Location	Date	TOC	Depth to Water (ft.)	Depth to LNAPL (ft.)	LNAPL Thickness (ft.)	GW Elevation (ft.)
MW-3	10/15/99	6049.32	27.92	NR		6021.40
MW-3	07/03/01	6049.32	28.97	NR		6020.35
MW-3	09/04/01	6049.32	28.40	NR		6020.92
MW-3	10/01/01	6049.32	28.63	NR		6020.69
MW-3	07/15/02	6049.32	31.46	NR		6017.86
MW-3	10/08/02	6049.32	31.22	NR		6018.10
MW-3	01/27/03	6049.32	31.11	ND		6018.21
MW-3	04/26/03	6049.32	30.99	ND		6018.33
MW-3	07/17/03	6049.32	31.62	ND		6017.70
MW-3	01/19/04	6049.32	30.66	ND		6018.66
MW-3	07/27/04	6049.32	31.30	ND		6018.02
MW-3	10/20/04	6049.32	31.32	ND		6018.00
MW-3	01/25/05	6049.32	31.08	ND		6018.24
MW-3	04/14/05	6049.32	30.87	ND		6018.45
MW-3	07/19/05	6049.32	31.56	ND		6017.76
MW-3	10/21/05	6049.32	31.66	ND		6017.66
MW-3	01/23/06	6049.32	31.61	ND		6017.71
MW-3	04/28/06	6049.32	31.62	ND		6017.70
MW-3	07/26/06	6049.32	31.72	ND		6017.60
MW-3	10/24/06	6049.32	30.03	ND		6019.29
MW-3	01/17/07	6049.32	30.81	ND		6018.51
MW-3	04/24/07	6049.32	30.28	ND		6019.04
MW-3	07/31/07	6049.32	31.12	ND		6018.20
MW-3	10/25/07	6049.32	31.19	ND		6018.13
MW-3	01/25/08	6049.32	20.93	ND		6028.39
MW-3	04/17/08	6049.32	30.36	ND		6018.96
MW-3	07/23/08	6049.32	30.58	ND		6018.74
MW-3	10/08/08	6049.32	31.15	ND		6018.17
MW-3	01/16/09	6049.32	31.47	ND		6017.85

TABLE 2 - GROUNDWATER ELEVATION RESULTS

Miles Fed 1A						
Location	Date	TOC	Depth to Water (ft.)	Depth to LNAPL (ft.)	LNAPL Thickness (ft.)	GW Elevation (ft.)
MW-3	04/06/09	6049.32	30.93	ND		6018.39
MW-3	08/25/09	6049.32	31.60	ND		6017.72
MW-3	11/02/09	6049.32	31.47	ND		6017.85
MW-3	02/16/10	6049.32	30.89	ND		6018.43
MW-3	06/02/10	6049.32	30.88	ND		6018.44
MW-3	09/27/10	6049.32	31.20	ND		6018.12
MW-3	11/01/10	6049.32	30.96	ND		6018.36
MW-3	02/01/11	6049.32	30.91	ND		6018.41
MW-3	05/09/11	6049.32	30.95	ND		6018.37
MW-3	09/23/11	6049.32	31.55	ND		6017.77
MW-3	11/02/11	6049.32	31.52	ND		6017.80
MW-3	02/22/12	6049.32	31.37	ND		6017.95
MW-3	05/15/12	6049.32	31.45	ND		6017.87
MW-3	06/05/13	6049.32	31.15	ND		6018.17
MW-3	09/10/13	6049.32	30.58	ND		6018.74
MW-3	12/11/13	6049.32	30.43	ND		6018.89
MW-3	04/04/14	6049.32	30.51	ND		6018.81
MW-3	10/24/14	6049.32	30.82	ND		6018.50
MW-3	05/31/15	6049.32	30.66	ND		6018.66
MW-3	11/21/15	6049.32	30.29	ND		6019.03
MW-3	04/17/16	6049.32	30.23	ND		6019.09
MW-3	10/15/16	6049.32	30.42	ND		6018.90

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

TABLE 3 - SOIL ANALYTICAL RESULTS

Miles Federal #1A											
Location (depth in feet bgs)	**Date (mm/dd/yy)**	**Benzene (mg/kg)**	**Toluene (mg/kg)**	**Ethylbenzene (mg/kg)**	**Total Xylenes (mg/kg)**	**BTEX Total (mg/kg)**	**GRO C6-10 (mg/kg)**	**DRO C10-28 (mg/kg)**	**MRO C28-35 (mg/kg)**	**TPH (mg/kg)**	**Chloride (mg/kg)**
NMOCD Criteria:		10	NE	NE	NE	50	NE	NE	NE	100	600
DP-1 (17-18)	05/22/16	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	480
DP-1 (19-20)	05/22/16	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	470
DP-1 (27-28)	05/22/16	0.23	1.8	3.6	13	18.63	500	13	BRL	**513**	**640**
DP-2 (16.5-17.5)	05/22/16	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	100

Notes:

mg/kg	Milligrams per kilogram
BRL	Below Reporting Limits
NE	New Mexico Oil Conservation Division (NMOCD) Standard Not Established
BTEX	Benzene, toluene, ethylbenzene, xylenes
GRO	Gasoline range organics
DRO	Diesel range organics
MRO	Motor oil range organics
Total BTEX	Sum of the detectable concentrations of individual BTEX constituents
TPH	Total Petroleum Hydrocarbon concentration is calculated by adding GRO, DRO, and MRO and rounded to the nearest mg/kg.
NMOCD Criteria	New Mexico Oil Conservation Division closure criteria for groundwater ≤50 feet below bottom of pit to groundwater less than 10,000 mg/L TDS Results bolded and highlighted yellow exceed their respective NMOCD Standards

FIGURES

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\MILES FEDERAL #1A\2016 MAPS\Miles_Fed_GARM_1SA_2016.mxd

FORMER EPC PIT
EXCAVATED TO 12 FEET

SMA BENCHMARK
ELEV. 6046.42'
NAD 83 NAVD 88
STATE PLANE COORDINATE SYSTEM
NEW MEXICO CENTRAL

MW-1
B: **81**
T: 99
E: 68
X: **1100**

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

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

WELLHEAD

SEPARATOR

(2) ELECTRIC BOX

METER HOUSE

CAÑON LARGO

AERIAL IMAGERY FROM GOOGLE EARTH, DATED 5/2/2013

LEGEND:

- 6050 — APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- GAS — NATURAL GAS LINE
- FENCE
- GAS VALVE
- MONITORING WELL
- RIG ANCHOR
- SMA BENCHMARK
- WELLHEAD

EXPLANATION OF ANALYTES AND APPLICABLE STANDARDS:

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

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

N

SCALE IN FEET
0 40 80

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
	11/3/2016	SLG	SLG	SRV

TITLE:

GROUNDWATER ANALYTICAL RESULTS
APRIL 17, 2016

PROJECT:
MILES FED #1A
SAN JUAN RIVER BASIN
RIO ARRIBA COUNTY, NEW MEXICO

MWH

Figure No.:
1

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\MILES FEDERAL #1A\2016 MAPS\Miles_Fed_GECM_1SA_2016.mxd

FORMER EPC PIT
EXCAVATED TO 12 FEET

SMA BENCHMARK
ELEV. 6046.42'
NAD 83 NAVD 88
STATE PLANE COORDINATE SYSTEM
NEW MEXICO CENTRAL

MW-1
6019.19
MW-1

MW-2
6018.47
MW-2

MW-3
6019.09
MW-3

6018.6
6018.8
6019
6045
6050

WELLHEAD

SEPARATOR

(2) ELECTRIC BOX

METER
HOUSE

CAÑON LARGO

AERIAL IMAGERY FROM GOOGLE EARTH, DATED 5/2/2013

LEGEND:

- 6050 — APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- GAS — NATURAL GAS LINE
- X — FENCE
- GAS VALVE
- MONITORING WELL
- RIG ANCHOR
- SMA BENCHMARK
- WELLHEAD

NOTES:

6019.03 GROUNDWATER ELEVATION FEET ABOVE MEAN SEA LEVEL

6018.8 WATER LEVEL ELEVATION CONTOUR DASHED WHERE INFERRED (FEET ABOVE MEAN SEA LEVEL, 0.1 FOOT CONTOUR INTERVAL)

DIRECTION OF APPARENT GROUNDWATER FLOW

N

SCALE IN FEET
0 40 80

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
	11/28/2016	SLG	SLG	SRV

TITLE:

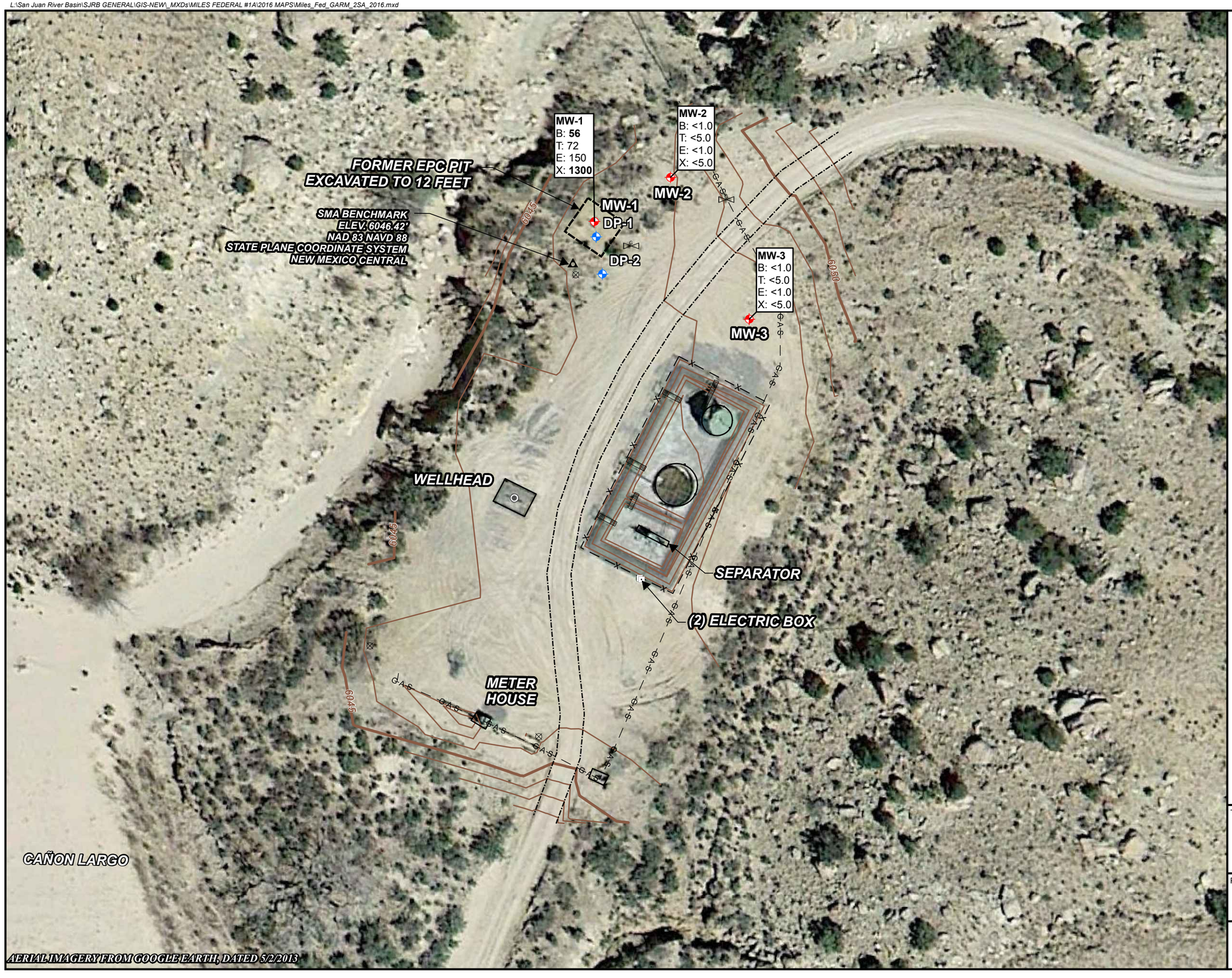
GROUNDWATER ELEVATION MAP
APRIL 17, 2016

PROJECT:
MILES FED #1A
SAN JUAN RIVER BASIN
RIO ARRIBA COUNTY, NEW MEXICO

MWH

Figure No.: 2

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\MILES FEDERAL #1A\2016 MAPS\Miles_Fed_GARM_2SA_2016.mxd



LEGEND:

- 6050 — APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- GAS — NATURAL GAS LINE
- X — FENCE
- GAS VALVE
- MONITORING WELL
- SOIL BORING
- RIG ANCHOR
- SMA BENCHMARK
- WELLHEAD

EXPLANATION OF ANALYTES AND APPLICABLE STANDARDS:

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

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

N

SCALE IN FEET
0 40 80

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
	1/24/2017	SLG	SLG	SRV

TITLE:

GROUNDWATER ANALYTICAL RESULTS
OCTOBER 15, 2016

PROJECT:
MILES FED #1A
SAN JUAN RIVER BASIN
RIO ARRIBA COUNTY, NEW MEXICO

MWH

Figure No.: 3

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\MILES FEDERAL #1A\2016 MAPS\Miles_Fed_GECM_2SA_2016.mxd

FORMER EPC PIT
EXCAVATED TO 12 FEET

SMA BENCHMARK
ELEV. 6046.42'
NAD 83 NAVD 88
STATE PLANE COORDINATE SYSTEM
NEW MEXICO CENTRAL

MW-1
6018.31

MW-2
6018.33

MW-3
6018.90

6018.4

6018.6

6018.8

WELLHEAD

SEPARATOR

(2) ELECTRIC BOX

METER
HOUSE

CAÑON LARGO

AERIAL IMAGERY FROM GOOGLE EARTH, DATED 5/2/2013

LEGEND:

- 6050 — APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- G A S — NATURAL GAS LINE
- — X — FENCE
- GAS VALVE
- MONITORING WELL
- RIG ANCHOR
- SMA BENCHMARK
- WELLHEAD

NOTES:

6019.03 GROUNDWATER ELEVATION FEET ABOVE MEAN SEA LEVEL

6018.8 WATER LEVEL ELEVATION CONTOUR DASHED WHERE INFERRED (FEET ABOVE MEAN SEA LEVEL, 0.2 FOOT CONTOUR INTERVAL)

DIRECTION OF APPARENT GROUNDWATER FLOW

N

SCALE IN FEET
0 40 80

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

TITLE:

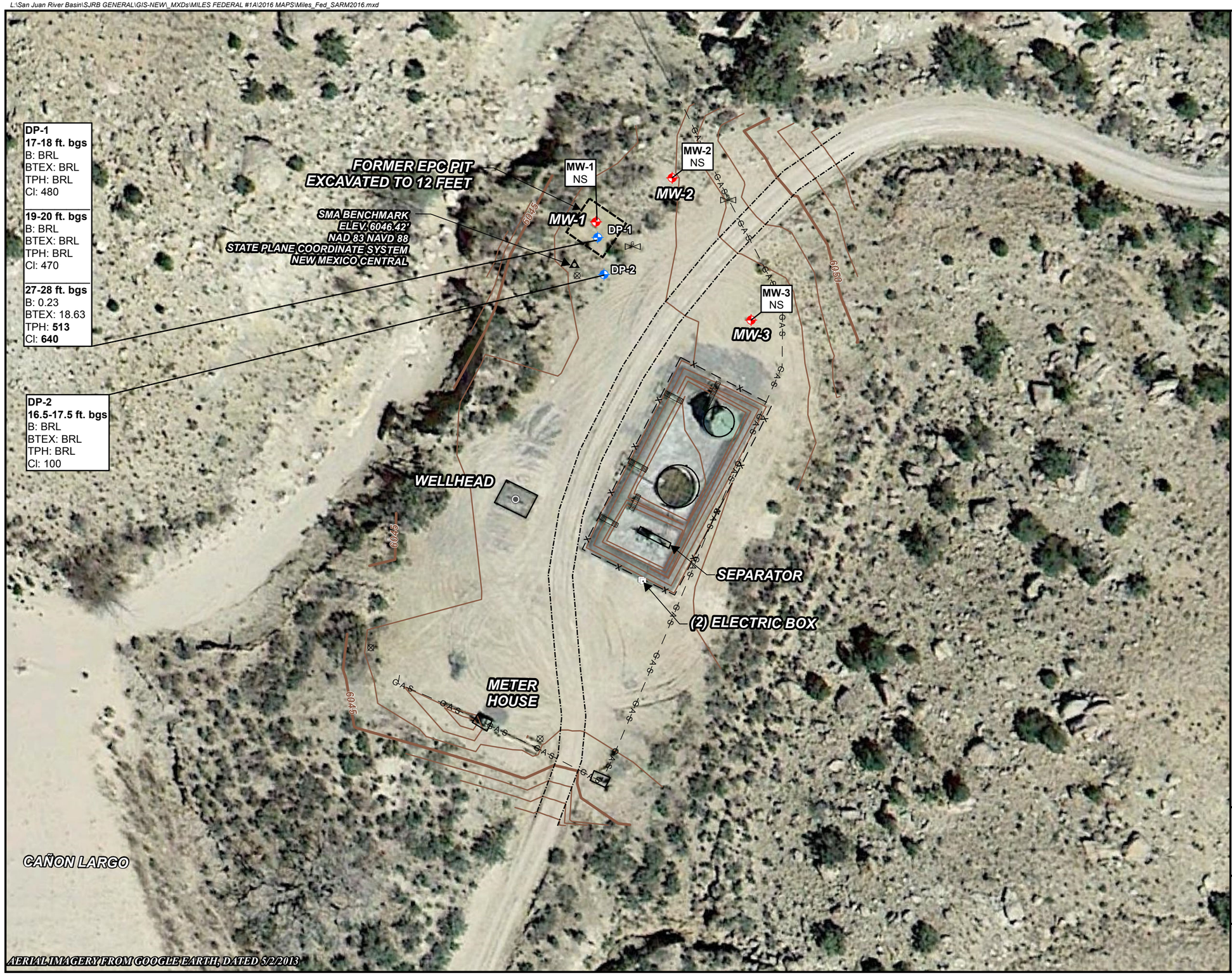
GROUNDWATER ELEVATION MAP
OCTOBER 15, 2016

PROJECT:
MILES FED #1A
SAN JUAN RIVER BASIN
RIO ARRIBA COUNTY, NEW MEXICO

MWH

Figure No.: 4

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\MILES FEDERAL #1A\2016 MAPS\Miles_Fed_SARM2016.mxd



LEGEND:

- 6050 — APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- GAS — NATURAL GAS LINE
- FENCE
- GAS VALVE
- MONITORING WELL
- SOIL BORING LOCATION
- RIG ANCHOR
- SMA BENCHMARK
- WELLHEAD

NOTES:

DP-1 AND DP-2 SAMPLES COLLECTED 5/22/2016.

UTILITY LOCATIONS ARE APPROXIMATE.

ft. bgs = FEET BELOW GROUND SURFACE
NS = NOT SAMPLED

EXPLANATION OF ANALYTES AND APPLICABLE STANDARDS:

RESULTS IN **BOLDFACE** TYPE INDICATE CONCENTRATION IN EXCESS OF APPLICABLE NEW MEXICO OIL CONSERVATION DIVISION SOIL CRITERIA FOR THAT ANALYTE.
mg/kg = MILLIGRAM/KILOGRAM
BRL = BELOW REPORTING LIMITS

ANALYTE	NMOCD STANDARDS
B = Benzene	10 mg/kg
BTEX = Benzene, toluene, ethylbenzene, xylenes	50 mg/kg
TPH = Total Petroleum Hydrocarbons	100 mg/kg
Cl = Chloride	600 mg/kg

N

SCALE IN FEET
0 40 80

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
	2/28/2017	SLG	SLG	SRV

TITLE:

SOIL ANALYTICAL RESULTS

PROJECT:

MILES FED #1A
SAN JUAN RIVER BASIN
RIO ARRIBA COUNTY, NEW MEXICO

MWH

Figure No.: 5

APPENDICES

APPENDIX A – BOREHOLE AND WELL CONSTRUCTION LOGS

APPENDIX B – SOIL SAMPLING ANALYTICAL REPORTS

APPENDIX C – WASTE DISPOSAL DOCUMENTATION

APPENDIX D – MAY 5, 2016 GROUNDWATER SAMPLING ANALYTICAL REPORT
OCTOBER 28, 2016 GROUNDWATER SAMPLING ANALYTICAL REPORT

APPENDIX A

Drilling Log

MWH

Soil Boring **DP-1**

Project *Miles Federal #1A* Owner *El Paso CGP Company, LLC*

Location *Rio Arriba County, New Mexico* Project Number *10509134*

Surface Elev. *6046.70 ft* North *NA* East *NA*

Top of Casing *NA* Water Level Initial ▽ *dry* Static ▼

Hole Depth *28.0 ft* Screen: Diameter *NA* Length *NA* Type/Size *NA*

Hole Diameter *2.875 in* Casing: Diameter *NA* Length *NA* Type *NA*

Drill Co. *Vista Geoscience* Drilling Method *Direct Push/Dual-tube* Sand Pack *NA*

Driller *Chase Cain* Driller Reg. # *WD-1705* Log By *Brad Barton*

Start Date *5/22/2016* Completion Date *5/22/2016* Checked By *S. Varsa*

COMMENTS
Adjacent to MW-1. Water level at MW-1 = 30.95 ft. below TOC, ~28.5 ft. below GS. Surface is dirt with minor vegetation. NM = Not measured.

Bentonite Chips | Bentonite Granules | Grout | Bentonite Pellets | Sand Pack | PP Sand Pack

Depth (ft)	PID (ppm)	% Recovery	Blow Count Recovery	Graphic Log	USCS	Description (Color, Moisture, Texture, Structure, Odor) Geologic Descriptions are Based on the USCS.
0						
0	0.0					Sand, silty, brown, dry, loose, medium to fine sand, no hydrocarbon odor. (0-8' cleared with a hydro-vac).
2	0.0					
	0.0					
4	0.0	100%			SM	
	0.0					
6	0.0					
	0.0					
8	0.0					Well-graded sand, dry, loose, all sand sizes, subangular, no cementation to minor noted at 16', no hydrocarbon odor, some iron oxidation present, soil compacted in the core liner in the 10-15' and 15-20' intervals; minor gravel.
	0.0	100%				
10	0.0					
	0.0				SW	
12	0.0	100%				
	0.0					
14						

Continued Next Page

Drilling Log

MWH

Soil Boring **DP-1**

Project *Miles Federal #1A* Owner *El Paso CGP Company, LLC*

Location *Rio Arriba County, New Mexico* Project Number *10509134*

Depth (ft)	PID (ppm)	% Recovery	Blow Count Recovery	Graphic Log	USCS	Description (Color, Moisture, Texture, Structure, Odor) Geologic Descriptions are Based on the USCS.
						Continued
14	0.0	100%			SW	
	0.0					
16	0.0					
	0.0	DP1 17-18'				
		100%				
18	0.0					
	0.0	DP1 19-20'				
20	0.0					Possible sandstone- probe refusal at 20'. Begin augering. Driller reports intermittent hard and soft in the weathered sandstone. Auger refusal at 28'. Auger cuttings have a slight hydrocarbon odor from 20-28', cuttings are very moist.
	NM					
22	20.5					
	NM					
24	NM					
	NM					
26	NM					
	192.5	DP1 27-28'				
28	NM					Total depth = 28'.
30						
32						

Drilling Log

MWH

Soil Boring **DP-2**

Project *Miles Federal #1A* Owner *El Paso CGP Company, LLC*

Location *Rio Arriba County, New Mexico* Project Number *10509134*

Surface Elev. *6046.70 ft* North *NA* East *NA*

Top of Casing *NA* Water Level Initial ▽ *26.0ft* 05/22/16 14:30 Static ▼ *27.0ft* 05/22/16 15:40

Hole Depth *34.0 ft* Screen: Diameter *NA* Length *NA* Type/Size *NA*

Hole Diameter *2.875 in* Casing: Diameter *NA* Length *NA* Type *NA*

Drill Co. *Vista Geoscience* Drilling Method *Direct Push/Dual-tube* Sand Pack *NA*

Driller *Chase Cain* Driller Reg. # *WD-1705* Log By *Brad Barton*

Start Date *5/22/2016* Completion Date *5/22/2016* Checked By *S. Varsa*

COMMENTS
Water level at MW-1 = 30.95 ft. below TOC, ~28.5 ft. below GS. Surface is dirt with minor vegetation (sagebrush). NM = Not measured.

Bentonite Chips | Bentonite Granules | Grout | Bentonite Pellets | Sand Pack | PP Sand Pack

Depth (ft)	PID (ppm)	% Recovery	Blow Count Recovery	Graphic Log	USCS	Description (Color, Moisture, Texture, Structure, Odor) Geologic Descriptions are Based on the USCS.
0						
	0.0					Sand, silty, brown, dry, loose. (0-8' cleared with a hydro-vac).
2	0.0					
	0.0					
4	0.0	100%			SM	
	0.0					
6	0.0					
	0.0					
8	0.0					
	0.0	100%				Well-graded sand, dry, loose but becoming consolidated at 16.5' with probe refusal at 17.5', very coarse to very fine sand but mostly fine, no hydrocarbon odor, subangular grains, grain size increases with depth, trace gravel, possible CaCO3 at 17.5'.
10	0.0					
	0.0					
12	0.0					
	0.0	100%			SW	
14	0.0					
	0.0					
16	0.0	DP2 16.5-17.5'				
	0.0	100%				
	0.0					
18	NM					Possible cemented sands/sandstone. Begin augering at 17.5'. Driller reports intermittent hard and soft in the weathered sandstone. Augering continued to 34'. Water at 26'.

Continued Next Page

Drilling Log

MWH

Soil Boring **DP-2**

Project *Miles Federal #1A* Owner *El Paso CGP Company, LLC*

Location *Rio Arriba County, New Mexico* Project Number *10509134*

Depth (ft)	PID (ppm)	% Recovery	Blow Count Recovery	Graphic Log	USCS	Description (Color, Moisture, Texture, Structure, Odor) Geologic Descriptions are Based on the USCS.
						Continued
	NM					
20	NM					
	NM					
22	NM					
	NM					
24	NM					
	NM					
26	NM					
	NM					
28	NM					
	NM					
30	0.0					
	NM					
32	NM					
	NM					
34	NM					
						Total depth = 34'.
36						
38						
40						
42						
44						

APPENDIX B

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: 400-122217-1
Client Project/Site: Miles Fed #1A

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

Attn: Steve Varsa

Authorized for release by:
6/9/2016 5:40:53 PM

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

Table of Contents

Qualifiers

GC VOA

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.

GC Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.

Glossary

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

Case Narrative

Client: MWH Americas Inc
Project/Site: Miles Fed #1A

TestAmerica Job ID: 400-122217-1

Job ID: 400-122217-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-122217-1

Comments
No additional comments.

Receipt
The samples were received on 5/26/2016 9:27 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.8º C.

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

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

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

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

Detection Summary

Client: MWH Americas Inc
Project/Site: Miles Fed #1A

TestAmerica Job ID: 400-122217-1

Client Sample ID: DP-2 (16.5-17.5) — Lab Sample ID: 400-122217-1

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Chloride	100		29		mg/Kg	1	☼	300.0	Soluble

Client Sample ID: DP-1 (17-18) — Lab Sample ID: 400-122217-2

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Chloride	480		24		mg/Kg	1	☼	300.0	Soluble

Client Sample ID: DP-1 (19-20) — Lab Sample ID: 400-122217-3

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Chloride	470		26		mg/Kg	1	☼	300.0	Soluble

Client Sample ID: DP-1 (27-28) — Lab Sample ID: 400-122217-4

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Gasoline Range Organics (GRO) C6--C10	500		30		mg/Kg	250	☼	8015B	Total/NA
Benzene	0.23		0.059		mg/Kg	50	☼	8021B	Total/NA
Ethylbenzene	3.6	F1	0.059		mg/Kg	50	☼	8021B	Total/NA
Toluene	1.8		0.30		mg/Kg	50	☼	8021B	Total/NA
Xylenes, Total	13	F1	0.30		mg/Kg	50	☼	8021B	Total/NA
C10-C28	13		13		mg/Kg	1	☼	8015B	Total/NA
Chloride	640		26		mg/Kg	1	☼	300.0	Soluble

This Detection Summary does not include radiochemical test results.

Sample Summary

Client: MWH Americas Inc
Project/Site: Miles Fed #1A

TestAmerica Job ID: 400-122217-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-122217-1	DP-2 (16.5-17.5)	Solid	05/22/16 13:20	05/26/16 09:27
400-122217-2	DP-1 (17-18)	Solid	05/22/16 15:25	05/26/16 09:27
400-122217-3	DP-1 (19-20)	Solid	05/22/16 15:35	05/26/16 09:27
400-122217-4	DP-1 (27-28)	Solid	05/22/16 16:30	05/26/16 09:27

Client Sample ID: DP-2 (16.5-17.5)

Date Collected: 05/22/16 13:20
Date Received: 05/26/16 09:27

Lab Sample ID: 400-122217-1

Matrix: Solid
Percent Solids: 68.9

Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) C6--C10	<0.13		0.13		mg/Kg	☼	06/01/16 12:00	06/02/16 03:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid)	*104*		*65 - 125*	*06/01/16 12:00*	*06/02/16 03:01*	*1*

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0013		0.0013		mg/Kg	☼	06/01/16 12:00	06/02/16 03:01	1
Ethylbenzene	<0.0013		0.0013		mg/Kg	☼	06/01/16 12:00	06/02/16 03:01	1
Toluene	<0.0065		0.0065		mg/Kg	☼	06/01/16 12:00	06/02/16 03:01	1
Xylenes, Total	<0.0065		0.0065		mg/Kg	☼	06/01/16 12:00	06/02/16 03:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*100*		*40 - 150*	*06/01/16 12:00*	*06/02/16 03:01*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	<14		14		mg/Kg	☼	06/02/16 09:32	06/07/16 22:31	1
C28-C35	<14		14		mg/Kg	☼	06/02/16 09:32	06/07/16 22:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*28*		*27 - 151*	*06/02/16 09:32*	*06/07/16 22:31*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**100**		29		mg/Kg	☼		06/07/16 03:01	1

Client Sample ID: DP-1 (17-18)

Date Collected: 05/22/16 15:25
Date Received: 05/26/16 09:27

Lab Sample ID: 400-122217-2

Matrix: Solid
Percent Solids: 86.8

Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) C6--C10	<0.11		0.11		mg/Kg	☼	06/01/16 12:00	06/02/16 03:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid)	*100*		*65 - 125*	*06/01/16 12:00*	*06/02/16 03:28*	*1*

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0011		0.0011		mg/Kg	☼	06/01/16 12:00	06/02/16 03:28	1
Ethylbenzene	<0.0011		0.0011		mg/Kg	☼	06/01/16 12:00	06/02/16 03:28	1
Toluene	<0.0054		0.0054		mg/Kg	☼	06/01/16 12:00	06/02/16 03:28	1
Xylenes, Total	<0.0054		0.0054		mg/Kg	☼	06/01/16 12:00	06/02/16 03:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*99*		*40 - 150*	*06/01/16 12:00*	*06/02/16 03:28*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	<11		11		mg/Kg	☼	06/02/16 09:32	06/07/16 22:42	1
C28-C35	<11		11		mg/Kg	☼	06/02/16 09:32	06/07/16 22:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*27*		*27 - 151*	*06/02/16 09:32*	*06/07/16 22:42*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**480**		24		mg/Kg	☼		06/07/16 03:24	1

Client Sample ID: DP-1 (19-20)

Date Collected: 05/22/16 15:35
Date Received: 05/26/16 09:27

Lab Sample ID: 400-122217-3

Matrix: Solid
Percent Solids: 75.6

Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) C6--C10	<0.12		0.12		mg/Kg	☼	06/01/16 18:17	06/02/16 04:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid)	*109*		*65 - 125*	*06/01/16 18:17*	*06/02/16 04:52*	*1*

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0012		0.0012		mg/Kg	☼	06/01/16 18:17	06/02/16 04:52	1
Ethylbenzene	<0.0012		0.0012		mg/Kg	☼	06/01/16 18:17	06/02/16 04:52	1
Toluene	<0.0062		0.0062		mg/Kg	☼	06/01/16 18:17	06/02/16 04:52	1
Xylenes, Total	<0.0062		0.0062		mg/Kg	☼	06/01/16 18:17	06/02/16 04:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*101*		*40 - 150*	*06/01/16 18:17*	*06/02/16 04:52*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	<13		13		mg/Kg	☼	06/02/16 09:32	06/07/16 22:52	1
C28-C35	<13		13		mg/Kg	☼	06/02/16 09:32	06/07/16 22:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*54*		*27 - 151*	*06/02/16 09:32*	*06/07/16 22:52*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**470**		26		mg/Kg	☼		06/07/16 03:47	1

Client Sample ID: DP-1 (27-28)

Lab Sample ID: 400-122217-4

Date Collected: 05/22/16 16:30

Matrix: Solid

Date Received: 05/26/16 09:27

Percent Solids: 75.4

Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) C6--C10	500		30		mg/Kg	☼	06/01/16 17:00	06/02/16 16:21	250

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid)	*95*		*65 - 125*	*06/01/16 17:00*	*06/02/16 16:21*	*250*

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.23		0.059		mg/Kg	☼	06/01/16 17:00	06/02/16 05:47	50
Ethylbenzene	3.6	F1	0.059		mg/Kg	☼	06/01/16 17:00	06/02/16 05:47	50
Toluene	1.8		0.30		mg/Kg	☼	06/01/16 17:00	06/02/16 05:47	50
Xylenes, Total	13	F1	0.30		mg/Kg	☼	06/01/16 17:00	06/02/16 05:47	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*94*		*40 - 150*	*06/01/16 17:00*	*06/02/16 05:47*	*50*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	13		13		mg/Kg	☼	06/02/16 09:32	06/07/16 23:03	1
C28-C35	<13		13		mg/Kg	☼	06/02/16 09:32	06/07/16 23:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*51*		*27 - 151*	*06/02/16 09:32*	*06/07/16 23:03*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	640		26		mg/Kg	☼		06/07/16 04:09	1

GC VOA

Prep Batch: 307464

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-122090-A-1-B MS	Matrix Spike	Total/NA	Solid	5035	
400-122090-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	
400-122217-4	DP-1 (27-28)	Total/NA	Solid	5035	
400-122217-4 MS	DP-1 (27-28)	Total/NA	Solid	5035	
400-122217-4 MSD	DP-1 (27-28)	Total/NA	Solid	5035	
LCS 400-307464/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCS 400-307464/8-A	Lab Control Sample	Total/NA	Solid	5035	
MB 400-307464/2-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 307478

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-122217-4	DP-1 (27-28)	Total/NA	Solid	8021B	307464
400-122217-4 MS	DP-1 (27-28)	Total/NA	Solid	8021B	307464
400-122217-4 MSD	DP-1 (27-28)	Total/NA	Solid	8021B	307464
LCS 400-307464/8-A	Lab Control Sample	Total/NA	Solid	8021B	307464
MB 400-307464/2-A	Method Blank	Total/NA	Solid	8021B	307464

Analysis Batch: 307479

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-122217-4	DP-1 (27-28)	Total/NA	Solid	8015B	307464
LCS 400-307464/1-A	Lab Control Sample	Total/NA	Solid	8015B	307464
MB 400-307464/2-A	Method Blank	Total/NA	Solid	8015B	307464

Analysis Batch: 307480

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-122090-A-1-B MS	Matrix Spike	Total/NA	Solid	8015B	307464
400-122090-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B	307464

Analysis Batch: 308196

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-122217-1	DP-2 (16.5-17.5)	Total/NA	Solid	8021B	308281
400-122217-2	DP-1 (17-18)	Total/NA	Solid	8021B	308281
400-122217-2 MS	DP-1 (17-18)	Total/NA	Solid	8021B	308281
400-122217-2 MSD	DP-1 (17-18)	Total/NA	Solid	8021B	308281
400-122217-3	DP-1 (19-20)	Total/NA	Solid	8021B	308281
LCS 400-308281/3-A	Lab Control Sample	Total/NA	Solid	8021B	308281
MB 400-308281/1-A	Method Blank	Total/NA	Solid	8021B	308281

Analysis Batch: 308197

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-122217-1	DP-2 (16.5-17.5)	Total/NA	Solid	8015B	308281
400-122217-2	DP-1 (17-18)	Total/NA	Solid	8015B	308281
400-122217-3	DP-1 (19-20)	Total/NA	Solid	8015B	308281
400-122262-B-3-C MS	Matrix Spike	Total/NA	Solid	8015B	308281
400-122262-B-3-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B	308281
LCS 400-308281/2-A	Lab Control Sample	Total/NA	Solid	8015B	308281
MB 400-308281/1-A	Method Blank	Total/NA	Solid	8015B	308281

Prep Batch: 308281

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-122217-1	DP-2 (16.5-17.5)	Total/NA	Solid	5035	

GC VOA (Continued)

Prep Batch: 308281 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-122217-2	DP-1 (17-18)	Total/NA	Solid	5035	
400-122217-2 MS	DP-1 (17-18)	Total/NA	Solid	5035	
400-122217-2 MSD	DP-1 (17-18)	Total/NA	Solid	5035	
400-122217-3	DP-1 (19-20)	Total/NA	Solid	5035	
400-122262-B-3-C MS	Matrix Spike	Total/NA	Solid	5035	
400-122262-B-3-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	
LCS 400-308281/2-A	Lab Control Sample	Total/NA	Solid	5035	
LCS 400-308281/3-A	Lab Control Sample	Total/NA	Solid	5035	
MB 400-308281/1-A	Method Blank	Total/NA	Solid	5035	

GC Semi VOA

Prep Batch: 308333

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-122217-1	DP-2 (16.5-17.5)	Total/NA	Solid	3546	
400-122217-2	DP-1 (17-18)	Total/NA	Solid	3546	
400-122217-3	DP-1 (19-20)	Total/NA	Solid	3546	
400-122217-4	DP-1 (27-28)	Total/NA	Solid	3546	
400-122218-A-7-B MS	Matrix Spike	Total/NA	Solid	3546	
400-122218-A-7-C MSD	Matrix Spike Duplicate	Total/NA	Solid	3546	
LCS 400-308333/22-A	Lab Control Sample	Total/NA	Solid	3546	
MB 400-308333/23-A	Method Blank	Total/NA	Solid	3546	

Analysis Batch: 308869

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-122217-1	DP-2 (16.5-17.5)	Total/NA	Solid	8015B	308333
400-122217-2	DP-1 (17-18)	Total/NA	Solid	8015B	308333
400-122217-3	DP-1 (19-20)	Total/NA	Solid	8015B	308333
400-122217-4	DP-1 (27-28)	Total/NA	Solid	8015B	308333
400-122218-A-7-B MS	Matrix Spike	Total/NA	Solid	8015B	308333
400-122218-A-7-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B	308333
LCS 400-308333/22-A	Lab Control Sample	Total/NA	Solid	8015B	308333
MB 400-308333/23-A	Method Blank	Total/NA	Solid	8015B	308333

HPLC/IC

Leach Batch: 308530

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-121955-A-1-E MS	Matrix Spike	Soluble	Solid	DI Leach	
400-121955-A-1-F MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
400-122217-1	DP-2 (16.5-17.5)	Soluble	Solid	DI Leach	
400-122217-2	DP-1 (17-18)	Soluble	Solid	DI Leach	
400-122217-3	DP-1 (19-20)	Soluble	Solid	DI Leach	
400-122217-4	DP-1 (27-28)	Soluble	Solid	DI Leach	
LCS 400-308530/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 400-308530/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
MB 400-308530/1-A	Method Blank	Soluble	Solid	DI Leach	

HPLC/IC (Continued)

Analysis Batch: 308790

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-121955-A-1-E MS	Matrix Spike	Soluble	Solid	300.0	308530
400-121955-A-1-F MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	308530
LCS 400-308530/2-A	Lab Control Sample	Soluble	Solid	300.0	308530
LCSD 400-308530/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	308530
MB 400-308530/1-A	Method Blank	Soluble	Solid	300.0	308530

Analysis Batch: 309038

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-122217-1	DP-2 (16.5-17.5)	Soluble	Solid	300.0	308530
400-122217-2	DP-1 (17-18)	Soluble	Solid	300.0	308530
400-122217-3	DP-1 (19-20)	Soluble	Solid	300.0	308530
400-122217-4	DP-1 (27-28)	Soluble	Solid	300.0	308530

General Chemistry

Analysis Batch: 307945

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-122216-A-1 DU	Duplicate	Total/NA	Solid	Moisture	
400-122217-1	DP-2 (16.5-17.5)	Total/NA	Solid	Moisture	
400-122217-2	DP-1 (17-18)	Total/NA	Solid	Moisture	
400-122217-3	DP-1 (19-20)	Total/NA	Solid	Moisture	
400-122217-4	DP-1 (27-28)	Total/NA	Solid	Moisture	

Method: 8015B - Gasoline Range Organics - (GC)

Lab Sample ID: MB 400-307464/2-A
Matrix: Solid
Analysis Batch: 307479

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 307464

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) C6--C10	<5.0		5.0		mg/Kg		05/25/16 12:50	05/26/16 19:29	50

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid)	*108*		*65 - 125*	*05/25/16 12:50*	*05/26/16 19:29*	*50*

Lab Sample ID: LCS 400-307464/1-A
Matrix: Solid
Analysis Batch: 307479

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 307464

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO) C6--C10			50.0	50.5		mg/Kg		101	62 - 141		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
a,a,a-Trifluorotoluene (fid)	*107*		*65 - 125*

Lab Sample ID: 400-122090-A-1-B MS
Matrix: Solid
Analysis Batch: 307480

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 307464

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO) C6--C10	<5.0		50.0	48.0		mg/Kg	☼	96	10 - 150		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
a,a,a-Trifluorotoluene (fid)	*105*		*65 - 125*

Lab Sample ID: 400-122090-A-1-C MSD
Matrix: Solid
Analysis Batch: 307480

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 307464

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) C6--C10	<5.0		50.0	54.1		mg/Kg	☼	108	10 - 150	12	32

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
a,a,a-Trifluorotoluene (fid)	*106*		*65 - 125*

Lab Sample ID: MB 400-308281/1-A
Matrix: Solid
Analysis Batch: 308197

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 308281

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) C6--C10	<0.10		0.10		mg/Kg		06/01/16 12:00	06/01/16 15:00	1

Method: 8015B - Gasoline Range Organics - (GC) (Continued)

Lab Sample ID: MB 400-308281/1-A
Matrix: Solid
Analysis Batch: 308197

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 308281

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid)	105		65 - 125	06/01/16 12:00	06/01/16 15:00	1

Lab Sample ID: LCS 400-308281/2-A
Matrix: Solid
Analysis Batch: 308197

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 308281

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO) C6--C10			1.00	0.981		mg/Kg		98	62 - 141		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
a,a,a-Trifluorotoluene (fid)	103		65 - 125

Lab Sample ID: 400-122262-B-3-C MS
Matrix: Solid
Analysis Batch: 308197

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 308281

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO) C6--C10	<0.13		1.33	1.15		mg/Kg	☼	86	10 - 150		

Surrogate	MS %Recovery	MS Qualifier	Limits
a,a,a-Trifluorotoluene (fid)	105		65 - 125

Lab Sample ID: 400-122262-B-3-D MSD
Matrix: Solid
Analysis Batch: 308197

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 308281

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) C6--C10	<0.13		1.31	1.15		mg/Kg	☼	87	10 - 150	0	32

Surrogate	MSD %Recovery	MSD Qualifier	Limits
a,a,a-Trifluorotoluene (fid)	102		65 - 125

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 400-307464/2-A
Matrix: Solid
Analysis Batch: 307478

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 307464

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.050		0.050		mg/Kg		05/25/16 12:50	05/26/16 19:29	50
Ethylbenzene	<0.050		0.050		mg/Kg		05/25/16 12:50	05/26/16 19:29	50
Toluene	<0.25		0.25		mg/Kg		05/25/16 12:50	05/26/16 19:29	50
Xylenes, Total	<0.25		0.25		mg/Kg		05/25/16 12:50	05/26/16 19:29	50

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

Lab Sample ID: MB 400-307464/2-A
Matrix: Solid
Analysis Batch: 307478

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 307464

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (pid)	102		40 - 150	05/25/16 12:50	05/26/16 19:29	50

Lab Sample ID: LCS 400-307464/8-A
Matrix: Solid
Analysis Batch: 307478

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 307464

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	2.50	2.53		mg/Kg		101	74 - 127
Ethylbenzene	2.50	2.56		mg/Kg		102	79 - 131
Toluene	2.50	2.57		mg/Kg		103	76 - 127
Xylenes, Total	7.50	7.73		mg/Kg		103	80 - 129

Surrogate	LCS %Recovery	LCS Qualifier	Limits
a,a,a-Trifluorotoluene (pid)	96		40 - 150

Lab Sample ID: 400-122217-4 MS
Matrix: Solid
Analysis Batch: 307478

Client Sample ID: DP-1 (27-28)
Prep Type: Total/NA
Prep Batch: 307464

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.23		2.97	3.61		mg/Kg	☼	114	10 - 150
Ethylbenzene	3.6	F1	2.97	6.74		mg/Kg	☼	106	10 - 150
Toluene	1.8		2.97	4.99		mg/Kg	☼	106	10 - 150
Xylenes, Total	13	F1	8.92	22.5		mg/Kg	☼	103	50 - 150

Surrogate	MS %Recovery	MS Qualifier	Limits
a,a,a-Trifluorotoluene (pid)	92		40 - 150

Lab Sample ID: 400-122217-4 MSD
Matrix: Solid
Analysis Batch: 307478

Client Sample ID: DP-1 (27-28)
Prep Type: Total/NA
Prep Batch: 307464

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.23		2.97	3.36		mg/Kg	☼	105	10 - 150	7	34
Ethylbenzene	3.6	F1	2.97	6.22		mg/Kg	☼	88	10 - 150	8	66
Toluene	1.8		2.97	4.63		mg/Kg	☼	94	10 - 150	7	44
Xylenes, Total	13	F1	8.92	20.7		mg/Kg	☼	84	50 - 150	8	46

Surrogate	MSD %Recovery	MSD Qualifier	Limits
a,a,a-Trifluorotoluene (pid)	92		40 - 150

Lab Sample ID: MB 400-308281/1-A
Matrix: Solid
Analysis Batch: 308196

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 308281

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0010		0.0010		mg/Kg		06/01/16 12:00	06/01/16 15:00	1

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

Lab Sample ID: MB 400-308281/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 308196 — **Prep Batch: 308281**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	<0.0010		0.0010		mg/Kg		06/01/16 12:00	06/01/16 15:00	1
Toluene	<0.0050		0.0050		mg/Kg		06/01/16 12:00	06/01/16 15:00	1
Xylenes, Total	<0.0050		0.0050		mg/Kg		06/01/16 12:00	06/01/16 15:00	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*102*		*40 - 150*	*06/01/16 12:00*	*06/01/16 15:00*	*1*

Lab Sample ID: LCS 400-308281/3-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 308196 — **Prep Batch: 308281**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.0500	0.0510		mg/Kg		102	74 - 127		
Ethylbenzene			0.0500	0.0500		mg/Kg		100	79 - 131		
Toluene			0.0500	0.0508		mg/Kg		102	76 - 127		
Xylenes, Total			0.150	0.149		mg/Kg		99	80 - 129		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
a,a,a-Trifluorotoluene (pid)	*98*		*40 - 150*

Lab Sample ID: 400-122217-2 MS — **Client Sample ID: DP-1 (17-18)**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 308196 — **Prep Batch: 308281**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	<0.0011		0.0554	0.0511		mg/Kg	☼	92	10 - 150		
Ethylbenzene	<0.0011		0.0554	0.0466		mg/Kg	☼	84	10 - 150		
Toluene	<0.0054		0.0554	0.0494		mg/Kg	☼	89	10 - 150		
Xylenes, Total	<0.0054		0.166	0.139		mg/Kg	☼	84	50 - 150		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
a,a,a-Trifluorotoluene (pid)	*100*		*40 - 150*

Lab Sample ID: 400-122217-2 MSD — **Client Sample ID: DP-1 (17-18)**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 308196 — **Prep Batch: 308281**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.0011		0.0569	0.0578		mg/Kg	☼	102	10 - 150	12	34
Ethylbenzene	<0.0011		0.0569	0.0558		mg/Kg	☼	98	10 - 150	18	66
Toluene	<0.0054		0.0569	0.0577		mg/Kg	☼	101	10 - 150	16	44
Xylenes, Total	<0.0054		0.171	0.166		mg/Kg	☼	97	50 - 150	18	46

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
a,a,a-Trifluorotoluene (pid)	*102*		*40 - 150*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 400-308333/23-A
Matrix: Solid
Analysis Batch: 308869

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 308333

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	<10		10		mg/Kg		06/02/16 09:32	06/07/16 20:12	1
C28-C35	<10		10		mg/Kg		06/02/16 09:32	06/07/16 20:12	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*65*		*27 - 151*	*06/02/16 09:32*	*06/07/16 20:12*	*1*

Lab Sample ID: LCS 400-308333/22-A
Matrix: Solid
Analysis Batch: 308869

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 308333

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
C10-C28			338	305		mg/Kg		90	63 - 153		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*102*		*27 - 151*

Lab Sample ID: 400-122218-A-7-B MS
Matrix: Solid
Analysis Batch: 308869

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 308333

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
C10-C28	<13	F1	445	230	F1	mg/Kg	☼	52	62 - 204		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
o-Terphenyl	*63*		*27 - 151*

Lab Sample ID: 400-122218-A-7-C MSD
Matrix: Solid
Analysis Batch: 308869

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 308333

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
C10-C28	<13	F1	441	235	F1	mg/Kg	☼	53	62 - 204	2	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
o-Terphenyl	*63*		*27 - 151*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 400-308530/1-A
Matrix: Solid
Analysis Batch: 308790

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<20		20		mg/Kg			06/05/16 04:26	1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 400-308530/2-A
Matrix: Solid
Analysis Batch: 308790

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			100	97.4		mg/Kg		97	80 - 120		

Lab Sample ID: LCSD 400-308530/3-A
Matrix: Solid
Analysis Batch: 308790

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride			100	97.2		mg/Kg		97	80 - 120	0	15

Lab Sample ID: 400-121955-A-1-E MS
Matrix: Solid
Analysis Batch: 308790

Client Sample ID: Matrix Spike
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	26		112	136		mg/Kg	☼	98	80 - 120		

Lab Sample ID: 400-121955-A-1-F MSD
Matrix: Solid
Analysis Batch: 308790

Client Sample ID: Matrix Spike Duplicate
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	26		112	138		mg/Kg	☼	101	80 - 120	2	15

Lab Chronicle

Client: MWH Americas Inc
Project/Site: Miles Fed #1A

TestAmerica Job ID: 400-122217-1

Client Sample ID: DP-2 (16.5-17.5)

Lab Sample ID: 400-122217-1

Date Collected: 05/22/16 13:20

Matrix: Solid

Date Received: 05/26/16 09:27

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			307945	05/28/16 16:16	LEC	TAL PEN
	Instrument ID: NOEQUIP									

Client Sample ID: DP-2 (16.5-17.5)

Lab Sample ID: 400-122217-1

Date Collected: 05/22/16 13:20

Matrix: Solid

Date Received: 05/26/16 09:27

Percent Solids: 68.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.61 g	5.0 g	308281	06/01/16 12:00	GRK	TAL PEN
Total/NA	Analysis	8015B		1	5.61 g	5.0 g	308197	06/02/16 03:01	GRK	TAL PEN
	Instrument ID: CH_RITA									
Total/NA	Prep	5035			5.61 g	5.0 g	308281	06/01/16 12:00	GRK	TAL PEN
Total/NA	Analysis	8021B		1	5.61 g	5.0 g	308196	06/02/16 03:01	GRK	TAL PEN
	Instrument ID: CH_RITA									
Total/NA	Prep	3546			15.35 g	2.0 mL	308333	06/02/16 09:32	RDT	TAL PEN
Total/NA	Analysis	8015B		1	15.35 g	2.0 mL	308869	06/07/16 22:31	RM	TAL PEN
	Instrument ID: Eva									
Soluble	Leach	DI Leach			2.54 g	50 mL	308530	06/03/16 12:29	TAJ	TAL PEN
Soluble	Analysis	300.0		1	10 mL		309038	06/07/16 03:01	TAJ	TAL PEN
	Instrument ID: IC2									

Client Sample ID: DP-1 (17-18)

Lab Sample ID: 400-122217-2

Date Collected: 05/22/16 15:25

Matrix: Solid

Date Received: 05/26/16 09:27

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			307945	05/28/16 16:16	LEC	TAL PEN
	Instrument ID: NOEQUIP									

Client Sample ID: DP-1 (17-18)

Lab Sample ID: 400-122217-2

Date Collected: 05/22/16 15:25

Matrix: Solid

Date Received: 05/26/16 09:27

Percent Solids: 86.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.30 g	5.0 g	308281	06/01/16 12:00	GRK	TAL PEN
Total/NA	Analysis	8015B		1	5.30 g	5.0 g	308197	06/02/16 03:28	GRK	TAL PEN
	Instrument ID: CH_RITA									
Total/NA	Prep	5035			5.30 g	5.0 g	308281	06/01/16 12:00	GRK	TAL PEN
Total/NA	Analysis	8021B		1	5.30 g	5.0 g	308196	06/02/16 03:28	GRK	TAL PEN
	Instrument ID: CH_RITA									
Total/NA	Prep	3546			15.47 g	2.0 mL	308333	06/02/16 09:32	RDT	TAL PEN
Total/NA	Analysis	8015B		1	15.47 g	2.0 mL	308869	06/07/16 22:42	RM	TAL PEN
	Instrument ID: Eva									

Client Sample ID: DP-1 (17-18)

Lab Sample ID: 400-122217-2

Date Collected: 05/22/16 15:25
Matrix: Solid
Date Received: 05/26/16 09:27
Percent Solids: 86.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			2.42 g	50 mL	308530	06/03/16 12:29	TAJ	TAL PEN
Soluble	Analysis	300.0		1	10 mL		309038	06/07/16 03:24	TAJ	TAL PEN
	Instrument ID: IC2									

Client Sample ID: DP-1 (19-20)

Lab Sample ID: 400-122217-3

Date Collected: 05/22/16 15:35
Matrix: Solid
Date Received: 05/26/16 09:27

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			307945	05/28/16 16:16	LEC	TAL PEN
	Instrument ID: NOEQUIP									

Client Sample ID: DP-1 (19-20)

Lab Sample ID: 400-122217-3

Date Collected: 05/22/16 15:35
Matrix: Solid
Date Received: 05/26/16 09:27
Percent Solids: 75.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.33 g	5.0 g	308281	06/01/16 18:17	GRK	TAL PEN
Total/NA	Analysis	8015B		1	5.33 g	5.0 g	308197	06/02/16 04:52	GRK	TAL PEN
	Instrument ID: CH_RITA									
Total/NA	Prep	5035			5.33 g	5.0 g	308281	06/01/16 18:17	GRK	TAL PEN
Total/NA	Analysis	8021B		1	5.33 g	5.0 g	308196	06/02/16 04:52	GRK	TAL PEN
	Instrument ID: CH_RITA									
Total/NA	Prep	3546			15.36 g	2.0 mL	308333	06/02/16 09:32	RDT	TAL PEN
Total/NA	Analysis	8015B		1	15.36 g	2.0 mL	308869	06/07/16 22:52	RM	TAL PEN
	Instrument ID: Eva									
Soluble	Leach	DI Leach			2.59 g	50 mL	308530	06/03/16 12:29	TAJ	TAL PEN
Soluble	Analysis	300.0		1	10 mL		309038	06/07/16 03:47	TAJ	TAL PEN
	Instrument ID: IC2									

Client Sample ID: DP-1 (27-28)

Lab Sample ID: 400-122217-4

Date Collected: 05/22/16 16:30
Matrix: Solid
Date Received: 05/26/16 09:27

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			307945	05/28/16 16:16	LEC	TAL PEN
	Instrument ID: NOEQUIP									

Lab Chronicle

Client: MWH Americas Inc
Project/Site: Miles Fed #1A

TestAmerica Job ID: 400-122217-1

Client Sample ID: DP-1 (27-28)
Date Collected: 05/22/16 16:30
Date Received: 05/26/16 09:27

Lab Sample ID: 400-122217-4
Matrix: Solid
Percent Solids: 75.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.58 g	5.0 g	307464	06/01/16 17:00	GRK	TAL PEN
Total/NA	Analysis	8015B		250	5.58 g	5.0 g	307479	06/02/16 16:21	GRK	TAL PEN
	Instrument ID: CH_RITA									
Total/NA	Prep	5035			5.58 g	5.0 g	307464	06/01/16 17:00	GRK	TAL PEN
Total/NA	Analysis	8021B		50	5.58 g	5.0 g	307478	06/02/16 05:47	GRK	TAL PEN
	Instrument ID: CH_RITA									
Total/NA	Prep	3546			15.20 g	2.0 mL	308333	06/02/16 09:32	RDT	TAL PEN
Total/NA	Analysis	8015B		1	15.20 g	2.0 mL	308869	06/07/16 23:03	RM	TAL PEN
	Instrument ID: Eva									
Soluble	Leach	DI Leach			2.58 g	50 mL	308530	06/03/16 12:29	TAJ	TAL PEN
Soluble	Analysis	300.0		1	10 mL		309038	06/07/16 04:09	TAJ	TAL PEN
	Instrument ID: IC2									

Laboratory References:

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

Certification Summary

Client: MWH Americas Inc
Project/Site: Miles Fed #1A

TestAmerica Job ID: 400-122217-1

Laboratory: TestAmerica Pensacola

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-16
Arizona	State Program	9	AZ0710	01-11-17
Arkansas DEQ	State Program	6	88-0689	09-01-16
California	ELAP	9	2510	03-31-18
Florida	NELAP	4	E81010	06-30-16
Georgia	State Program	4	N/A	06-30-16
Illinois	NELAP	5	200041	10-09-16
Iowa	State Program	7	367	07-31-16
Kansas	NELAP	7	E-10253	07-31-16 *
Kentucky (UST)	State Program	4	53	06-30-16
Kentucky (WW)	State Program	4	98030	12-31-16
Louisiana	NELAP	6	30976	06-30-16
Maryland	State Program	3	233	09-30-16
Massachusetts	State Program	1	M-FL094	06-30-16
Michigan	State Program	5	9912	06-30-16
New Jersey	NELAP	2	FL006	06-30-17 *
North Carolina (WW/SW)	State Program	4	314	12-31-16
Oklahoma	State Program	6	9810	08-31-16
Pennsylvania	NELAP	3	68-00467	01-31-17
Rhode Island	State Program	1	LAO00307	12-30-16
South Carolina	State Program	4	96026	06-30-16
Tennessee	State Program	4	TN02907	06-30-16
Texas	NELAP	6	T104704286-15-9	09-30-16
USDA	Federal		P330-13-00193	07-01-16
Virginia	NELAP	3	460166	06-14-16
Washington	State Program	10	C915	05-15-17
West Virginia DEP	State Program	3	136	06-30-16

* Certification renewal pending - certification considered valid.

Method Summary

Client: MWH Americas Inc
Project/Site: Miles Fed #1A

TestAmerica Job ID: 400-122217-1

Method	Method Description	Protocol	Laboratory
8015B	Gasoline Range Organics - (GC)	SW846	TAL PEN
8021B	Volatile Organic Compounds (GC)	SW846	TAL PEN
8015B	Diesel Range Organics (DRO) (GC)	SW846	TAL PEN
300.0	Anions, Ion Chromatography	MCAWW	TAL PEN
Moisture	Percent Moisture	EPA	TAL PEN

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

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

Laboratory References:

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

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

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Brad Barton	Lab PM: Edwards, Marty P	Carrier Tracking No(s):	COC No: 400-55305-24156.1
Client Contact: Steve Varsa	Phone: 316 305 2789	E-Mail: marty.edwards@testamericainc.com		Page: Page 1 of 1
Company: MWH Americas Inc		Analysis Requested		Job #:
Address: 11153 Aurora Avenue	Due Date Requested: Per ARF			Preservation Codes:
City: Des Moines	TAT Requested (days): Per ARF			A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)
State, Zip: IA. 50322-7904				
Phone: 303-291-2239(Tel)	PO #: Purchase Order Requested			
Email: steve.varsa@us.mwhglobal.com	~~WO#:~~ ARF# ERG-MWH-04-28-16-CW3-01		400-122217 COC	
Project Name: Miles Fed #1A	Project #: 40005479			Other:
Site: Miles Federal #1A	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Preservation Code	Field Filtered Sample (Yes or No)	8015B_DRO - DRO C10-C28 / ORO & Chloride	8015B_GRO, 8021B	Total Number of containers	Special Instructions/Note:
DP-2 (16.5-17.5)	5/22/16	1320	G	Solid		N	1	1	2	
DP-1 (17-18)	5/22/16	1525	G	Solid		N	1	1	2	
DP-1 (19-20)	5/22/16	1535	G	Solid		N	1	1	2	
DP-1 (27-28)	5/22/16	1630	G	Solid		N	1	1	2	
				~~Solid~~						
				~~Solid~~						
				~~Solid~~						

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) Per ARF

Special Instructions/QC Requirements: Per ARF

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

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by: Brad Barton	Date/Time: 5/25/16 0930	Company MWH	Received by: Fed Ex office	Date/Time: 5/25/16 0930	Company Fed Ex
Relinquished by: Fed Ex	Date/Time: 5/26/16 -	Company Fed Ex	Received by:	Date/Time: 5/26/16 0927	Company TA

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

Cooler Temperature(s) °C and Other Remarks: 1.8 C IR6

Login Sample Receipt Checklist

Client: MWH Americas Inc

Job Number: 400-122217-1

Login Number: 122217

List Source: TestAmerica Pensacola

List Number: 1

Creator: Crawford, Lauren E

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	1.8°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 (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

APPENDIX C

envirotech

Bill of Lading

MANIFEST # 54599
GENERATOR El Paso
POINT OF ORIGIN Lindrith B# 24
TRANSPORTER Sierra
DATE 5-25-16 JOB # 14073-0016

PHONE: (505) 632-0615 • 5796 U.S. HIGHWAY 64 • FARMINGTON, NEW MEXICO 87401

LOAD NO.	COMPLETE DESCRIPTION OF SHIPMENT					TRANSPORTING COMPANY			
	DESTINATION	MATERIAL	GRID	YDS	BBLS	TKT#	TRK#	TIME	DRIVER SIGNATURE
1	LF II	Cont Soil	K-1		1	—	6	12:45	Juan Molina
					1				

Miles Federal Soil Investigation soil cuttings combined with soil cuttings from Lindrith B#24, totaling 1 Drum

RESULTS			LANDFARM EMPLOYEE	NOTES
<282	CHLORIDE TEST	1	EL	
	PAINT FILTER TEST	1	Certification of above receival & placement	

By signing as the driver/transporter, I certify the material hauled from the above location has not been added to or tampered with. I certify the material is from the above mentioned Generator/Point of Origin and that no additional material has been added or mixed into the load.

Generator Onsite Contact _____ Phone _____

Signatures required prior to distribution of the legal document. DISTRIBUTION: **White** - Company Records, **Yellow** - Billing, **Pink** - Customer, **Goldenrod** - LF Copy

APPENDIX D

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: 400-120430-1
Client Project/Site: Miles Fed #1A

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

Attn: Steve Varsa

Authorized for release by:
5/3/2016 5:04:26 PM

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

Table of Contents

Client: MWH Americas Inc
Project/Site: Miles Fed #1A

TestAmerica Job ID: 400-120430-1

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: 400-120430-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-120430-1

Comments
No additional comments.

Receipt
The samples were received on 4/19/2016 9:43 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.9º 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: Miles Fed #1A

TestAmerica Job ID: 400-120430-1

Client Sample ID: TRIP BLANK — Lab Sample ID: 400-120430-1

No Detections.

Client Sample ID: MW-1 — Lab Sample ID: 400-120430-2

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene	81		2.0		ug/L	2		8021B	Total/NA
Ethylbenzene	68		2.0		ug/L	2		8021B	Total/NA
Toluene	99		10		ug/L	2		8021B	Total/NA
Xylenes, Total	1100		10		ug/L	2		8021B	Total/NA

Client Sample ID: MW-2 — Lab Sample ID: 400-120430-3

No Detections.

Client Sample ID: MW-3 — Lab Sample ID: 400-120430-4

No Detections.

This Detection Summary does not include radiochemical test results.

Sample Summary

Client: MWH Americas Inc
Project/Site: Miles Fed #1A

TestAmerica Job ID: 400-120430-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-120430-1	TRIP BLANK	Water	04/17/16 08:00	04/19/16 09:43
400-120430-2	MW-1	Water	04/17/16 11:35	04/19/16 09:43
400-120430-3	MW-2	Water	04/17/16 11:45	04/19/16 09:43
400-120430-4	MW-3	Water	04/17/16 11:50	04/19/16 09:43

Client: MWH Americas Inc
Project/Site: Miles Fed #1A

TestAmerica Job ID: 400-120430-1

Client Sample ID: TRIP BLANK
Date Collected: 04/17/16 08:00
Date Received: 04/19/16 09:43

Lab Sample ID: 400-120430-1
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			04/28/16 21:15	1
Ethylbenzene	<1.0		1.0		ug/L			04/28/16 21:15	1
Toluene	<5.0		5.0		ug/L			04/28/16 21:15	1
Xylenes, Total	<5.0		5.0		ug/L			04/28/16 21:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*98*		*78 - 124*		*04/28/16 21:15*	*1*

Client: MWH Americas Inc
Project/Site: Miles Fed #1A

TestAmerica Job ID: 400-120430-1

Client Sample ID: MW-1
Date Collected: 04/17/16 11:35
Date Received: 04/19/16 09:43

Lab Sample ID: 400-120430-2
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	81		2.0		ug/L			04/22/16 13:54	2
Ethylbenzene	68		2.0		ug/L			04/22/16 13:54	2
Toluene	99		10		ug/L			04/22/16 13:54	2
Xylenes, Total	1100		10		ug/L			04/22/16 13:54	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*100*		*78 - 124*		*04/22/16 13:54*	*2*

Client: MWH Americas Inc
Project/Site: Miles Fed #1A

TestAmerica Job ID: 400-120430-1

Client Sample ID: MW-2
Date Collected: 04/17/16 11:45
Date Received: 04/19/16 09:43

Lab Sample ID: 400-120430-3
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0		ug/L			04/22/16 08:34	1
Ethylbenzene	<1.0		1.0		ug/L			04/22/16 08:34	1
Toluene	<5.0		5.0		ug/L			04/22/16 08:34	1
Xylenes, Total	<5.0		5.0		ug/L			04/22/16 08:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*110*		*78 - 124*		*04/22/16 08:34*	*1*

Client: MWH Americas Inc
Project/Site: Miles Fed #1A

TestAmerica Job ID: 400-120430-1

Client Sample ID: MW-3
Date Collected: 04/17/16 11:50
Date Received: 04/19/16 09:43

Lab Sample ID: 400-120430-4
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0		ug/L			04/28/16 21:42	1
Ethylbenzene	<1.0		1.0		ug/L			04/28/16 21:42	1
Toluene	<5.0		5.0		ug/L			04/28/16 21:42	1
Xylenes, Total	<5.0		5.0		ug/L			04/28/16 21:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*100*		*78 - 124*		*04/28/16 21:42*	*1*

QC Association Summary

Client: MWH Americas Inc
Project/Site: Miles Fed #1A

TestAmerica Job ID: 400-120430-1

GC VOA

Analysis Batch: 302837

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-120371-B-2 MS	Matrix Spike	Total/NA	Water	8021B	
400-120371-B-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8021B	
400-120430-3	MW-2	Total/NA	Water	8021B	
LCS 400-302837/1001	Lab Control Sample	Total/NA	Water	8021B	
MB 400-302837/2	Method Blank	Total/NA	Water	8021B	

Analysis Batch: 302977

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-120367-A-2 MS	Matrix Spike	Total/NA	Water	8021B	
400-120367-A-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8021B	
400-120430-2	MW-1	Total/NA	Water	8021B	
LCS 400-302977/1002	Lab Control Sample	Total/NA	Water	8021B	
MB 400-302977/4	Method Blank	Total/NA	Water	8021B	

Analysis Batch: 303815

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-120430-1	TRIP BLANK	Total/NA	Water	8021B	
400-120430-4	MW-3	Total/NA	Water	8021B	
400-120433-B-15 MS	Matrix Spike	Total/NA	Water	8021B	
400-120433-B-15 MSD	Matrix Spike Duplicate	Total/NA	Water	8021B	
LCS 400-303815/1001	Lab Control Sample	Total/NA	Water	8021B	
MB 400-303815/2	Method Blank	Total/NA	Water	8021B	

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 400-302837/2
Matrix: Water
Analysis Batch: 302837

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

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0		ug/L			04/21/16 11:39	1
Ethylbenzene	<1.0		1.0		ug/L			04/21/16 11:39	1
Toluene	<5.0		5.0		ug/L			04/21/16 11:39	1
Xylenes, Total	<5.0		5.0		ug/L			04/21/16 11:39	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*110*		*78 - 124*		*04/21/16 11:39*	*1*

Lab Sample ID: LCS 400-302837/1001
Matrix: Water
Analysis Batch: 302837

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	54.4		ug/L		109	85 - 115		
Ethylbenzene			50.0	54.1		ug/L		108	85 - 115		
Toluene			50.0	53.9		ug/L		108	85 - 115		
Xylenes, Total			150	164		ug/L		109	85 - 115		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
a,a,a-Trifluorotoluene (pid)	*108*		*78 - 124*

Lab Sample ID: 400-120371-B-2 MS
Matrix: Water
Analysis Batch: 302837

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	42.7		ug/L		85	44 - 150		
Ethylbenzene	<1.0		50.0	42.8		ug/L		86	70 - 142		
Toluene	<5.0		50.0	43.4		ug/L		84	69 - 136		
Xylenes, Total	<5.0		150	132		ug/L		85	68 - 142		

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

Lab Sample ID: 400-120371-B-2 MSD
Matrix: Water
Analysis Batch: 302837

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<1.0		50.0	41.8		ug/L		84	44 - 150	2	16
Ethylbenzene	<1.0		50.0	42.5		ug/L		85	70 - 142	1	16
Toluene	<5.0		50.0	42.5		ug/L		82	69 - 136	2	16
Xylenes, Total	<5.0		150	130		ug/L		84	68 - 142	2	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 400-302977/4
Matrix: Water
Analysis Batch: 302977

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

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0		ug/L			04/22/16 12:59	1
Ethylbenzene	<1.0		1.0		ug/L			04/22/16 12:59	1
Toluene	<5.0		5.0		ug/L			04/22/16 12:59	1
Xylenes, Total	<5.0		5.0		ug/L			04/22/16 12:59	1

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

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

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			50.0	49.3		ug/L		99	85 - 115		
Ethylbenzene			50.0	49.7		ug/L		99	85 - 115		
Toluene			50.0	49.5		ug/L		99	85 - 115		
Xylenes, Total			150	149		ug/L		99	85 - 115		

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

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

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	<1.0		50.0	44.0		ug/L		88	44 - 150		
Ethylbenzene	<1.0		50.0	44.1		ug/L		88	70 - 142		
Toluene	<5.0		50.0	44.4		ug/L		89	69 - 136		
Xylenes, Total	<5.0		150	132		ug/L		88	68 - 142		

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

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

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<1.0		50.0	47.5		ug/L		95	44 - 150	8	16
Ethylbenzene	<1.0		50.0	47.8		ug/L		96	70 - 142	8	16
Toluene	<5.0		50.0	47.9		ug/L		96	69 - 136	8	16
Xylenes, Total	<5.0		150	144		ug/L		96	68 - 142	8	15

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

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

Lab Sample ID: MB 400-303815/2
Matrix: Water
Analysis Batch: 303815

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

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0		ug/L			04/28/16 04:24	1
Ethylbenzene	<1.0		1.0		ug/L			04/28/16 04:24	1
Toluene	<5.0		5.0		ug/L			04/28/16 04:24	1
Xylenes, Total	<5.0		5.0		ug/L			04/28/16 04:24	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*103*		*78 - 124*		*04/28/16 04:24*	*1*

Lab Sample ID: LCS 400-303815/1001
Matrix: Water
Analysis Batch: 303815

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	51.8		ug/L		104	85 - 115		
Ethylbenzene			50.0	50.6		ug/L		101	85 - 115		
Toluene			50.0	51.5		ug/L		103	85 - 115		
Xylenes, Total			150	150		ug/L		100	85 - 115		

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

Lab Sample ID: 400-120433-B-15 MS
Matrix: Water
Analysis Batch: 303815

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	59.0		ug/L		118	44 - 150		
Ethylbenzene	<1.0		50.0	52.3		ug/L		105	70 - 142		
Toluene	<5.0		50.0	56.1		ug/L		112	69 - 136		
Xylenes, Total	<5.0		150	156		ug/L		104	68 - 142		

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

Lab Sample ID: 400-120433-B-15 MSD
Matrix: Water
Analysis Batch: 303815

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	58.8		ug/L		118	44 - 150	0	16
Ethylbenzene	<1.0		50.0	57.4		ug/L		115	70 - 142	9	16
Toluene	<5.0		50.0	58.2		ug/L		116	69 - 136	4	16
Xylenes, Total	<5.0		150	172		ug/L		115	68 - 142	9	15

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

Lab Chronicle

Client: MWH Americas Inc
Project/Site: Miles Fed #1A

TestAmerica Job ID: 400-120430-1

Client Sample ID: TRIP BLANK
Lab Sample ID: 400-120430-1
Date Collected: 04/17/16 08:00
Matrix: Water
Date Received: 04/19/16 09:43

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	303815	04/28/16 21:15	GRK	TAL PEN
	Instrument ID: CH_RITA									

Client Sample ID: MW-1
Lab Sample ID: 400-120430-2
Date Collected: 04/17/16 11:35
Matrix: Water
Date Received: 04/19/16 09:43

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		2	5 mL	5 mL	302977	04/22/16 13:54	MKA	TAL PEN
	Instrument ID: CH_RITA									

Client Sample ID: MW-2
Lab Sample ID: 400-120430-3
Date Collected: 04/17/16 11:45
Matrix: Water
Date Received: 04/19/16 09:43

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	302837	04/22/16 08:34	MKA	TAL PEN
	Instrument ID: ETHYL									

Client Sample ID: MW-3
Lab Sample ID: 400-120430-4
Date Collected: 04/17/16 11:50
Matrix: Water
Date Received: 04/19/16 09:43

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	303815	04/28/16 21:42	GRK	TAL PEN
	Instrument ID: CH_RITA									

Laboratory References:

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

Certification Summary

Client: MWH Americas Inc
Project/Site: Miles Fed #1A

TestAmerica Job ID: 400-120430-1

Laboratory: TestAmerica Pensacola

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-16
Arizona	State Program	9	AZ0710	01-11-17
Arkansas DEQ	State Program	6	88-0689	09-01-16
California	ELAP	9	2510	03-31-18
Florida	NELAP	4	E81010	06-30-16
Georgia	State Program	4	N/A	06-30-16
Illinois	NELAP	5	200041	10-09-16
Iowa	State Program	7	367	07-31-16
Kansas	NELAP	7	E-10253	05-31-16 *
Kentucky (UST)	State Program	4	53	06-30-16
Kentucky (WW)	State Program	4	98030	12-31-16
Louisiana	NELAP	6	30976	06-30-16
Maryland	State Program	3	233	09-30-16
Massachusetts	State Program	1	M-FL094	06-30-16
Michigan	State Program	5	9912	06-30-16
New Jersey	NELAP	2	FL006	06-30-16
North Carolina (WW/SW)	State Program	4	314	12-31-16
Oklahoma	State Program	6	9810	08-31-16
Pennsylvania	NELAP	3	68-00467	01-31-17
Rhode Island	State Program	1	LAO00307	12-30-16
South Carolina	State Program	4	96026	06-30-16
Tennessee	State Program	4	TN02907	06-30-16
Texas	NELAP	6	T104704286-15-9	09-30-16
USDA	Federal		P330-13-00193	07-01-16
Virginia	NELAP	3	460166	06-14-16
West Virginia DEP	State Program	3	136	06-30-16

* Certification renewal pending - certification considered valid.

Method Summary

Client: MWH Americas Inc
Project/Site: Miles Fed #1A

TestAmerica Job ID: 400-120430-1

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

Protocol References:

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

Laboratory References:

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

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

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Brad Barker / Clint Oberbroeckling	Lab PM: Edwards, Marty P	Carrier Tracking No(s):	COC No: 400-54733-21711.1
Client Contact: Ms. Sarah Gardner	Phone: 346 634 1738	E-Mail: marty.edwards@testamericainc.com		Page: Page 1 of 1
Company: MWH Americas Inc		Analysis Requested		Job #:
Address: 1560 Broadway Suite 1800	Due Date Requested: Per ARF			Preservation Codes:
City: Denver	TAT Requested (days): Per ARF			A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - ph 4-5; Z - other (specify)
State, Zip: CO, 80202				
Phone: 303-291-2239(Tel)	PO #: Purchase Order Requested			
Email: sarah.gardner@mwhglobal.com	WO#: ARF # FRG-MWH-03-30-15-CW0-01			Other:
Project Name: Miles Fed 1A	Project #: 40005479			
Site: Miles Fed #1A	SSOW#:			

400-120430 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)	8021B - 5ITEX 8021	Total Number of containers	Special Instructions/Note:
				Preservation Code:	X	X	X	
Trip Blank	4/17/16	0800	-	Water	N	N 2	2	Per ARF
MW-1	4/17/16	1135		Water	N	N 2	2	
MW-2	4/17/16	1145		Water	N	N 2	2	
MW-3	4/17/16	1150		Water	N	N 2	2	

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
X Non-Hazard; Flammable; Skin Irritant; Poison B; Unknown; Radiological	Return To Client; X Disposal By Lab; Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Per ARF	Special Instructions/QC Requirements: Per ARF

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

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	Brad Barker	4/18/16 1530	MWH	Fed Ex Office	4/18/16	Fed Ex
	Fed Ex	4/19/16 -	Fed Ex		4/19/16 0943	TA

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 2.9C IR-2

Login Sample Receipt Checklist

Client: MWH Americas Inc

Job Number: 400-120430-1

Login Number: 120430

List Source: TestAmerica Pensacola

List Number: 1

Creator: Crawford, Lauren E

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.9°C IR-2
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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

TestAmerica Job ID: 400-128858-1
Client Project/Site: Miles Fed 1A

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

Attn: Ms. Sarah Gardner

Madonna Myers

Authorized for release by:
10/28/2016 9:46:34 AM
Madonna Myers, Project Manager II
(615)796-1870
madonna.myers@testamericainc.com

Designee for

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

Table of Contents

Definitions/Glossary

Client: MWH Americas Inc
Project/Site: Miles Fed 1A

TestAmerica Job ID: 400-128858-1

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: 400-128858-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-128858-1

Comments
No additional comments.

Receipt
The samples were received on 10/18/2016 9:11 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.

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

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

Detection Summary

Client: MWH Americas Inc
Project/Site: Miles Fed 1A

TestAmerica Job ID: 400-128858-1

Client Sample ID: MW-1 — Lab Sample ID: 400-128858-1

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene	56		5.0		ug/L	5		8021B	Total/NA
Ethylbenzene	150		5.0		ug/L	5		8021B	Total/NA
Toluene	72		25		ug/L	5		8021B	Total/NA
Xylenes, Total	1300		25		ug/L	5		8021B	Total/NA

Client Sample ID: MW-2 — Lab Sample ID: 400-128858-2

No Detections.

Client Sample ID: MW-3 — Lab Sample ID: 400-128858-3

No Detections.

Client Sample ID: TB — Lab Sample ID: 400-128858-4

No Detections.

This Detection Summary does not include radiochemical test results.

Sample Summary

Client: MWH Americas Inc
Project/Site: Miles Fed 1A

TestAmerica Job ID: 400-128858-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-128858-1	MW-1	Water	10/15/16 10:51	10/18/16 09:11
400-128858-2	MW-2	Water	10/15/16 10:54	10/18/16 09:11
400-128858-3	MW-3	Water	10/15/16 11:01	10/18/16 09:11
400-128858-4	TB	Water	10/15/16 00:00	10/18/16 09:11

Client: MWH Americas Inc
Project/Site: Miles Fed 1A

TestAmerica Job ID: 400-128858-1

Client Sample ID: MW-1
Date Collected: 10/15/16 10:51
Date Received: 10/18/16 09:11

Lab Sample ID: 400-128858-1
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	56		5.0		ug/L			10/26/16 20:13	5
Ethylbenzene	150		5.0		ug/L			10/26/16 20:13	5
Toluene	72		25		ug/L			10/26/16 20:13	5
Xylenes, Total	1300		25		ug/L			10/26/16 20:13	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*97*		*78 - 124*		*10/26/16 20:13*	*5*

Client: MWH Americas Inc
Project/Site: Miles Fed 1A

TestAmerica Job ID: 400-128858-1

Client Sample ID: MW-2
Date Collected: 10/15/16 10:54
Date Received: 10/18/16 09:11

Lab Sample ID: 400-128858-2
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0		ug/L			10/26/16 00:42	1
Ethylbenzene	<1.0		1.0		ug/L			10/26/16 00:42	1
Toluene	<5.0		5.0		ug/L			10/26/16 00:42	1
Xylenes, Total	<5.0		5.0		ug/L			10/26/16 00:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*103*		*78 - 124*		*10/26/16 00:42*	*1*

Client: MWH Americas Inc
Project/Site: Miles Fed 1A

TestAmerica Job ID: 400-128858-1

Client Sample ID: MW-3
Date Collected: 10/15/16 11:01
Date Received: 10/18/16 09:11

Lab Sample ID: 400-128858-3
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0		ug/L			10/26/16 01:10	1
Ethylbenzene	<1.0		1.0		ug/L			10/26/16 01:10	1
Toluene	<5.0		5.0		ug/L			10/26/16 01:10	1
Xylenes, Total	<5.0		5.0		ug/L			10/26/16 01:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*103*		*78 - 124*		*10/26/16 01:10*	*1*

Client: MWH Americas Inc
Project/Site: Miles Fed 1A

TestAmerica Job ID: 400-128858-1

Client Sample ID: TB
Date Collected: 10/15/16 00:00
Date Received: 10/18/16 09:11

Lab Sample ID: 400-128858-4
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0		ug/L			10/26/16 01:37	1
Ethylbenzene	<1.0		1.0		ug/L			10/26/16 01:37	1
Toluene	<5.0		5.0		ug/L			10/26/16 01:37	1
Xylenes, Total	<5.0		5.0		ug/L			10/26/16 01:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*100*		*78 - 124*		*10/26/16 01:37*	*1*

QC Association Summary

Client: MWH Americas Inc
Project/Site: Miles Fed 1A

TestAmerica Job ID: 400-128858-1

GC VOA

Analysis Batch: 328165

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-128858-2	MW-2	Total/NA	Water	8021B	
400-128858-3	MW-3	Total/NA	Water	8021B	
400-128858-4	TB	Total/NA	Water	8021B	
MB 400-328165/5	Method Blank	Total/NA	Water	8021B	
LCS 400-328165/1004	Lab Control Sample	Total/NA	Water	8021B	
400-128742-A-2 MS	Matrix Spike	Total/NA	Water	8021B	
400-128742-A-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8021B	

Analysis Batch: 328444

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-128858-1	MW-1	Total/NA	Water	8021B	
MB 400-328444/4	Method Blank	Total/NA	Water	8021B	
LCS 400-328444/1003	Lab Control Sample	Total/NA	Water	8021B	
400-128919-B-2 MS	Matrix Spike	Total/NA	Water	8021B	
400-128919-B-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8021B	

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 400-328165/5
Matrix: Water
Analysis Batch: 328165

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

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0		ug/L			10/25/16 13:15	1
Ethylbenzene	<1.0		1.0		ug/L			10/25/16 13:15	1
Toluene	<5.0		5.0		ug/L			10/25/16 13:15	1
Xylenes, Total	<5.0		5.0		ug/L			10/25/16 13:15	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*101*		*78 - 124*		*10/25/16 13:15*	*1*

Lab Sample ID: LCS 400-328165/1004
Matrix: Water
Analysis Batch: 328165

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			50.0	49.0		ug/L		98	85 - 115		
Ethylbenzene			50.0	48.4		ug/L		97	85 - 115		
Toluene			50.0	49.5		ug/L		99	85 - 115		
Xylenes, Total			150	145		ug/L		97	85 - 115		

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

Lab Sample ID: 400-128742-A-2 MS
Matrix: Water
Analysis Batch: 328165

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	56.6		ug/L		113	44 - 150		
Ethylbenzene	<1.0		50.0	53.6		ug/L		107	70 - 142		
Toluene	<5.0		50.0	55.3		ug/L		111	69 - 136		
Xylenes, Total	<5.0		150	160		ug/L		106	68 - 142		

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

Lab Sample ID: 400-128742-A-2 MSD
Matrix: Water
Analysis Batch: 328165

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	54.4		ug/L		109	44 - 150	4	16
Ethylbenzene	<1.0		50.0	51.3		ug/L		103	70 - 142	4	16
Toluene	<5.0		50.0	53.1		ug/L		106	69 - 136	4	16
Xylenes, Total	<5.0		150	153		ug/L		102	68 - 142	4	15

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
a,a,a-Trifluorotoluene (pid)	*105*		*78 - 124*

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

Lab Sample ID: MB 400-328444/4
Matrix: Water
Analysis Batch: 328444

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

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0		ug/L			10/26/16 19:18	1
Ethylbenzene	<1.0		1.0		ug/L			10/26/16 19:18	1
Toluene	<5.0		5.0		ug/L			10/26/16 19:18	1
Xylenes, Total	<5.0		5.0		ug/L			10/26/16 19:18	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*99*		*78 - 124*		*10/26/16 19:18*	*1*

Lab Sample ID: LCS 400-328444/1003
Matrix: Water
Analysis Batch: 328444

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	48.0		ug/L		96	85 - 115		
Ethylbenzene			50.0	47.2		ug/L		94	85 - 115		
Toluene			50.0	48.0		ug/L		96	85 - 115		
Xylenes, Total			150	141		ug/L		94	85 - 115		

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

Lab Sample ID: 400-128919-B-2 MS
Matrix: Water
Analysis Batch: 328444

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	59.5		ug/L		119	44 - 150		
Ethylbenzene	<1.0		50.0	58.8		ug/L		118	70 - 142		
Toluene	<5.0		50.0	59.6		ug/L		119	69 - 136		
Xylenes, Total	<5.0		150	175		ug/L		117	68 - 142		

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

Lab Sample ID: 400-128919-B-2 MSD
Matrix: Water
Analysis Batch: 328444

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	61.2		ug/L		122	44 - 150	3	16
Ethylbenzene	<1.0		50.0	60.0		ug/L		120	70 - 142	2	16
Toluene	<5.0		50.0	60.7		ug/L		121	69 - 136	2	16
Xylenes, Total	<5.0		150	179		ug/L		119	68 - 142	2	15

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
a,a,a-Trifluorotoluene (pid)	*105*		*78 - 124*

Lab Chronicle

Client: MWH Americas Inc
Project/Site: Miles Fed 1A

TestAmerica Job ID: 400-128858-1

Client Sample ID: MW-1
Date Collected: 10/15/16 10:51
Date Received: 10/18/16 09:11

Lab Sample ID: 400-128858-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		5	5 mL	5 mL	328444	10/26/16 20:13	GRK	TAL PEN
	Instrument ID: CH_RITA									

Client Sample ID: MW-2
Date Collected: 10/15/16 10:54
Date Received: 10/18/16 09:11

Lab Sample ID: 400-128858-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	328165	10/26/16 00:42	GRK	TAL PEN
	Instrument ID: CH_RITA									

Client Sample ID: MW-3
Date Collected: 10/15/16 11:01
Date Received: 10/18/16 09:11

Lab Sample ID: 400-128858-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	328165	10/26/16 01:10	GRK	TAL PEN
	Instrument ID: CH_RITA									

Client Sample ID: TB
Date Collected: 10/15/16 00:00
Date Received: 10/18/16 09:11

Lab Sample ID: 400-128858-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	328165	10/26/16 01:37	GRK	TAL PEN
	Instrument ID: CH_RITA									

Laboratory References:

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

Certification Summary

Client: MWH Americas Inc
Project/Site: Miles Fed 1A

TestAmerica Job ID: 400-128858-1

Laboratory: TestAmerica Pensacola

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-17
Arizona	State Program	9	AZ0710	01-11-17
Arkansas DEQ	State Program	6	88-0689	09-01-17
California	ELAP	9	2510	03-31-18
Florida	NELAP	4	E81010	06-30-17
Georgia	State Program	4	N/A	06-30-17
Illinois	NELAP	5	200041	10-09-17
Iowa	State Program	7	367	08-01-18
Kansas	NELAP	7	E-10253	10-31-17
Kentucky (UST)	State Program	4	53	06-30-17
Kentucky (WW)	State Program	4	98030	12-31-16
Louisiana	NELAP	6	30976	06-30-17
Maryland	State Program	3	233	09-30-17
Massachusetts	State Program	1	M-FL094	06-30-17
Michigan	State Program	5	9912	05-06-17
New Jersey	NELAP	2	FL006	06-30-17
North Carolina (WW/SW)	State Program	4	314	12-31-16
Oklahoma	State Program	6	9810	08-31-17
Pennsylvania	NELAP	3	68-00467	01-31-17
Rhode Island	State Program	1	LAO00307	12-30-16
South Carolina	State Program	4	96026	06-30-16 *
Tennessee	State Program	4	TN02907	06-30-17
Texas	NELAP	6	T104704286-16-10	09-30-17
USDA	Federal		P330-16-00172	05-24-19
Virginia	NELAP	3	460166	06-14-17
Washington	State Program	10	C915	05-15-17
West Virginia DEP	State Program	3	136	06-30-17

* Certification renewal pending - certification considered valid.

Method Summary

Client: MWH Americas Inc
Project/Site: Miles Fed 1A

TestAmerica Job ID: 400-128858-1

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

SERIAL NUMBER: 80876

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: EPC GP

ADDRESS

PAGE: 1 OF 1

PROJECT NAME: Miles Fed

PROJECT NO.

CLIENT PROJECT MANAGER: Clint Oberbroeckling

PROJECT LOC. (STATE): NM

SAMPLED BY: CWO

~~CONTRACT / P.O. NO.~~ ~~ARFF~~ ERG-MWH-09-23-16-CWO-01

CLIENT PHONE: 515.210.4299

CLIENT E-MAIL OR FAX

TAT REQUESTED: RUSH NEEDS LAB PREAPPROVAL ☐ NORMAL 10 BUSINESS DAYS
☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ 5 DAYS ☐ 20 DAYS (Package) ☒ OTHER: See contract

SAMPLE DISPOSAL: ☐ RETURN TO CLIENT ☒ DISPOSAL BY LAB
☐ SEE CONTRACT ☐ OTHER:

REQUESTED ANALYSIS

400-128858 COC

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
10/15/16	1051	MW-1		X									X				2	
↓	1054	MW-2		X									X				2	
	1101	MW-3		X									X				2	
↓	—	TB		X									X				2	

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
EMPTY CONTAINERS				10/17/16	0800			
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME
EMPTY CONTAINERS							10/18/16	0911

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY:	DATE	TIME	CUSTODY INTACT? △ YES △ NO	CUSTODY SEAL NO.	REMARKS:
					2.1°C IR6

TAL-8251 (1207)

Login Sample Receipt Checklist

Client: MWH Americas Inc

Job Number: 400-128858-1

Login Number: 128858
List Number: 1
Creator: Chambers, Cheryle A

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.1°C IR6
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	