2016 ANNUAL GROUNDWATER REPORT

Fields A#7A
NMOCD Case#: 3RP-170-0
Meter Code: 89961
T32N, R11W, S 34, Unit E

SITE DETAILS

Site Location: Latitude: 36.944245 N, Longitude: -107.982116 W
Land Type: Federal
Operator: BP

SITE BACKGROUND

- **Site Assessment:** 8/94
- **Excavation:** 9/94 (70 cy)

Environmental Remediation activities at the Fields A#7A (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 BP America Production Company and is active.

The Site is located on Federal land. Various site investigations have occurred since 1994. Monitoring wells MW-1, MW-2, MW-3 and MW-4 were installed in 1995. Temporary piezometers PZ-1 through PZ-5 were installed and removed in 1997. Monitoring wells MW-4A and MW-5 though MW-11 were installed in 2016. Historically, free product has been observed and periodically recovered. Free product was not observed in 2016. Currently, groundwater sampling is conducted on a semi-annual basis.

MONITORING WELL INSTALLATION ACTIVITIES

In August 2016, new monitoring well locations were staked and surveyed for permitting and utility locating purposes. The monitoring well advancement and installation activities were completed in accordance with the Monitoring Well Installation Work Plan, submitted on June 28, 2016.

Eight new wells (MW-4R, MW-5, MW-6, MW-7, MW-8, MW-9, MW-10, and MW-11) were completed in August 2016, to further characterize the extent of the dissolved-phase hydrocarbons at the Site. Soil borings SB-1 and SB-2 were also advanced in the vicinity of the former pit to evaluate soil concentrations at these locations. Additionally, MW-2, MW-3, and MW-4 were plugged and abandoned in accordance to Subsection C of 19.27.4.30 of the New Mexico Administrative Code and the conditions outlined in the New Mexico Office of the State Engineer approved Plugging Plan. Ground surface and casing elevations of the new monitoring wells were surveyed in October 2016 by a licensed surveyor using state plane coordinates.

Monitoring wells were constructed of 2-inch-diameter, Schedule 40 polyvinyl chloride (PVC), with 0.010-inch, continuous, factory-slotted PVC screen. The well screen was installed from 15 feet below ground surface (bgs) to 45 feet bgs and bisects the observed water table located at depths ranging from 19-29 feet below the top of the monitoring well casings during 2016 gauging events. A 3-foot seal of bentonite chips was placed above the sandpack and hydrated, and the remaining annular space filled with bentonite grout. Monitoring wells MW-5 through MW-9 were completed as at-grade completions with locking water-tight compression caps and a traffic-rated bolt-down manhole centered in a concrete pad. The remaining monitoring wells were completed as stick-up wells with locking protective casings and a concrete surface completion. Four protective bollards were installed around each new monitoring well with a stick-up completion. Borehole logs and well construction diagrams are provided in Appendix A.

Monitoring well MW-10 was installed to the northwest (side gradient). Monitoring well MW-11 was installed upgradient of the former pit location. Monitoring well MW-8 was installed to the west of well MW-1. Monitoring wells MW-4R, MW-5, MW-6, MW-7, and MW-9 were installed south/southwest of the former pit. Soil boring SB-1 was completed near MW-1 to evaluate remaining soil impacts in the vicinity of the former pit. Soil boring SB-2 was completed near MW-8 to further evaluate soil impacts. Pertinent site features, the soil boring, and monitoring well locations are shown on maps in Figures 1 through 5.

During advancement of each monitoring well and soil boring completed in August 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 at the SB-1 and SB-2 locations to quantify petroleum hydrocarbon concentrations at additional intervals. Retained sample jars were stored in an ice-filled cooler and shipped under standard chain-of-custody protocols to TestAmerica Laboratories, Inc. in Pensacola, Florida (TestAmerica). The 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), gasoline range organics, diesel range organics, and mineral range organics using EPA Method 8015B; and chloride according to EPA Method 300. The soil sample analytical report is provided in Appendix B.

Monitoring well development was performed using a well swab and down-hole pump until visibly clear groundwater was observed. Development and decontamination water was containerized and transported to Basin Disposal, Inc. in Bloomfield, NM for disposal. Soil drums were staged on site for later disposal at Envirotech, Inc. (Envirotech), located south of Bloomfield, NM. On August 30, 2016, Sierra Oilfield Services, Inc. removed 12 drums of soil cuttings from the Site and delivered them to Envirotech. Disposal documentation is contained in Appendix C.

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GROUNDWATER SAMPLING ACTIVITIES

On April 15 and October 14, 2016, water levels were gauged at MW-1, MW-2, MW-3, and MW-4. Groundwater samples were collected from each well that did not contain free product using HydraSleeve™ (HydraSleeve) no-purge groundwater sampling devices. New monitoring wells MW-4R, MW-5, MW-6, MW-7, MW-8, MW-9, MW-10, and MW-11 were also gauged and sampled in the October 2016 sampling event. The HydraSleeves were set during the previous sampling event or after new well installation and development. HydraSleeves were suspended 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 groundwater analytical results and well gauging data are summarized in Tables 1 and 2, respectively. Soil analytical results are summarized in Table 3.

SITE MAPS

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

ANALYTICAL LAB REPORTS

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

GROUNDWATER RESULTS

- Groundwater elevations indicate a flow direction to the southwest (see Figures 2 and 4).
- Groundwater samples collected in 2016 from MW-1, MW-5, MW-6, MW-7,

MW-9, and MW-10 exceeded the New Mexico Water Quality Control Commission (NMWQCC) standard (10 micrograms per liter [µg/L]) for benzene in groundwater. Benzene was either below the NMWQCC standard (10 µg/L) or not detected in monitoring well MW-4A, MW-8, and MW-11.

Groundwater samples collected in 2016 from MW-6, exceeded the NMWQCC standard (775 µg/L) for toluene in groundwater. Toluene was either below the NMWQCC standard or not detected in monitoring wells MW-1, MW-4A, MW-5, MW-7, MW-8, MW-9, MW-10, and MW-11.

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

- Groundwater samples collected in 2016 from MW-6, exceeded the NMWQCC standard (620 µg/L) for total xylenes in groundwater. Total Xylenes were either below the NMWQCC standard or not detected in monitoring wells MW-1, MW-4A, MW-5, MW-7, MW-8, MW-9, MW-10, and MW-11.

SOIL RESULTS

- Soil samples were collected from the borings for monitoring wells MW-4R, MW-5 through MW-11, and soil borings SB-1 and SB-2. The benzene concentration in the soil sample collected from SB-2 (23-24 feet bgs) exceeded the New Mexico Oil Conservation Division (NMOCD) 2013 Pit Rule Guidance (10 milligrams per kilogram (mg/kg)). Total BTEX concentrations exceeded the applicable limit in the NMOCD 2013 Pit Rule Guidance (50 mg/kg) in soil samples collected and submitted from MW-7, MW-8, MW-10, and SB-2 (4-5 feet bgs, 11-12 feet bgs, and 23-24 feet bgs).

- TPH concentrations ranged from 32.7 mg/kg at MW-4R to 4,640 mg/kg in MW-7. TPH concentrations exceeded the 2013 Pit Rule Guidance (100 mg/kg) in soil samples collected and submitted from MW-5, MW-6, MW-7, MW-8, MW-9, MW-10, SB-1 (12-13 feet bgs) and SB-2 (4-5 feet bgs, 11-12 feet bgs, and 23-24 feet bgs) locations.

- Detectable concentrations of chloride was detected in one soil sample (MW-6). The concentration of chloride in MW-6 was below the 2013 Pit Rule Guidance (600 mg/kg).

PLANNED FUTURE ACTIVITIES

Groundwater monitoring events will be conducted on a semi-annual basis. The 2017 Annual Report will be submitted in early 2018.

The current operator will be contacted to determine the nature of environmental issues, which have apparently occurred, based on the presence of monitoring wells and a passive vent well observed by EPCGP personnel, and the report of a historical release noted in a March 6, 2014 Release Notification and Corrective Action (Form C-141), submitted by BP under API 3004522464. EPCGP has been unable to locate additional information in online NMOCD files regarding historical releases at this Site.

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TABLES

TABLE 1 - GROUNDWATER ANALYTICAL RESULTS

Fields A#7A					
Location	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
NMWQCC Standards:		10	750	750	620
MW-1	08/09/95	1950	1946	115	1361
MW-1	01/03/96	3150	5280	361	3460
MW-1	04/18/96	1300	2140	119	1240
MW-1	05/08/96	NS	NS	NS	NS
MW-1	07/29/96	503	804	28	363
MW-1	10/21/96	843	1300	26	422
MW-1	01/30/97	1300	2200	76.8	966
MW-1	04/21/97	951	1920	73	894
MW-1	01/30/01	NS	NS	NS	NS
MW-1	02/08/01	NS	NS	NS	NS
MW-1	02/16/01	NS	NS	NS	NS
MW-1	02/17/01	NS	NS	NS	NS
MW-1	02/26/01	NS	NS	NS	NS
MW-1	03/05/01	NS	NS	NS	NS
MW-1	04/11/01	NS	NS	NS	NS
MW-1	06/05/01	NS	NS	NS	NS
MW-1	06/15/01	NS	NS	NS	NS
MW-1	07/06/01	NS	NS	NS	NS
MW-1	07/13/01	NS	NS	NS	NS
MW-1	07/20/01	NS	NS	NS	NS
MW-1	08/01/01	NS	NS	NS	NS
MW-1	08/08/01	NS	NS	NS	NS
MW-1	08/18/01	NS	NS	NS	NS
MW-1	08/20/01	NS	NS	NS	NS
MW-1	09/05/01	NS	NS	NS	NS
MW-1	09/21/01	NS	NS	NS	NS
MW-1	09/26/01	NS	NS	NS	NS
MW-1	10/03/01	NS	NS	NS	NS
MW-1	10/10/01	NS	NS	NS	NS
MW-1	12/04/01	NS	NS	NS	NS
MW-1	12/13/01	NS	NS	NS	NS
MW-1	12/21/01	NS	NS	NS	NS
MW-1	12/28/01	NS	NS	NS	NS
MW-1	01/07/02	NS	NS	NS	NS
MW-1	01/23/02	NS	NS	NS	NS
MW-1	01/31/02	NS	NS	NS	NS
MW-1	02/07/02	NS	NS	NS	NS
MW-1	02/14/02	NS	NS	NS	NS
MW-1	02/20/02	NS	NS	NS	NS
MW-1	03/21/02	NS	NS	NS	NS
MW-1	03/28/02	NS	NS	NS	NS
MW-1	04/04/02	NS	NS	NS	NS
MW-1	04/12/02	NS	NS	NS	NS
MW-1	04/19/02	NS	NS	NS	NS
MW-1	04/25/02	NS	NS	NS	NS
MW-1	05/03/02	NS	NS	NS	NS

TABLE 1 - GROUNDWATER ANALYTICAL RESULTS

Fields A#7A					
Location	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
NMWQCC Standards:		10	750	750	620
MW-1	05/10/02	NS	NS	NS	NS
MW-1	05/17/02	NS	NS	NS	NS
MW-1	05/24/02	NS	NS	NS	NS
MW-1	05/31/02	NS	NS	NS	NS
MW-1	06/06/02	NS	NS	NS	NS
MW-1	06/14/02	NS	NS	NS	NS
MW-1	06/21/02	NS	NS	NS	NS
MW-1	06/27/02	NS	NS	NS	NS
MW-1	07/02/02	NS	NS	NS	NS
MW-1	07/11/02	NS	NS	NS	NS
MW-1	07/18/02	NS	NS	NS	NS
MW-1	08/21/02	NS	NS	NS	NS
MW-1	10/01/02	NS	NS	NS	NS
MW-1	01/15/03	NS	NS	NS	NS
MW-1	04/27/03	NS	NS	NS	NS
MW-1	07/16/03	NS	NS	NS	NS
MW-1	10/27/03	NS	NS	NS	NS
MW-1	01/26/04	121	54	15.8	216
MW-1	04/21/04	116	58.1	29.3	83.3
MW-1	07/27/04	NS	NS	NS	NS
MW-1	10/18/04	NS	NS	NS	NS
MW-1	01/25/05	NS	NS	NS	NS
MW-1	04/18/05	108	29	14.2	274
MW-1	10/22/05	180	69.2	6.3	154
MW-1	04/25/06	83.7	23.8	2.1 J	82.5
MW-1	10/24/06	254	108	4	169
MW-1	04/24/07	106	37.2	3.3	112
MW-1	10/29/07	NS	NS	NS	NS
MW-1	04/21/08	246	38.3	1.6 J	81.3
MW-1	10/09/08	NS	NS	NS	NS
MW-1	04/07/09	25.5	11	0.6 J	21.5
MW-1	11/04/09	NS	NS	NS	NS
MW-1	05/24/10	100	43.8	1.1 J	56.9
MW-1	11/02/10	NS	NS	NS	NS
MW-1	05/04/11	158	2.6	2.4	12.1
MW-1	11/01/11	NS	NS	NS	NS
MW-1	05/07/12	27.1	8.7	1.1	14.2
MW-1	06/07/13	910	110	14.0	170
MW-1	09/12/13	130	13	3.1	29
MW-1	12/13/13	380	30	4.7	98
MW-1	04/05/14	66	11	<0.20	10
MW-1	10/21/14	93	3.8	2.1	23
MW-1	05/31/15	230	12	2.5	43
MW-1	11/22/15	440	8.6	2.7	34
MW-1	04/15/16	150	29	2.3	36
MW-1	10/14/16	22	<5.0	<1.0	<5.0

TABLE 1 - GROUNDWATER ANALYTICAL RESULTS

Fields A#7A					
Location	**Date**	**Benzene (µg/L)**	**Toluene (µg/L)**	**Ethylbenzene (µg/L)**	**Total Xylenes (µg/L)**
NMWQCC Standards:		10	750	750	620
MW-2	01/03/96	28.8	<2.5	297.0	1169
MW-2	04/18/96	<1	<1	2.6	<3
MW-2	05/08/96	NS	NS	NS	NS
MW-2	07/29/96	<2	<2	<2	<6
MW-2	10/21/96	<1	<1	<1	<3
MW-2	01/30/97	<2	<2	<2	<6
MW-2	04/21/97	<1	<1	<1	<3
MW-2	04/13/01	<0.5	<0.5	<0.5	<0.5
MW-2	06/05/01	NS	NS	NS	NS
MW-2	07/20/01	NS	NS	NS	NS
MW-2	08/20/01	NS	NS	NS	NS
MW-2	05/17/02	NS	NS	NS	NS
MW-2	10/27/03	NS	NS	NS	NS
MW-2	04/21/04	NS	NS	NS	NS
MW-2	04/18/05	<1	<1	<1	<2
MW-2	04/21/08	<2	<2	<2	<6
MW-2	11/02/10	NS	NS	NS	NS
MW-2	05/04/11	0.38 J	<1	<1	<3
MW-2	11/01/11	NS	NS	NS	NS
MW-2	05/07/12	NS	NS	NS	NS
MW-2	06/07/13	NS	NS	NS	NS
MW-2	09/12/13	NS	NS	NS	NS
MW-2	12/13/13	NS	NS	NS	NS
MW-2	04/05/14	NS	NS	NS	NS
MW-2	10/21/14	NS	NS	NS	NS
MW-2	05/31/15	NS	NS	NS	NS
MW-2	11/22/15	NS	NS	NS	NS
MW-2	04/15/16	NS	NS	NS	NS
MW-2 abandoned on August 22, 2016					

TABLE 1 - GROUNDWATER ANALYTICAL RESULTS

Fields A#7A					
Location	**Date**	**Benzene (µg/L)**	**Toluene (µg/L)**	**Ethylbenzene (µg/L)**	**Total Xylenes (µg/L)**
NMWQCC Standards:		10	750	750	620
MW-3	01/03/96	176	16.4	225.0	1550
MW-3	04/18/96	129	<2	212.0	463
MW-3	05/08/96	NS	NS	NS	NS
MW-3	07/29/96	212	<2	167.0	393
MW-3	10/21/96	165	<1	157.0	467
MW-3	01/30/97	144	<1	198.0	851
MW-3	04/21/97	2070	4340	332.0	4730
MW-3	04/13/01	120	5.2	<5	80
MW-3	06/05/01	NS	NS	NS	NS
MW-3	07/20/01	NS	NS	NS	NS
MW-3	08/20/01	NS	NS	NS	NS
MW-3	04/02/02	NS	NS	NS	NS
MW-3	05/17/02	NS	NS	NS	NS
MW-3	01/25/05	NS	NS	NS	NS
MW-3	04/18/05	<1	<1	<1	<2
MW-3	10/22/05	NS	NS	NS	NS
MW-3	04/25/06	46.4	<5	<5	<10
MW-3	10/24/06	NS	NS	NS	NS
MW-3	04/24/07	179	<5	12.3	37.9
MW-3	10/29/07	NS	NS	NS	NS
MW-3	04/21/08	140	2.5	2.7	16.9
MW-3	10/09/08	NS	NS	NS	NS
MW-3	04/07/09	182	<50	<50	<100
MW-3	11/04/09	NS	NS	NS	NS
MW-3	05/24/10	NS	NS	NS	NS
MW-3	11/02/10	NS	NS	NS	NS
MW-3	05/04/11	5.7	<1	0.42 J	<3
MW-3	11/01/11	NS	NS	NS	NS
MW-3	05/07/12	14.6	<1	0.3 J	2.5 J
MW-3	06/07/13	NS	NS	NS	NS
MW-3	09/12/13	NS	NS	NS	NS
MW-3	12/13/13	NS	NS	NS	NS
MW-3	04/05/14	NS	NS	NS	NS
MW-3	10/21/14	NS	NS	NS	NS
MW-3	05/31/15	NS	NS	NS	NS
MW-3	11/22/15	NS	NS	NS	NS
MW-3	04/15/16	NS	NS	NS	NS
MW-3 abandoned on August 22, 2016					

TABLE 1 - GROUNDWATER ANALYTICAL RESULTS

Fields A#7A					
Location	**Date**	**Benzene (µg/L)**	**Toluene (µg/L)**	**Ethylbenzene (µg/L)**	**Total Xylenes (µg/L)**
NMWQCC Standards:		10	750	750	620
MW-4	01/03/96	2470	1880	206.0	2350
MW-4	04/18/96	4760	2460	235.0	1880
MW-4	01/00/00	NS	NS	NS	NS
MW-4	07/29/96	1830	2380	106.0	967
MW-4	10/21/96	3320	4520	149.0	1680
MW-4	01/30/97	4320	7420	280.0	3250
MW-4	04/21/97	2410	5170	219.0	2530
MW-4	06/05/01	NS	NS	NS	NS
MW-4	06/15/01	NS	NS	NS	NS
MW-4	07/06/01	NS	NS	NS	NS
MW-4	07/13/01	NS	NS	NS	NS
MW-4	07/20/01	NS	NS	NS	NS
MW-4	08/01/01	NS	NS	NS	NS
MW-4	08/08/01	NS	NS	NS	NS
MW-4	08/16/01	NS	NS	NS	NS
MW-4	08/20/01	NS	NS	NS	NS
MW-4	09/05/01	NS	NS	NS	NS
MW-4	09/21/01	NS	NS	NS	NS
MW-4	09/26/01	NS	NS	NS	NS
MW-4	10/03/01	NS	NS	NS	NS
MW-4	10/10/01	NS	NS	NS	NS
MW-4	12/04/01	NS	NS	NS	NS
MW-4	12/13/01	NS	NS	NS	NS
MW-4	12/21/01	NS	NS	NS	NS
MW-4	12/28/01	NS	NS	NS	NS
MW-4	01/07/02	NS	NS	NS	NS
MW-4	01/23/02	NS	NS	NS	NS
MW-4	01/31/02	NS	NS	NS	NS
MW-4	02/07/02	NS	NS	NS	NS
MW-4	02/14/02	NS	NS	NS	NS
MW-4	02/20/02	NS	NS	NS	NS
MW-4	03/21/02	NS	NS	NS	NS
MW-4	04/04/02	NS	NS	NS	NS
MW-4	05/17/02	NS	NS	NS	NS
MW-4	05/24/02	NS	NS	NS	NS
MW-4	05/31/02	NS	NS	NS	NS
MW-4	06/06/02	NS	NS	NS	NS

TABLE 1 - GROUNDWATER ANALYTICAL RESULTS

Fields A#7A					
Location	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
NMWQCC Standards:		10	750	750	620
MW-4	06/14/02	NS	NS	NS	NS
MW-4	07/18/02	NS	NS	NS	NS
MW-4	10/01/02	NS	NS	NS	NS
MW-4	01/15/03	NS	NS	NS	NS
MW-4	01/26/04	NS	NS	NS	NS
MW-4	04/21/04	NS	NS	NS	NS
MW-4	07/27/04	NS	NS	NS	NS
MW-4	10/18/04	NS	NS	NS	NS
MW-4	01/25/05	NS	NS	NS	NS
MW-4	04/18/05	NS	NS	NS	NS
MW-4	04/21/08	1580	679	6.8 J	3900
MW-4	10/09/08	NS	NS	NS	NS
MW-4	04/07/09	695	206	<50	745
MW-4	11/04/09	NS	NS	NS	NS
MW-4	05/24/10	NS	NS	NS	NS
MW-4	11/02/10	NS	NS	NS	NS
MW-4	05/04/11	NS	NS	NS	NS
MW-4	11/01/11	533	207	<10	419
MW-4	05/07/12	NS	NS	NS	NS
MW-4	06/07/13	NS	NS	NS	NS
MW-4	09/12/13	NS	NS	NS	NS
MW-4	12/13/13	NS	NS	NS	NS
MW-4	04/05/14	NS	NS	NS	NS
MW-4	10/21/14	NS	NS	NS	NS
MW-4	05/31/15	NS	NS	NS	NS
MW-4	11/22/15	NS	NS	NS	NS
MW-4	04/15/16	NS	NS	NS	NS
MW-4 replaced with MW-4A on August 21, 2016					
MW-4A	10/14/16	<1.0	<5.0	<1.0	<5.0
MW-5	10/14/16	130	6.4	19.0	57
MW-6	10/14/16	2100	880	490.0	2300
MW-7	10/14/16	410	340	31.0	270
MW-8	10/14/16	2.2	<5.0	<1.0	<5.0
MW-9	10/14/16	12	8.1	4.6	34
MW-10	10/14/16	26	32	4.6	41
MW-11	10/14/16	<1.0	<5.0	1.3	9.7

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
"DRY" = water not detected

TABLE 2 - GROUNDWATER ELEVATION RESULTS

Fields A#7A						
Location	Date	TOC	Depth to Water (ft.)	Depth to LNAPL (ft.)	LNAPL Thickness (ft.)	GW Elevation (ft.)
MW-1	08/09/95	6085.98	22.50	NR		6063.48
MW-1	01/03/96	6085.98	23.28	NR		6062.70
MW-1	04/18/96	6085.98	24.20	NR		6061.78
MW-1	05/08/96	6085.98	24.20	NR		6061.78
MW-1	07/29/96	6085.98	25.07	25.02	0.05	6060.95
MW-1	10/21/96	6085.98	25.45	25.38	0.07	6060.59
MW-1	01/30/97	6085.98	26.83	26.57	0.26	6059.35
MW-1	04/21/97	6085.98	26.47	26.44	0.03	6059.54
MW-1	01/30/01	6085.98	30.08	28.74	1.34	6056.91
MW-1	02/08/01	6085.98	29.85	28.65	1.20	6057.03
MW-1	02/16/01	6085.98	30.20	29.08	1.12	6056.62
MW-1	02/17/01	6085.98	29.66	29.08	0.58	6056.76
MW-1	02/26/01	6085.98	29.54	29.39	0.15	6056.56
MW-1	03/05/01	6085.98	29.28	29.25	0.03	6056.73
MW-1	04/11/01	6085.98	29.33	NR		6056.65
MW-1	06/05/01	6085.98	29.46	29.34	0.12	6056.61
MW-1	06/15/01	6085.98	29.65	29.57	0.08	6056.39
MW-1	07/06/01	6085.98	30.00	NR		6055.98
MW-1	07/13/01	6085.98	29.96	NR		6056.02
MW-1	07/20/01	6085.98	29.69	NR		6056.29
MW-1	08/01/01	6085.98	30.19	NR		6055.79
MW-1	08/08/01	6085.98	30.12	NR		6055.86
MW-1	08/18/01	6085.98	30.44	NR		6055.54
MW-1	08/20/01	6085.98	30.32	NR		6055.66
MW-1	09/05/01	6085.98	30.38	NR		6055.60
MW-1	09/21/01	6085.98	30.63	NR		6055.35
MW-1	09/26/01	6085.98	30.78	NR		6055.20
MW-1	10/03/01	6085.98	30.69	NR		6055.29
MW-1	10/10/01	6085.98	30.33	30.32	0.01	6055.66
MW-1	12/04/01	6085.98	30.51	NR		6055.47
MW-1	12/13/01	6085.98	29.43	29.42	0.01	6056.56
MW-1	12/21/01	6085.98	30.40	30.39	0.01	6055.59
MW-1	12/28/01	6085.98	30.64	NR		6055.34
MW-1	01/07/02	6085.98	30.59	30.58	0.01	6055.40
MW-1	01/23/02	6085.98	30.41	30.40	0.01	6055.58
MW-1	01/31/02	6085.98	30.95	30.94	0.01	6055.04
MW-1	02/07/02	6085.98	31.12	31.11	0.01	6054.87
MW-1	02/14/02	6085.98	31.18	31.17	0.01	6054.81
MW-1	02/20/02	6085.98	31.15	31.14	0.01	6054.84
MW-1	03/21/02	6085.98	30.80	30.78	0.02	6055.20
MW-1	03/28/02	6085.98	30.92	NR		6055.06
MW-1	04/04/02	6085.98	30.64	NR		6055.34
MW-1	04/12/02	6085.98	31.45	NR		6054.53

TABLE 2 - GROUNDWATER ELEVATION RESULTS

Fields A#7A						
Location	Date	TOC	Depth to Water (ft.)	Depth to LNAPL (ft.)	LNAPL Thickness (ft.)	GW Elevation (ft.)
MW-1	04/19/02	6085.98	31.56	NR		6054.42
MW-1	04/25/02	6085.98	31.54	NR		6054.44
MW-1	05/03/02	6085.98	31.51	NR		6054.47
MW-1	05/10/02	6085.98	31.59	NR		6054.39
MW-1	05/17/02	6085.98	31.16	NR		6054.82
MW-1	05/24/02	6085.98	31.38	NR		6054.60
MW-1	05/31/02	6085.98	31.23	NR		6054.75
MW-1	06/06/02	6085.98	31.32	NR		6054.66
MW-1	06/14/02	6085.98	31.34	NR		6054.64
MW-1	06/21/02	6085.98	31.67	NR		6054.31
MW-1	06/27/02	6085.98	31.81	NR		6054.17
MW-1	07/02/02	6085.98	31.82	NR		6054.16
MW-1	07/11/02	6085.98	31.84	NR		6054.14
MW-1	07/18/02	6085.98	31.45	NR		6054.53
MW-1	08/21/02	6085.98	32.12	NR		6053.86
MW-1	10/01/02	6085.98	31.77	NR		6054.21
MW-1	01/15/03	6085.98	31.90	ND		6054.08
MW-1	04/27/03	6085.98	31.07	31.06	0.01	6054.92
MW-1	07/16/03	6085.98	31.30	ND		6054.69
MW-1	10/27/03	6085.98	30.97	ND		6055.01
MW-1	01/26/04	6085.98	30.67	ND		6055.31
MW-1	04/21/04	6085.98	30.83	ND		6055.15
MW-1	07/27/04	6085.98	30.97	ND		6055.01
MW-1	10/18/04	6085.98	31.15	ND		6054.83
MW-1	01/25/05	6085.98	30.19	ND		6055.79
MW-1	04/18/05	6085.98	30.19	ND		6055.79
MW-1	10/22/05	6085.98	30.74	ND		6055.24
MW-1	04/25/06	6085.98	31.41	ND		6054.57
MW-1	10/24/06	6085.98	31.39	ND		6054.59
MW-1	04/24/07	6085.98	31.66	ND		6054.32
MW-1	10/29/07	6085.98	31.73	ND		6054.25
MW-1	04/21/08	6085.98	30.31	ND		6055.67
MW-1	10/09/08	6085.98	30.69	ND		6055.29
MW-1	04/07/09	6085.98	31.24	ND		6054.74
MW-1	11/04/09	6085.98	31.77	ND		6054.21
MW-1	05/24/10	6085.98	31.33	ND		6054.65
MW-1	11/02/10	6085.98	29.93	ND		6056.05
MW-1	05/04/11	6085.98	29.91	ND		6056.07
MW-1	11/01/11	6085.98	29.80	ND		6056.18
MW-1	05/07/12	6085.98	30.29	ND		6055.69
MW-1	06/07/13	6085.98	31.41	ND		6054.57
MW-1	09/12/13	6085.98	31.55	ND		6054.43
MW-1	12/13/13	6085.98	31.09	ND		6054.89
MW-1	04/05/14	6085.98	31.24	ND		6054.74
MW-1	10/21/14	6085.98	31.65	ND		6054.33
MW-1	05/31/15	6085.98	31.82	ND		6054.16
MW-1	11/22/15	6085.98	31.27	ND		6054.71
MW-1	04/15/16	6085.98	30.87	ND		6055.11
MW-1	10/14/16	6085.98	30.96	ND		6055.02

TABLE 2 - GROUNDWATER ELEVATION RESULTS

Fields A#7A						
Location	**Date**	**TOC**	**Depth to Water (ft.)**	**Depth to LNAPL (ft.)**	**LNAPL Thickness (ft.)**	**GW Elevation (ft.)**
MW-2	01/03/96	6084.24	24.27	NR		6059.97
MW-2	04/18/96	6084.24	25.53	NR		6058.71
MW-2	05/08/96	6084.24	25.53	NR		6058.71
MW-2	07/29/96	6084.24	26.48	NR		6057.76
MW-2	10/21/96	6084.24	26.96	NR		6057.28
MW-2	01/30/97	6084.24	27.73	NR		6056.51
MW-2	04/21/97	6084.24	27.77	NR		6056.47
MW-2	04/13/01	6084.24	30.33	NR		6053.91
MW-2	06/05/01	6084.24	30.71	NR		6053.53
MW-2	07/20/01	6084.24	30.95	NR		6053.29
MW-2	08/20/01	6084.24	31.03	NR		6053.21
MW-2	05/17/02	6084.24	31.38	NR		6052.86
MW-2	10/27/03	6084.24	31.79	NR		6052.46
MW-2	04/21/04	6084.24	31.10	ND		6053.14
MW-2	04/18/05	6084.24	30.98	ND		6053.26
MW-2	04/21/08	6084.24	30.66	ND		6053.58
MW-2	11/02/10	6084.24	29.65	ND		6054.59
MW-2	05/04/11	6084.24	31.10	ND		6053.14
MW-2	11/01/11	6084.24	31.42	ND		6052.82
MW-2	05/07/12	6084.24	31.29	ND		6052.95
MW-2	06/07/13	6084.24	DRY	ND		DRY
MW-2	09/12/13	6084.24	DRY	ND		DRY
MW-2	12/13/13	6084.24	DRY	ND		DRY
MW-2	04/05/14	6084.24	DRY	ND		DRY
MW-2	10/21/14	6084.24	DRY	ND		DRY
MW-2	05/31/15	6084.24	DRY	ND		DRY
MW-2	11/22/15	6084.24	DRY	ND		DRY
MW-2	04/15/16	6084.24	DRY	ND		DRY
MW-2 abandoned on August 22, 2016						

TABLE 2 - GROUNDWATER ELEVATION RESULTS

Fields A#7A						
Location	**Date**	**TOC**	**Depth to Water (ft.)**	**Depth to LNAPL (ft.)**	**LNAPL Thickness (ft.)**	**GW Elevation (ft.)**
MW-3	01/03/96	6084.06	24.88	NR		6059.18
MW-3	04/18/96	6084.06	25.75	NR		6058.31
MW-3	05/08/96	6084.06	25.75	NR		6058.31
MW-3	07/29/96	6084.06	26.64	NR		6057.42
MW-3	10/21/96	6084.06	27.16	NR		6056.90
MW-3	01/30/97	6084.06	27.92	NR		6056.14
MW-3	04/21/97	6084.06	28.00	NR		6056.06
MW-3	04/13/01	6084.06	30.48	NR		6053.58
MW-3	06/05/01	6084.06	30.79	NR		6053.27
MW-3	07/20/01	6084.06	31.03	NR		6053.03
MW-3	08/20/01	6084.06	31.14	NR		6052.92
MW-3	04/02/02	6084.06	31.62	NR		6052.44
MW-3	05/17/02	6084.06	32.05	NR		6052.01
MW-3	01/25/05	6084.06	31.93	ND		6052.14
MW-3	04/18/05	6084.06	30.77	ND		6053.29
MW-3	10/22/05	6084.06	31.57	ND		6052.49
MW-3	04/25/06	6084.06	31.61	ND		6052.45
MW-3	10/24/06	6084.06	31.90	ND		6052.16
MW-3	04/24/07	6084.06	31.90	ND		6052.16
MW-3	10/29/07	6084.06	31.93	ND		6052.13
MW-3	04/21/08	6084.06	30.40	ND		6053.66
MW-3	10/09/08	6084.06	31.56	ND		6052.50
MW-3	04/07/09	6084.06	31.40	ND		6052.66
MW-3	11/04/09	6084.06	31.97	ND		6052.09
MW-3	05/24/10	6084.06	31.87	ND		6052.19
MW-3	11/02/10	6084.06	29.83	ND		6054.23
MW-3	05/04/11	6084.06	30.71	ND		6053.35
MW-3	11/01/11	6084.06	31.08	ND		6052.98
MW-3	05/07/12	6084.06	31.57	ND		6052.49
MW-3	06/07/13	6084.06	DRY	ND		DRY
MW-3	09/12/13	6084.06	DRY	ND		DRY
MW-3	12/13/13	6084.06	DRY	ND		DRY
MW-3	04/05/14	6084.06	DRY	ND		DRY
MW-3	10/21/14	6084.06	DRY	ND		DRY
MW-3	05/31/15	6084.06	DRY	ND		DRY
MW-3	11/22/15	6084.06	DRY	ND		DRY
MW-3	04/15/16	6084.06	DRY	ND		DRY
MW-3 abandoned on August 22, 2016						

TABLE 2 - GROUNDWATER ELEVATION RESULTS

Fields A#7A						
Location	**Date**	**TOC**	**Depth to Water (ft.)**	**Depth to LNAPL (ft.)**	**LNAPL Thickness (ft.)**	**GW Elevation (ft.)**
MW-4	01/03/96	6084.61	25.69	NR		6058.92
MW-4	04/18/96	6084.61	26.42	NR		6058.19
MW-4	01/00/00	6084.61	26.42	25.83	0.59	6058.64
MW-4	07/29/96	6084.61	28.65	26.82	1.83	6057.34
MW-4	10/21/96	6084.61	28.84	27.45	1.39	6056.82
MW-4	01/30/97	6084.61	28.85	28.43	0.42	6056.08
MW-4	04/21/97	6084.61	28.68	28.58	0.10	6056.01
MW-4	06/05/01	6084.61	31.25	31.01	0.24	6053.54
MW-4	06/15/01	6084.61	31.56	31.12	0.44	6053.38
MW-4	07/06/01	6084.61	DRY	31.20	-	DRY
MW-4	07/13/01	6084.61	DRY	31.44	-	DRY
MW-4	07/20/01	6084.61	DRY	31.51	-	DRY
MW-4	08/01/01	6084.61	DRY	31.54	-	DRY
MW-4	08/08/01	6084.61	DRY	NR		DRY
MW-4	08/16/01	6084.61	DRY	NR		DRY
MW-4	08/20/01	6084.61	DRY	NR		DRY
MW-4	09/05/01	6084.61	DRY	NR		DRY
MW-4	09/21/01	6084.61	DRY	NR		DRY
MW-4	09/26/01	6084.61	DRY	NR		DRY
MW-4	10/03/01	6084.61	DRY	NR		DRY
MW-4	10/10/01	6084.61	DRY	NR		DRY
MW-4	12/04/01	6084.61	DRY	NR		DRY
MW-4	12/13/01	6084.61	DRY	31.65	-	DRY
MW-4	12/21/01	6084.61	DRY	31.61	-	DRY
MW-4	12/28/01	6084.61	31.61	NR		6053.00
MW-4	01/07/02	6084.61	DRY	31.61	-	DRY
MW-4	01/23/02	6084.61	DRY	31.62	-	DRY
MW-4	01/31/02	6084.61	DRY	31.61	-	DRY
MW-4	02/07/02	6084.61	DRY	31.60	-	DRY
MW-4	02/14/02	6084.61	DRY	31.62	-	DRY
MW-4	02/20/02	6084.61	DRY	31.62	-	DRY
MW-4	03/21/02	6084.61	DRY	NR		DRY
MW-4	04/04/02	6084.61	DRY	NR		DRY
MW-4	05/17/02	6084.61	DRY	NR		DRY

TABLE 2 - GROUNDWATER ELEVATION RESULTS

Fields A#7A						
Location	**Date**	**TOC**	**Depth to Water (ft.)**	**Depth to LNAPL (ft.)**	**LNAPL Thickness (ft.)**	**GW Elevation (ft.)**
MW-4	05/24/02	6084.61	DRY	NR		DRY
MW-4	05/31/02	6084.61	DRY	NR		DRY
MW-4	06/06/02	6084.61	DRY	NR		DRY
MW-4	06/14/02	6084.61	DRY	NR		DRY
MW-4	07/18/02	6084.61	DRY	NR		DRY
MW-4	10/01/02	6084.61	DRY	NR		DRY
MW-4	01/15/03	6084.61	DRY	ND		DRY
MW-4	01/26/04	6084.61	DRY	ND		DRY
MW-4	04/21/04	6084.61	DRY	ND		DRY
MW-4	07/27/04	6084.61	DRY	ND		DRY
MW-4	10/18/04	6084.61	DRY	ND		DRY
MW-4	01/25/05	6084.61	DRY	ND		DRY
MW-4	04/18/05	6084.61	DRY	ND		DRY
MW-4	04/21/08	6084.61	31.22	ND		6053.39
MW-4	10/09/08	6084.61	31.40	ND		6053.21
MW-4	04/07/09	6084.61	31.40	ND		6053.21
MW-4	11/04/09	6084.61	31.58	ND		6053.03
MW-4	05/24/10	6084.61	31.47	ND		6053.14
MW-4	11/02/10	6084.61	30.60	ND		6054.01
MW-4	05/04/11	6084.61	31.05	ND		6053.56
MW-4	11/01/11	6084.61	31.05	ND		6053.56
MW-4	05/07/12	6084.61	31.47	ND		6053.14
MW-4	06/07/13	6084.61	31.42	ND		6053.19
MW-4	09/12/13	6084.61	DRY	ND		DRY
MW-4	12/13/13	6084.61	DRY	ND		DRY
MW-4	04/05/14	6084.61	DRY	ND		DRY
MW-4	10/21/14	6084.61	DRY	ND		DRY
MW-4	05/31/15	6084.61	DRY	ND		DRY
MW-4	11/22/15	6084.61	DRY	ND		DRY
MW-4	04/15/16	6084.61	DRY	ND		DRY
MW-4 replaced with MW-4A on August 21, 2016						
MW-4A	10/14/16	6084.43	32.53	ND		6051.90
MW-5	10/14/16	6081.99	28.08	ND		6053.91
MW-6	10/14/16	6081.99	29.78	ND		6052.21
MW-7	10/14/16	6082.19	27.46	ND		6054.73
MW-8	10/14/16	6082.28	27.80	ND		6054.48
MW-9	10/14/16	6082.35	27.37	ND		6054.98
MW-10	10/14/16	6086.17	31.16	ND		6055.01
MW-11	10/14/16	6085.79	30.47	ND		6055.32

Notes:
"ft" = feet
"TOC" = Top of Casing
"LNAPL" = Light non-aqueous phase liquid
"ND" = LNAPL not detected
"NR" = LNAPL not recorded
"DRY" = No water detected

TABLE 3 - SOIL ANALYTICAL RESULTS

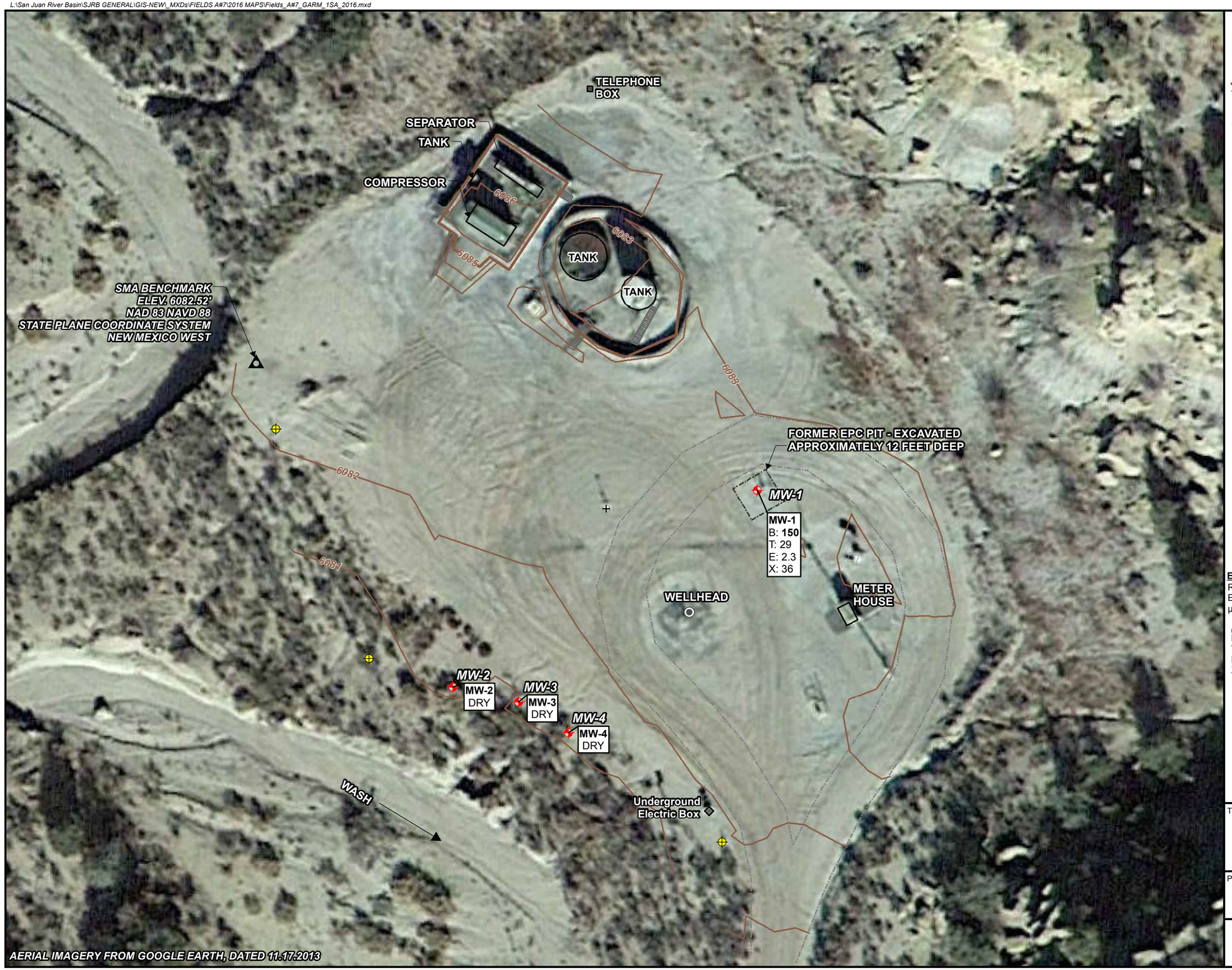
Fields A#7A											
Location (depth in feet bgs)	**Date (mm/dd/yy)**	**Benzene (mg/kg)**	**Toluene (mg/kg)**	**Ethylbenzene (mg/kg)**	**Total Xylenes (mg/kg)**	**BTEX Total (mg/kg)**	**GRO C6-10 (mg/kg)**	**DRO C10-28 (mg/kg)**	**MRO C28-35 (mg/kg)**	**TPH (mg/kg)**	**Chloride (mg/kg)**
NMOCD Criteria:		10	NE	NE	NE	50	NE	NE	NE	100	600
MW-4R (24-25)	08/21/16	BRL	BRL	0.098	0.55	0.65	26	6.7	BRL	32.7	BRL
MW-5 (23-24)	08/22/16	3.0	15	5.9	24	47.9	850	77	14	**941**	BRL
MW-6 (24-25)	08/20/16	0.11	2.0	2.8	15	19.9	320	59	BRL	**379**	22
MW-7 (13-14)	08/21/16	5.6	53	28	210	**296.6**	4000	640	BRL	**4640**	BRL
MW-8 (12-13)	08/19/16	1.2	13	11	66	**91.2**	2100	100	BRL	**2200**	BRL
MW-9 (25-26)	08/23/16	0.42	7.7	3.7	28	39.8	410	17	8.7	**435.7**	BRL
MW-10 (13-14)	08/19/16	4.9	53	6.1	50	**114**	1300	12	7.4	**1319**	BRL
MW-11 (21-22)	08/18/16	BRL	BRL	0.12	0.67	0.8	58	19	5.6	82.6	BRL
SB-1 (12-13)	08/23/16	0.18	0.44	2.7	9.3	12.6	240	34	14	**288**	BRL
SB-1 (15-16)	08/23/16	BRL	BRL	BRL	BRL	BRL	16	17	23	56	BRL
SB-1 (27-28)	08/23/16	1.5	7.5	2.3	18	29.3	390	7.1	BRL	**397.1**	BRL
SB-2 (4-5)	08/24/16	0.30	3.0	7.3	71	**81.6**	1700	690	190	**2580**	BRL
SB-2 (11-12)	08/24/16	BRL	1.9	3.0	54	**58.9**	770	240	110	**1120**	BRL
SB-2 (23-24)	08/24/16	**24**	120	30	210	**384**	2300	390	49	**2739**	BRL

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\FIELDS A#7\2016 MAPS\Fields_A#7_GARM_1SA_2016.mxd



LEGEND:

- 6082 — APPROX. GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- SMA BENCHMARK
- MONITORING WELL
- OTHER MONITORING WELL
- PASSIVE VENT WELL
- 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

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

N

SCALE IN FEET
0 30 60

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
A	1/23/2017	SLG	SLG	SV

TITLE:

GROUNDWATER ANALYTICAL RESULTS
APRIL 15, 2016

PROJECT:
FIELDS A#7A
SAN JUAN RIVER BASIN
SAN JUAN COUNTY, NEW MEXICO

MWH

Figure No.: 1

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\FIELDS A#7\2016 MAPS\Fields_A#7_GECM_1SA_2016.mxd

LEGEND:

- 6082 — APPROX. GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- SMA BENCHMARK
- MONITORING WELL
- OTHER MONITORING WELL
- PASSIVE VENT WELL
- WELLHEAD

NOTES:

6054.71 GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)

N

SCALE IN FEET

0 30 60

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
	1/23/2017	SLG	SLG	SRV

TITLE:

GROUNDWATER ELEVATION MAP
APRIL 15, 2016

PROJECT:

FIELDS A#7A
SAN JUAN RIVER BASIN
SAN JUAN COUNTY, NEW MEXICO

MWH

Figure No.: **2**

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\FIELDS A#7\2016 MAPS\Fields_A#7_GARM_2SA_2016.mxd

TELEPHONE BOX

SEPARATOR

TANK

COMPRESSOR

6086

6083

6085

TANK

TANK

SMA BENCHMARK
ELEV. 6082.52'
NAD 83 NAVD 88
STATE PLANE COORDINATE SYSTEM
NEW MEXICO WEST

MW-10
B: **26**
T: 32
E: 4.6
X: 41

MW-11
B: <1.0
T: <5.0
E: 1.3
X: 9.7

MW-1
B: **22**
T: <5.0
E: <1.0
X: <5.0

MW-8
B: 2.2
T: <5.0
E: <1.0
X: <5.0

6082

FORMER EPC PIT - EXCAVATED APPROXIMATELY 12 FEET DEEP

SB-2

SB-1

MW-9
B: **12**
T: 8.1
E: 4.6
X: 34

MW-7
B: **410**
T: 340
E: 31
X: 270

MW-6
B: **2100**
T: **880**
E: 490
X: **2300**

WELLHEAD

METER HOUSE

MW-5
B: **130**
T: 6.4
E: 19
X: 57

MW-2

MW-3

MW-4A
B: <1.0
T: <5.0
E: <1.0
X: <5.0

MW-4

WASH

Underground Electric Box

AERIAL IMAGERY FROM GOOGLE EARTH, DATED 11.17.2013

LEGEND:

- 6082 — APPROX. GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- SMA BENCHMARK
- MONITORING WELL
- SOIL BORING
- ABANDONED MONITORING WELL
- OTHER MONITORING WELL
- PASSIVE VENT WELL
- 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 30 60

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
A	1/23/2017	SLG	SLG	SV

TITLE:

GROUNDWATER ANALYTICAL RESULTS
OCTOBER 14, 2016

PROJECT:

FIELDS A#7A
SAN JUAN RIVER BASIN
SAN JUAN COUNTY, NEW MEXICO

MWH

Figure No.: 3

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\FIELDS A#7\2016 MAPS\Fields_A#7_GECM_2SA_2016.mxd

TELEPHONE BOX
SEPARATOR
TANK
COMPRESSOR
6086
6085
6083
TANK
TANK
SMA BENCHMARK
ELEV. 6082.52'
NAD 83 NAVD 88
STATE PLANE COORDINATE SYSTEM
NEW MEXICO WEST
6082
6081
MW-10
6055.01
MW-10
MW-11
6055.32
MW-11
FORMER EPC PIT - EXCAVATED APPROXIMATELY 12 FEET DEEP
MW-8
6054.49
MW-8
MW-1
6055.02
MW-1
MW-7
6054.73
MW-7
MW-9
MW-9
6054.98
METER HOUSE
6055
WELLHEAD
MW-6
6052.21
MW-6
MW-5
MW-5
6053.91
MW-2
MW-3
MW-4A
6051.90
MW-4A
MW-4
6053
6054
6052
WASH
Underground Electric Box
AERIAL IMAGERY FROM GOOGLE EARTH, DATED 11.17.2013

LEGEND:

- 6082 — APPROX. GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- SMA BENCHMARK
- MONITORING WELL
- ABANDONED MONITORING WELL
- OTHER MONITORING WELL
- PASSIVE VENT WELL
- WELLHEAD

NOTES:

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

5739.8 — CORRECTED WATER LEVEL ELEVATION CONTOUR DASHED WHERE INFERRED (FEET ABOVE MEAN SEA LEVEL)

DIRECTION OF APPARENT GROUNDWATER FLOW

N

SCALE IN FEET

0 30 60

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
	1/23/2017	SLG	SLG	SRV

TITLE:

GROUNDWATER ELEVATION MAP
OCTOBER 14, 2016

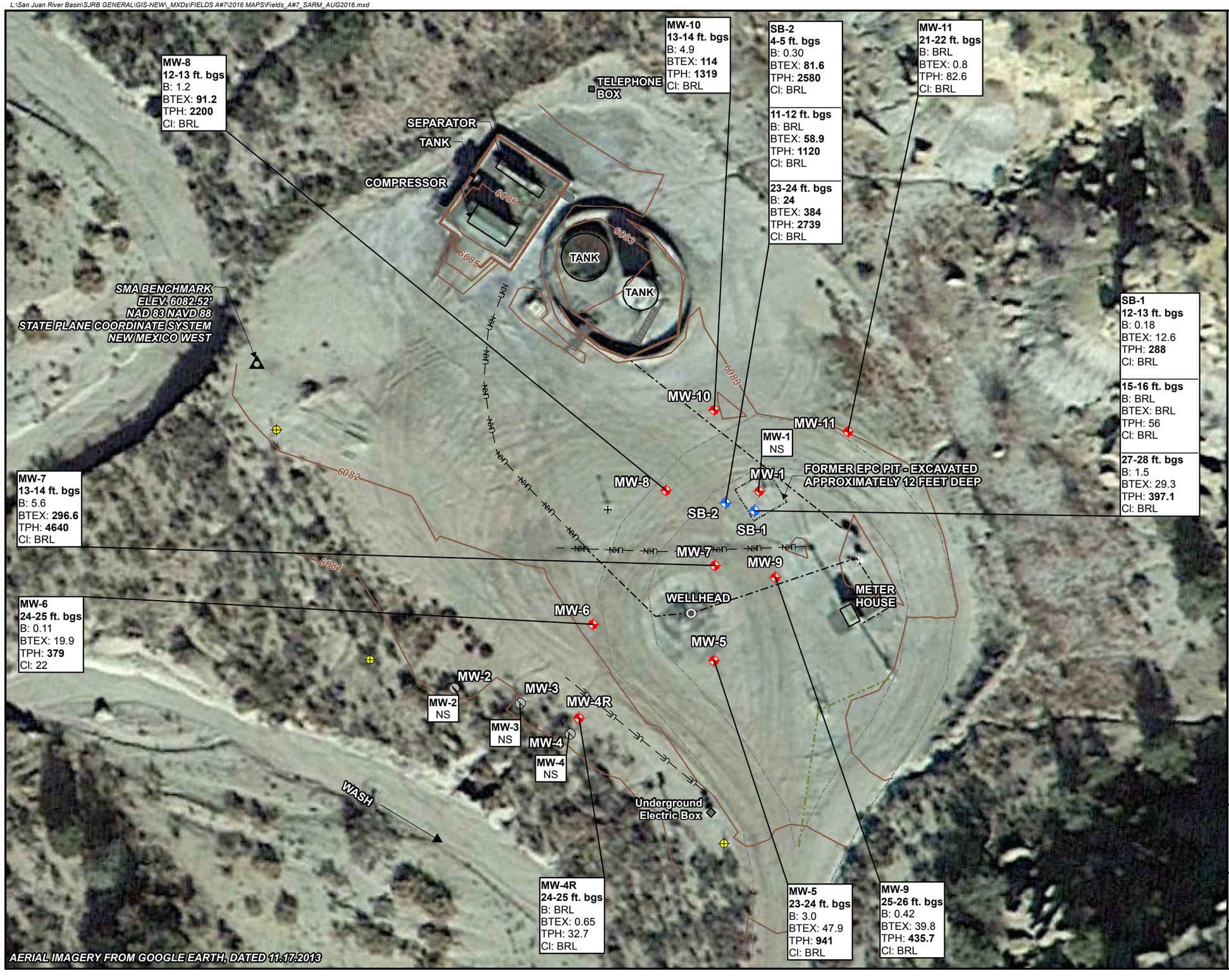
PROJECT:

FIELDS A#7A
SAN JUAN RIVER BASIN
SAN JUAN COUNTY, NEW MEXICO

MWH

Figure No.: 4

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\FIELDS A#7\2016 MAPS\Fields_A#7_SARM_AUG2016.mxd



LEGEND:

- 6082 — APPROX. GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- SMA BENCHMARK
- MONITORING WELL
- SOIL BORING
- ABANDONED MONITORING WELL
- OTHER MONITORING WELL
- PASSIVE VENT WELL
- WELLHEAD
- UKN — UKN UNKNOWN LINE
- UE — UE UNDERGROUND ELECTRIC
- PIPELINE
- COMMUNICATION

NOTES:

MW-11 SAMPLES COLLECTED 8/18/2016; MW-8 AND MW-10 8/19/2016; MW-6 8/20/2016; MW-4R AND MW-7 8/21/2016; MW-5 8/22/2016; MW-9 AND SB-1 8/23/2016; SB-2 8/24/2016.

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 30 60

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
A	1/26/2017	SLG	SLG	SV

TITLE:

SOIL ANALYTICAL RESULTS

PROJECT:
FIELDS A#7A
SAN JUAN RIVER BASIN
SAN JUAN 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 – APRIL 29, 2016 GROUNDWATER SAMPLING ANALYTICAL REPORT
OCTOBER 27, 2016 GROUNDWATER SAMPLING ANALYTICAL REPORT

APPENDIX A

Drilling Log

MWH

Monitoring Well **MW-4R**

Project *Fields A#7A* Owner *El Paso CGP Company, LLC*

Location *San Juan County, New Mexico* Project Number *10509367*

Surface Elev. *6081.55 ft* North *2162999.63* East *2679604.28*

Top of Casing *6084.43 ft* Water Level Initial ▽ *6055.43* 08/20/16 00:00 Static ▼

Hole Depth *45.0 ft* Screen: Diameter *2 in* Length *30.0 ft* Type/Size *PVC/0.01 in*

Hole Diameter *8.25 in* Casing: Diameter *2 in* Length *15.0 ft* Type *PVC*

Drill Co. *Yellow Jacket* Drilling Method *Hollow Stem Auger* Sand Pack *10/20 CO silica*

Driller *Roger Rubio* Driller Reg. # *WD-1458* Log By *Brad Barton*

Start Date *8/20/2016* Completion Date *8/24/2016* Checked By *S. Varsa*

COMMENTS
Dirt surface with minor vegetation, 5' NE of MW-4.

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.	Well Completion
0							
	0.0	100%				Silty sand, brown, dry, loose to semi-consolidated, fine to medium sand, subangular, no hydrocarbon odor, debris noted at 4.5'.	
5	0.0	100%					
	0.0					Soil vacuum excavated from the surface to 8 feet deep.	
10	0.0	100%			SM		
	0.0						
	0.0					Silt content decreases at 13', sand becoming more coarse-grained.	
15	0.0	100%					
	0.0						
20	0.0						
	0.0	100%				Sand, poorly-sorted, loose, weakly cemented, dry to slightly moist, subangular grains, no hydrocarbon odor.	
	9.8						
	8.6					Slight to moderate hydrocarbon odor at 23'.	
	516.4	MW-4R 24-25'					
25 ▽	726.4				SW		
	326.3	100%				Black hydrocarbon staining with a slight hydrocarbon odor present at 26'.	
	112.6						
	76.8					Color grades to light olive-gray/pale olive (6/3 5Y) and less odor at 27.5'. Very moist to wet from 28' to 30', some residual hydrocarbon staining present at 30'.	
	24.2	100%					
30	58.6						

Continued Next Page

Drilling Log

MWH

Monitoring Well **MW-4R**

Project *Fields A#7A* Owner *El Paso CGP Company, LLC*

Location *San Juan County, New Mexico* Project Number *10509367*

Depth (ft)	PID (ppm)	% Recovery	Blow Count Recovery	Graphic Log	USCS	Description (Color, Moisture, Texture, Structure, Odor) Geologic Descriptions are Based on the USCS.	Well Completion
						Continued	
30	68.9	100%			SW	Color changes to light brown below 30'.	
	78.9						
	17.8					Weakly to moderately cemented at 33'.	
	6.1					From 34' to 35', loose coarse sand.	
35	4.2	100%				Driller cites very hard drilling at 35'.	
	5.6						
	26.8						
	9.5					Sandstone, poorly-sorted, light gray, very moist, no hydrocarbon odor.	
	15.2						
40	128.9	100%					
	22.5						
	28.2					Color changes to light brown.	
	15.3					Saturated/wet at 43'.	
	0.0	100%				Color changes to dark gray at 45'.	
45	0.0					Total depth = 45'.	
50							
55							
60							
65							
70							

Drilling Log

MWH

Monitoring Well **MW-5**

Project *Fields A#7A* Owner *El Paso CGP Company, LLC*

Location *San Juan County, New Mexico* Project Number *10509367*

Surface Elev. *6082.21 ft* North *2163017.68* East *2679646.54*

Top of Casing *6081.99 ft* Water Level Initial ▽ *6053.99* 08/22/16 00:00 Static ▼

Hole Depth *45.0 ft* Screen: Diameter *2 in* Length *30.0 ft* Type/Size *PVC/0.01 in*

Hole Diameter *8.25 in* Casing: Diameter *2 in* Length *15.0 ft* Type *PVC*

Drill Co. *Yellow Jacket* Drilling Method *Hollow-Stem Auger* Sand Pack *10/20 CO silica*

Driller *Roger Rubio* Driller Reg. # *WD-1458* Log By *Brad Barton*

Start Date *8/20/2016* Completion Date *8/24/2016* Checked By *S. Varsa*

COMMENTS
Dirt surface, near dirt road.

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.	Well Completion
0							
	0.0	100%			SM	Silty sand, brown, dry, loose, fine to medium sand, subangular, no hydrocarbon odor.	
5	0.0	100%					
						Soil vacuum excavated from the surface to 8 feet deep.	
	0.0						
10	0.0						
	0.0	100%					
	0.0						
	0.0						
	0.0						
15	1.1						
	0.3	100%				Sand, poorly-sorted, loose, dry to slightly moist, light olive-brown, no hydrocarbon odor.	
	0.0						
	0.0						
	0.1					Dark gray/black hydrocarbon staining present at 19', no hydrocarbon odor.	
20	1.7						
	2.8	100%					
	2.6					Very slight hydrocarbon odor and gray/black hydrocarbon staining present at 22'	
	24.2	MW-5 23-24'			SW		
	1799					Very moist at 23', weakly cemented.	
25	1569						
	1546	100%					
	1663						
▽	1693					Water present at 28' along with a black oily sludge from 28' to 28.5'.	
	8.8	100%				Color becomes pale olive at 29'.	
30	4.3						

Continued Next Page

Drilling Log

MWH

Monitoring Well **MW-5**

Project *Fields A#7A* Owner *El Paso CGP Company, LLC*

Location *San Juan County, New Mexico* Project Number *10509367*

Depth (ft)	PID (ppm)	% Recovery	Blow Count Recovery	Graphic Log	USCS	Description (Color, Moisture, Texture, Structure, Odor) Geologic Descriptions are Based on the USCS.	Well Completion
						Continued	
30	16.1	100%			SW		
	20.5						
	10.1						
	6.8						
35	5.7					Driller cites very hard drilling from 35' to 45'.	
	8.2	100%					
	19.6					Sandstone, poorly-sorted, medium and coarse-grained, gray, slightly moist to wet, weakly to moderately cemented, subangular grains, none to slight hydrocarbon odor.	
	78.6						
	23.3						
40	25.6						
	47.3	100%					
	112.4						
	6.8					Moderately cemented at 43'.	
	57	100%					
45	27.5						
						Total depth = 45'.	
50							
55							
60							
65							
70							

Drilling Log

MWH

Monitoring Well **MW-6**

Project *Fields A#7A* Owner *El Paso CGP Company, LLC*

Location *San Juan County, New Mexico* Project Number *10509367*

Surface Elev. *6082.17 ft* North *2163029.05* East *2679608.65*

Top of Casing *6081.99 ft* Water Level Initial ▽ *6052.99* 08/19/16 00:00 Static ▼

Hole Depth *45.0 ft* Screen: Diameter *2 in* Length *30.0 ft* Type/Size *PVC/0.01 in*

Hole Diameter *8.25 in* Casing: Diameter *2 in* Length *15.0 ft* Type *PVC*

Drill Co. *Yellow Jacket* Drilling Method *Hollow-Stem Auger* Sand Pack *10/20 CO silica*

Driller *Roger Rubio* Driller Reg. # *WD-1458* Log By *Brad Barton*

Start Date *8/19/2016* Completion Date *8/24/2016* Checked By *S. Varsa*

COMMENTS
Dirt surface, near dirt road.

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.	Well Completion
0	0.0	100%			SM	Silty sand, brown, dry, loose to semi-consolidated, fine to medium sand, subangular, no hydrocarbon odor, some compaction in material.	
5	0.0	100%				Soil vacuum excavated from the surface to 8 feet deep.	
10	0.0 0.0 0.0 0.0 0.0 0.0	100%					
15	0.0 0.0 0.0	100%					
20	2.9 2.9 2.0 57.8	100%			SW	Sand, poorly-sorted, dark bluish-gray (4/1 gley 2) from residual hydrocarbon staining, loose, subangular, slightly moist, very slight hydrocarbon odor at 18'. Slight hydrocarbon odor at 20', slightly moist to moist.	
25	75.2 77.7 1935 1942 1887 611.1	MW-6 24-25' 100%				Strong hydrocarbon odor at 24'. Weakly cemented at 27.5' with some thin silty lamination, strong hydrocarbon odor, slightly moist, medium to coarse-grained, becomes dark gray to black with hydrocarbon staining from 28' to 30', driller cites hard drilling at 28', water present at 29'.	
▽ 30	1581 254.6 713.8	100%					

Continued Next Page

Drilling Log

MWH

Monitoring Well **MW-6**

Project *Fields A#7A* Owner *El Paso CGP Company, LLC*

Location *San Juan County, New Mexico* Project Number *10509367*

Depth (ft)	PID (ppm)	% Recovery	Blow Count Recovery	Graphic Log	USCS	Description (Color, Moisture, Texture, Structure, Odor) Geologic Descriptions are Based on the USCS.	Well Completion
						Continued	
30	92.8	100%				Sandstone, poorly-sorted, medium and coarse-grained, gray, slightly moist to wet, weakly to moderately cemented, subangular grains, no to slight hydrocarbon odor.	
	144.1						
	21.6						
	4.6						
35	3.6	100%					
	10.5						
	4.5	100%					
	14.6						
	4.7						
40	15.8	100%					
	50.1						
	15.9						
	16.7	100%				Moderately cemented at 43'.	
	0.9						
45	1.3					Total depth = 45'.	
50							
55							
60							
65							
70							

Drilling Log

MWH

Monitoring Well **MW-7**

Project *Fields A#7A* Owner *El Paso CGP Company, LLC*

Location *San Juan County, New Mexico* Project Number *10509367*

Surface Elev. *6082.42 ft* North *2163047.41* East *2679646.85*

Top of Casing *6082.19 ft* Water Level Initial ▽ *6052.19* 08/20/16 00:00 Static ▼

Hole Depth *45.0 ft* Screen: Diameter *2 in* Length *30.0 ft* Type/Size *PVC/0.01 in*

Hole Diameter *8.25 in* Casing: Diameter *2 in* Length *15.0 ft* Type *PVC*

Drill Co. *Yellow Jacket* Drilling Method *Hollow Stem Auger* Sand Pack *10/20 CO silica*

Driller *Roger Rubio* Driller Reg. # *WD-1458* Log By *Brad Barton*

Start Date *8/20/2016* Completion Date *8/24/2016* Checked By *S. Varsa*

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

COMMENTS
Dirt surface near dirt road.

Depth (ft)	PID (ppm)	% Recovery	Blow Count Recovery	Graphic Log	USCS	Description (Color, Moisture, Texture, Structure, Odor) Geologic Descriptions are Based on the USCS.	Well Completion
0							
	1.0	100%			SM	Silty sand, brown changing to dark gray/black at 4.5' and then back to brown from 8' to 10', dry, loose, fine to medium sand, slight hydrocarbon odor at 4.5' and from 8' to 10', hydrocarbon staining at 4.5', some compaction in material.	
5	5.3	100%				Soil vacuum excavated from the surface to 8 feet deep.	
	20.9						
10	9.7						
	55.7	100%			CH	Fat clay, soft, very moist, black/hydrocarbon stained, strong hydrocarbon odor.	
	33.4						
	1309	MW-7 13-14'				Sand, poorly-sorted, loose, dry to slightly moist, gray with pale olive, subangular, strong hydrocarbon odor.	
	1919						
15	1691					Becomes dark gray to black with hydrocarbon staining at 14', strong hydrocarbon odor, some gravel present.	
	1147	100%					
	629.4						
	944.7						
	610.1						
20	135.8						
	374.4	100%			SW		
	213.9						
	643.1						
	1912						
25	1772					At 24', color is dark gray and a strong hydrocarbon odor is present.	
	1722	100%					
	1580						
	1697						
	15.1					Becomes brown at 28', very slight hydrocarbon odor.	
	50.1	100%					
30							

Continued Next Page

Drilling Log

MWH

Monitoring Well **MW-7**

Project *Fields A#7A* Owner *El Paso CGP Company, LLC*

Location *San Juan County, New Mexico* Project Number *10509367*

Depth (ft)	PID (ppm)	% Recovery	Blow Count Recovery	Graphic Log	USCS	Description (Color, Moisture, Texture, Structure, Odor) Geologic Descriptions are Based on the USCS.	Well Completion
						Continued	
30 ▽						Water present at 30'.	
	66.4						
	8.1	100%					
	6.7					Becomes pale olive and very moist at 33'.	
	24.5				SW		
35	19.8						
	50.4	100%					
	81.0					Becomes light gray at 37', coarse-grained content increases.	
	2.2					Sandstone, poorly-sorted, dark gray to light gray, wet,	
	9.2						
40	18.1						
	28.8	100%					
	49.2						
	50.7					No hydrocarbon odor at 43'.	
	10.2	100%					
45	3.8						
						Total depth = 45'.	
50							
55							
60							
65							
70							

Drilling Log

MWH

Monitoring Well **MW-8**

Project *Fields A#7A* Owner *El Paso CGP Company, LLC*

Location *San Juan County, New Mexico* Project Number *10509367*

Surface Elev. *6082.48 ft* North *2163070.94* East *2679631.56*

Top of Casing *6082.29 ft* Water Level Initial ▽ *6054.29* 08/19/16 00:00 Static ▼

Hole Depth *45.0 ft* Screen: Diameter *2 in* Length *30.0 ft* Type/Size *PVC/0.01 in*

Hole Diameter *8.25 in* Casing: Diameter *2 in* Length *15.0 ft* Type *PVC*

Drill Co. *Yellow Jacket* Drilling Method *Hollow-Stem Auger* Sand Pack *10/20 CO silica*

Driller *Roger Rubio* Driller Reg. # *WD-1458* Log By *Brad Barton*

Start Date *8/19/2016* Completion Date *8/24/2016* Checked By *S. Varsa*

COMMENTS
Dirt surface, near dirt road. NR = No Recovery.

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.	Well Completion
0							
	3.9	100%			SM	Silty sand, dark gray, dry, loose to semi-consolidated, fine to medium-grained, none to slight hydrocarbon odor at 4', some compaction in material.	
5	41.9	100%					
	19.0					Becomes slightly moist at 8', strong hydrocarbon odor. Soil vacuum excavated from the surface to 8 feet deep.	
10	82.4						
	92.5	100%					
	451.6	MW-8 12-13'					
	1569						
	356.5						
15	1018						
	440.7	100%				Sandstone, dry, cemented, fine to medium-grained, light brown to light gray, none to slight hydrocarbon odor.	
	0.9						
	1.5					Weakly cemented at 18', slight hydrocarbon odor.	
	381.1					Color changes to dark gray/black with hydrocarbon staining at 19', moderate hydrocarbon odor.	
20	120.1						
	130.3	100%				Very slight hydrocarbon odor at 21'.	
	53.5					Color changes to light gray at 22', slight hydrocarbon odor.	
	124.4					No hydrocarbon odor at 23', light gray to light brown, dry to slightly moist.	
	14.3						
25	8.7						
	1.4	44%				No recovery from 25.2' to 28'.	
	NR						
	NR						
▽	NR						
	899.4	100%				Black hydrocarbon-stained sand fro 28' to 29', very moist to water 29', strong hydrocarbon odor.	
30	51.3						

Continued Next Page

Drilling Log

MWH

Monitoring Well **MW-8**

Project *Fields A#7A* Owner *El Paso CGP Company, LLC*

Location *San Juan County, New Mexico* Project Number *10509367*

Depth (ft)	PID (ppm)	% Recovery	Blow Count Recovery	Graphic Log	USCS	Description (Color, Moisture, Texture, Structure, Odor) Geologic Descriptions are Based on the USCS.	Well Completion
						Continued	
30	57.4						
	27.5	100%					
	59.3					Color changes to light brown at 33', wet/saturated sand.	
	4.3						
35	59.4						
	54.4	100%					
	28.6					Color changes to light gray at 37' becoming light brown with depth, loose, wet (saturated from 38' to 41'), medium to coarse-grained, subangular grains, no hydrocarbon odor.	
	4.1						
	4.3						
40	5.7						
	1.3	100%					
	16.5						
	2.0						
	0.0	100%					
45	0.0					Total depth = 45'.	
50							
55							
60							
65							
70							

Drilling Log

MWH

Monitoring Well **MW-9**

Project *Fields A#7A* Owner *El Paso CGP Company, LLC*

Location *San Juan County, New Mexico* Project Number *10509367*

Surface Elev. *6082.55 ft* North *2163043.71* East *2679665.73*

Top of Casing *6082.35 ft* Water Level Initial ▽ *6054.35* 08/22/16 00:00 Static ▼

Hole Depth *45.0 ft* Screen: Diameter *2 in* Length *30.0 ft* Type/Size *PVC/0.01 in*

Hole Diameter *8.25 in* Casing: Diameter *2 in* Length *15.0 ft* Type *PVC*

Drill Co. *Yellow Jacket* Drilling Method *Hollow-Stem Auger* Sand Pack *10/20 CO silica*

Driller *Roger Rubio* Driller Reg. # *WD-1458* Log By *Brad Barton*

Start Date *8/22/2016* Completion Date *8/24/2016* Checked By *S. Varsa*

COMMENTS
Dirt surface, near dirt road. 10' from meter run.

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.	Well Completion
0	0.0	100%			SM	Silty sand, loose to semi-consolidated, brown to dark gray/black with hydrocarbon staining at 4', fine to medium-grained, none to slight hydrocarbon odor at 4', some compaction in material.	
5	1.6	100%				Very dark gray at 8', soft, very moist, very slight hydrocarbon odor. Soil vacuum excavated from the surface to 8 feet deep.	
	3.0						
10	4.0						
	7.1	100%					
	8.7					Sand, poorly-sorted, loose, slightly moist, light gray to light brown/pale olive, no hydrocarbon odor.	
	3.1						
	0.1						
15	7.5						
	18.4	100%					
	33.0						
	111.8						
	2.6						
20	16.5				SW	Slight hydrocarbon odor at 20' becoming moderate from 21' to 22'.	
	76.2	100%					
	1253						
	205.4						
	448.7						
25	1387	MW-9 25-26'					
	2604	100%				At 25.5', color is dark gray/black and hydrocarbon staining is present.	
	230.7						
▽	50.1					Water present at 28'.	
	54.1	100%				Shale, dark brown to black, wet, hard, fractured, slight hydrocarbon odor.	
30	334.2						

Continued Next Page

Drilling Log

MWH

Monitoring Well **MW-9**

Project *Fields A#7A* Owner *El Paso CGP Company, LLC*

Location *San Juan County, New Mexico* Project Number *10509367*

Depth (ft)	PID (ppm)	% Recovery	Blow Count Recovery	Graphic Log	USCS	Description (Color, Moisture, Texture, Structure, Odor) Geologic Descriptions are Based on the USCS.	Well Completion
						Continued	
30	138.5					Sandstone, poorly-sorted, slightly moist, light brown/pale olive to light gray, medium to coarse-grained, weakly to moderately cemented, no hydrocarbon odor.	
	55.1	100%					
	14.6						
	100.1						
35	349.7						
	49.6	100%				Very moist at 35.5'.	
	47.5						
	44.4						
	11.6						
40	2.1						
	4.5	100%					
	3.2						
	0.0						
	1.1	100%					
45	0.9					Total depth = 45'.	
50							
55							
60							
65							
70							

Drilling Log

MWH

Monitoring Well **MW-10**

Project *Fields A#7A* Owner *El Paso CGP Company, LLC*

Location *San Juan County, New Mexico* Project Number *10509367*

Surface Elev. *6082.95 ft* North *2163096.14* East *2679646.64*

Top of Casing *6086.17 ft* Water Level Initial ▽ *6058.17* 08/18/16 00:00 Static ▼

Hole Depth *45.0 ft* Screen: Diameter *2 in* Length *30.0 ft* Type/Size *PVC/0.01 in*

Hole Diameter *8.25 in* Casing: Diameter *2 in* Length *15.0 ft* Type *PVC*

Drill Co. *Yellow Jacket* Drilling Method *Hollow-Stem Auger* Sand Pack *10/20 CO silica*

Driller *Roger Rubio* Driller Reg. # *WD-1458* Log By *Brad Barton*

Start Date *8/18/2016* Completion Date *8/24/2016* Checked By *S. Varsa*

COMMENTS
Dirt surface. NR = No Recovery.

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.	Well Completion
0							
	15.9	100%				Silty sand, loose, fine to medium-grained, dark gray to black, slight hydrocarbon odor.	
5	41.8	100%			SM		
	23.8					Soil vacuum excavated from the surface to 8 feet deep.	
10	14.7						
	44.9	100%				Black hydrocarbon staining present from 10' to 13', moderate hydrocarbon odor which becomes strong at 11.5'.	
	361.4						
	712	MW-10 13-14'				Sand, poorly-sorted, loose, gray, dry to slightly moist, some hydrocarbon staining present from 12' to 15'. strong hydrocarbon odor.	
	1895						
15	446.5						
	1408	100%				Color changes to olive-gray at 15', minor gravel present.	
	648.6						
	138.7					Color becomes light brown at 17', slight hydrocarbon odor present.	
	60.8						
20	139						
	101.4	100%			SW		
	1852					Color becomes dark brown at 21', slightly moist, minor dark gray hydrocarbon staining present from 21' to 22', strong hydrocarbon odor at 21' becomes moderate at 22'.	
	246.3						
	366.7						
25 ▽	130.9						
	1753	100%				Dark gray to black hydrocarbon staining with a strong hydrocarbon odor present from 25' to 27', slightly moist.	
	1669						
	242.4					Water present at 28', sand is brown and loose.	
	559.6	100%				Color changes to gray at 29.5', slightly moist to moist.	
30	29.0						

Continued Next Page

Drilling Log

MWH

Monitoring Well **MW-10**

Project *Fields A#7A* Owner *El Paso CGP Company, LLC*

Location *San Juan County, New Mexico* Project Number *10509367*

Depth (ft)	PID (ppm)	% Recovery	Blow Count Recovery	Graphic Log	USCS	Description (Color, Moisture, Texture, Structure, Odor) Geologic Descriptions are Based on the USCS.	Well Completion
						Continued	
30	144.1						
	210.3	100%			SW		
	54.1						
	24.3					Sandstone, light gray to light brown, wet, medium to coarse-grained, subangular, weakly to moderately cemented, no hydrocarbon odor.	
35	8.9						
	4.5	54%				No recovery from 35.7' to 38'.	
	NR						
	NR						
	0.0						
40	0.0						
	0.0	80%					
	0.0						
	0.0					No recovery from 42' to 43'.	
	NR					Poorly-sorted sand, wet, gray, no cementation, no hydrocarbon odor.	
	0.0	100%			SW		
45	0.0						
						Total depth = 45'.	
50							
55							
60							
65							
70							

Drilling Log

MWH

Monitoring Well **MW-11**

Project *Fields A#7A* Owner *El Paso CGP Company, LLC*

Location *San Juan County, New Mexico* Project Number *10509367*

Surface Elev. *6083.01 ft* North *2163089.34* East *2679688.49*

Top of Casing *6085.79 ft* Water Level Initial ▽ *6057.79* 08/18/16 00:00 Static ▼

Hole Depth *45.0 ft* Screen: Diameter *2 in* Length *30.0 ft* Type/Size *PVC/0.01 in*

Hole Diameter *8.25 in* Casing: Diameter *2 in* Length *15.0 ft* Type *PVC*

Drill Co. *Yellow Jacket* Drilling Method *Hollow-Stem Auger* Sand Pack *10/20 CO silica*

Driller *Roger Rubio* Driller Reg. # *WD-1458* Log By *Brad Barton*

Start Date *8/18/2016* Completion Date *8/24/2016* Checked By *S. Varsa*

COMMENTS
Dirt surface, minor vegetation.
NR = No Recovery.

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.	Well Completion
0							
						Silty sand, black, loose, fine to medium-grained, no hydrocarbon odor, subangular, some compaction in material.	
	8.4	100%			SM		
5							
						Soil vacuum excavated from the surface to 8 feet deep.	
	2.3						
10	26.4						
	51.0	100%					
	7.6					Becomes light gray to light brown, minor gravel, slightly moist, minor black hydrocarbon staining and slight hydrocarbon odor present from 12' to 13'.	
	103.1						
	8.6					Sand, poorly-sorted, light gray to light brown, slightly moist, slight hydrocarbon odor.	
15	24.9						
	26.7	100%					
	32.8					At 17', light gray, weakly to moderately cemented, no hydrocarbon odor.	
	1.7						
	1.4					Color changes to light brown at 19', slightly moist.	
20	1.7						
	8.5	100% MW-11 21-22'			SW		
	146.3					Layers of black hydrocarbon-stained sand present from 21' to 22' and from 22.5' to 23', slight hydrocarbon odor.	
	55.4						
	10.4						
	7.1						
25 ▽	NR					No recovery from 24.5' to 28'.	
	NR	30%					
	NR						
	NR						
	0.9					Loose, no hydrocarbon odor, water present at 28'.	
	0.7	100%				Sandstone, light brown to medium gray, medium to coarse-grained, dry to	
30							

Continued Next Page

Drilling Log

MWH

Monitoring Well **MW-11**

Project *Fields A#7A* Owner *El Paso CGP Company, LLC*

Location *San Juan County, New Mexico* Project Number *10509367*

Depth (ft)	PID (ppm)	% Recovery	Blow Count Recovery	Graphic Log	USCS	Description (Color, Moisture, Texture, Structure, Odor) Geologic Descriptions are Based on the USCS.	Well Completion
						Continued	
30	0.5	100%				moist, weakly to moderately cemented, no hydrocarbon odor.	
	0.3					Minor coal seam noted at 32', black, flaky, dry,	
	0.2						
	0.0						
35	0.0	72%				Less cementation present, light gray, wet at 35'.	
	0.0						
	NR					No recovery from 36.6' to 38'.	
	NR					Unconsolidated layers present in sandstone, medium to coarse-grained, wet, light gray, subangular, no hydrocarbon odor.	
	0.0						
40	0.0	100%					
	0.0						
	0.0						
	0.0					Driller reports very hard drilling at 43'.	
	0.0	100%					
45	0.0					Total depth = 45'.	
50							
55							
60							
65							
70							

Drilling Log

MWH

Soil Boring **SB-1**

Page: 1 of 1

Project *Fields A#7A* Owner *El Paso CGP Company, LLC*

Location *San Juan County, New Mexico* Project Number *10509367*

Surface Elev. *6082.44 ft* North *2163064.58* East *2679659.26*

Top of Casing *NA* Water Level Initial ▽ *29.9ft* 08/22/16 00:00 Static ▼

Hole Depth *30.0 ft* Screen: Diameter *NA* Length *NA* Type/Size *NA*

Hole Diameter *8.25 in* Casing: Diameter *NA* Length *NA* Type *NA*

Drill Co. *Yellow Jacket* Drilling Method *Hollow-Stem Auger* Sand Pack *NA*

Driller *Roger Rubio* Driller Reg. # *WD-1458* Log By *Brad Barton*

Start Date *8/22/2016* Completion Date *8/23/2016* Checked By *S. Varsa*

COMMENTS
Dirt surface. 6.5' south of MW-1.

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						
	10.9	100%			SM	Silty sand, backfill, loose, dark gray to black, hydrocarbon stained, slight to moderate hydrocarbon odor, becomes very moist and dark olive-gray below 8', some compaction in material below 8'.
5	62.5	100%				
						Soil vacuum excavated from the surface to 8 feet deep.
	14.8					
10	47.8					
	75.4	100%				
	455.4	SB-1 12-13'				Sand, poorly-sorted, slightly moist, dark olive to dark gray with black hydrocarbon staining, moderate hydrocarbon odor to strong from 15' to 16', hydrocarbon odor diminished below 16', subangular sand, minor cementation.
	1309					
	159.3					
15	596.6					
	1794	100% SB-1 15-16'				Becomes light brown/pale olive below 16'.
	82.5					
	20.1					
	6.8					
20	76.3					
	94.2	100%			SW	
	23.3					Very moist and tight at 22'.
	12.8					
	22.6					
25	28.1					
	125.7	100%				Strong hydrocarbon odor at 26', dry to slightly moist.
	1022	SB-1 27-28'				
	1046					Very moist to wet from 28' to 30', water measured at 29.85' in the borehole after drilling.
	288.6	100%				Total depth = 30'.
30	189.8					

Drilling Log

MWH

Soil Boring **SB-2**

Page: 1 of 1

Project *Fields A#7A* Owner *El Paso CGP Company, LLC*

Location *San Juan County, New Mexico* Project Number *10509367*

Surface Elev. *6082.48 ft* North *2163067.05* East *2679650.18*

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

Hole Depth *25.0 ft* Screen: Diameter *NA* Length *NA* Type/Size *NA*

Hole Diameter *8.25 in* Casing: Diameter *NA* Length *NA* Type *NA*

Drill Co. *Yellow Jacket* Drilling Method *Hollow-Stem Auger* Sand Pack *NA*

Driller *Roger Rubio* Driller Reg. # *WD-1458* Log By *Brad Barton*

Start Date *8/24/2016* Completion Date *8/25/2016* Checked By *S. Varsa*

COMMENTS
Dirt road. 11.5' from MW-1, 19' from MW-8, 10' from SB-1.

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						
	288.4	100%			SM	Silty sand, brown to dark gray/black, loose, fine to medium-grained, some clay content below 8', clay has moderate plasticity, slightly moist, strong hydrocarbon odor from 2' to 16', some compaction in material below 8'.
	996	100%				
5	413.3	100%				
	435.2					Soil vacuum excavated from the surface to 8 feet deep.
	739.4					
10	2962	100% SB-2 11-12'				
	2966					
	2773					
	120.5				SW	Sand, poorly-sorted, dark gray (hydrocarbon stained areas) to pale olive/light brown, subangular sand, weak cementation, moderate to strong hydrocarbon odor becoming weaker below 16'.
15	1047					
	346.8	100%				
	126.6					
	20.9					
	41.4					
20	81.6					Black hydrocarbon-stained lens with moderate hydrocarbon odor from 20' to 20.5', moisture increasing with depth.
	446.7	100%				
	61.8					Black hydrocarbon-stained lens with very slight hydrocarbon odor from 22' to 22.5'.
	31.8	SB-2 23-24'				
	1649	100%				Becomes dark gray at 23.5'.
25	929.2					Becomes pale olive at 24.5'.
						Total depth = 25'.
30						

Drilling Log 2016 FIELDS A#7A LOGS.GPJ MWH IA.GDT 12/16/16

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: 400-126215-1
Client Project/Site: Fields A#7A

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

Attn: Ms. Sarah Gardner

Carol M Webb

Authorized for release by:
9/8/2016 11:06:53 AM

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

Table of Contents

Definitions/Glossary

Client: MWH Americas Inc
Project/Site: Fields A#7A

TestAmerica Job ID: 400-126215-1

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
X	Surrogate is outside control 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)

Job ID: 400-126215-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-126215-1

Comments
No additional comments.

Receipt
The samples were received on 8/23/2016 9:22 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.0º C.

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.

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

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

Detection Summary

Client: MWH Americas Inc
Project/Site: Fields A#7A

TestAmerica Job ID: 400-126215-1

Client Sample ID: MW-11 (21-22) — Lab Sample ID: 400-126215-1

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Gasoline Range Organics (GRO) C6--C10	58		5.2		mg/Kg	50	☼	8015B	Total/NA
Ethylbenzene	0.12		0.052		mg/Kg	50	☼	8021B	Total/NA
Xylenes, Total	0.67		0.26		mg/Kg	50	☼	8021B	Total/NA
C10-C28	19		5.3		mg/Kg	1	☼	8015B	Total/NA
C28-C35	5.6		5.3		mg/Kg	1	☼	8015B	Total/NA

Client Sample ID: MW-10 (13-14) — Lab Sample ID: 400-126215-2

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Gasoline Range Organics (GRO) C6--C10	1300		100		mg/Kg	1000	☼	8015B	Total/NA
Benzene	4.9		0.20		mg/Kg	200	☼	8021B	Total/NA
Ethylbenzene	6.1		0.20		mg/Kg	200	☼	8021B	Total/NA
Toluene	53		1.0		mg/Kg	200	☼	8021B	Total/NA
Xylenes, Total	50		1.0		mg/Kg	200	☼	8021B	Total/NA
C10-C28	12		5.4		mg/Kg	1	☼	8015B	Total/NA
C28-C35	7.4		5.4		mg/Kg	1	☼	8015B	Total/NA

Client Sample ID: MW-8 (12-13) — Lab Sample ID: 400-126215-3

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Gasoline Range Organics (GRO) C6--C10	2100		120		mg/Kg	1000	☼	8015B	Total/NA
Benzene	1.2		0.25		mg/Kg	200	☼	8021B	Total/NA
Ethylbenzene	11		0.25		mg/Kg	200	☼	8021B	Total/NA
Toluene	13		1.2		mg/Kg	200	☼	8021B	Total/NA
Xylenes, Total	66		1.2		mg/Kg	200	☼	8021B	Total/NA
C10-C28	100		6.3		mg/Kg	1	☼	8015B	Total/NA

Client Sample ID: MW-6 (24-25) — Lab Sample ID: 400-126215-4

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Gasoline Range Organics (GRO) C6--C10	320		21		mg/Kg	200	☼	8015B	Total/NA
Benzene	0.11		0.053		mg/Kg	50	☼	8021B	Total/NA
Ethylbenzene	2.8		0.053		mg/Kg	50	☼	8021B	Total/NA
Toluene	2.0		0.26		mg/Kg	50	☼	8021B	Total/NA
Xylenes, Total	15		0.26		mg/Kg	50	☼	8021B	Total/NA
C10-C28	59		5.4		mg/Kg	1	☼	8015B	Total/NA
Chloride	22		22		mg/Kg	1	☼	300.0	Soluble

Client Sample ID: MW-4R (24-25) — Lab Sample ID: 400-126215-5

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Gasoline Range Organics (GRO) C6--C10	26		5.1		mg/Kg	50	☼	8015B	Total/NA
Ethylbenzene	0.098		0.051		mg/Kg	50	☼	8021B	Total/NA
Xylenes, Total	0.55		0.26		mg/Kg	50	☼	8021B	Total/NA
C10-C28	6.7		5.3		mg/Kg	1	☼	8015B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: MWH Americas Inc
Project/Site: Fields A#7A

TestAmerica Job ID: 400-126215-1

Client Sample ID: MW-7 (13-14)

Lab Sample ID: 400-126215-6

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Gasoline Range Organics (GRO) C6--C10	4000		210		mg/Kg	2000	☼	8015B	Total/NA
Benzene	5.6		2.1		mg/Kg	2000	☼	8021B	Total/NA
Ethylbenzene	28		2.1		mg/Kg	2000	☼	8021B	Total/NA
Toluene	53		10		mg/Kg	2000	☼	8021B	Total/NA
Xylenes, Total	210		10		mg/Kg	2000	☼	8021B	Total/NA
C10-C28	640		5.5		mg/Kg	1	☼	8015B	Total/NA

This Detection Summary does not include radiochemical test results.

Sample Summary

Client: MWH Americas Inc
Project/Site: Fields A#7A

TestAmerica Job ID: 400-126215-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-126215-1	MW-11 (21-22)	Solid	08/18/16 13:15	08/23/16 09:22
400-126215-2	MW-10 (13-14)	Solid	08/19/16 10:10	08/23/16 09:22
400-126215-3	MW-8 (12-13)	Solid	08/19/16 15:45	08/23/16 09:22
400-126215-4	MW-6 (24-25)	Solid	08/20/16 10:15	08/23/16 09:22
400-126215-5	MW-4R (24-25)	Solid	08/21/16 09:30	08/23/16 09:22
400-126215-6	MW-7 (13-14)	Solid	08/21/16 13:45	08/23/16 09:22

Client Sample ID: MW-11 (21-22)

Date Collected: 08/18/16 13:15
Date Received: 08/23/16 09:22

Lab Sample ID: 400-126215-1

Matrix: Solid
Percent Solids: 93.7

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) C6--C10	**58**		5.2		mg/Kg	☼	08/27/16 11:30	08/29/16 17:51	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid)	*100*		*65 - 125*	*08/27/16 11:30*	*08/29/16 17:51*	*50*

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.052		0.052		mg/Kg	☼	08/27/16 11:30	08/29/16 17:51	50
Ethylbenzene	**0.12**		0.052		mg/Kg	☼	08/27/16 11:30	08/29/16 17:51	50
Toluene	<0.26		0.26		mg/Kg	☼	08/27/16 11:30	08/29/16 17:51	50
Xylenes, Total	**0.67**		0.26		mg/Kg	☼	08/27/16 11:30	08/29/16 17:51	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*97*		*40 - 150*	*08/27/16 11:30*	*08/29/16 17:51*	*50*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	**19**		5.3		mg/Kg	☼	08/25/16 11:50	08/26/16 11:40	1
C28-C35	**5.6**		5.3		mg/Kg	☼	08/25/16 11:50	08/26/16 11:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*118*		*27 - 151*	*08/25/16 11:50*	*08/26/16 11:40*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<21		21		mg/Kg	☼		09/02/16 21:17	1

Client Sample ID: MW-10 (13-14)

Date Collected: 08/19/16 10:10
Date Received: 08/23/16 09:22

Lab Sample ID: 400-126215-2

Matrix: Solid
Percent Solids: 90.8

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) C6--C10	1300		100		mg/Kg	☼	08/27/16 11:30	08/29/16 21:32	1000

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid)	*94*		*65 - 125*	*08/27/16 11:30*	*08/29/16 21:32*	*1000*

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	4.9		0.20		mg/Kg	☼	08/27/16 11:30	08/27/16 23:27	200
Ethylbenzene	6.1		0.20		mg/Kg	☼	08/27/16 11:30	08/27/16 23:27	200
Toluene	53		1.0		mg/Kg	☼	08/27/16 11:30	08/27/16 23:27	200
Xylenes, Total	50		1.0		mg/Kg	☼	08/27/16 11:30	08/27/16 23:27	200

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*97*		*40 - 150*	*08/27/16 11:30*	*08/27/16 23:27*	*200*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	12		5.4		mg/Kg	☼	08/25/16 11:50	08/26/16 11:52	1
C28-C35	7.4		5.4		mg/Kg	☼	08/25/16 11:50	08/26/16 11:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*105*		*27 - 151*	*08/25/16 11:50*	*08/26/16 11:52*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<22		22		mg/Kg	☼		09/02/16 22:26	1

Client: MWH Americas Inc
Project/Site: Fields A#7A

TestAmerica Job ID: 400-126215-1

Client Sample ID: MW-8 (12-13)

Date Collected: 08/19/16 15:45
Date Received: 08/23/16 09:22

Lab Sample ID: 400-126215-3

Matrix: Solid
Percent Solids: 79.1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) C6--C10	2100		120		mg/Kg	☼	08/27/16 11:30	08/29/16 21:59	1000

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid)	*97*		*65 - 125*	*08/27/16 11:30*	*08/29/16 21:59*	*1000*

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.2		0.25		mg/Kg	☼	08/27/16 11:30	08/27/16 23:54	200
Ethylbenzene	11		0.25		mg/Kg	☼	08/27/16 11:30	08/27/16 23:54	200
Toluene	13		1.2		mg/Kg	☼	08/27/16 11:30	08/27/16 23:54	200
Xylenes, Total	66		1.2		mg/Kg	☼	08/27/16 11:30	08/27/16 23:54	200

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*85*		*40 - 150*	*08/27/16 11:30*	*08/27/16 23:54*	*200*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	100		6.3		mg/Kg	☼	08/25/16 11:50	08/26/16 12:03	1
C28-C35	<6.3		6.3		mg/Kg	☼	08/25/16 11:50	08/26/16 12:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*111*		*27 - 151*	*08/25/16 11:50*	*08/26/16 12:03*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<25		25		mg/Kg	☼		09/02/16 22:48	1

Client Sample ID: MW-6 (24-25)

Date Collected: 08/20/16 10:15
Date Received: 08/23/16 09:22

Lab Sample ID: 400-126215-4

Matrix: Solid
Percent Solids: 92.1

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) C6--C10	320		21		mg/Kg	☼	08/27/16 11:30	08/28/16 00:21	200

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid)	*98*		*65 - 125*	*08/27/16 11:30*	*08/28/16 00:21*	*200*

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.11		0.053		mg/Kg	☼	08/27/16 11:30	08/29/16 20:10	50
Ethylbenzene	2.8		0.053		mg/Kg	☼	08/27/16 11:30	08/29/16 20:10	50
Toluene	2.0		0.26		mg/Kg	☼	08/27/16 11:30	08/29/16 20:10	50
Xylenes, Total	15		0.26		mg/Kg	☼	08/27/16 11:30	08/29/16 20:10	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*85*		*40 - 150*	*08/27/16 11:30*	*08/29/16 20:10*	*50*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	59		5.4		mg/Kg	☼	08/25/16 11:50	08/26/16 12:15	1
C28-C35	<5.4		5.4		mg/Kg	☼	08/25/16 11:50	08/26/16 12:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*114*		*27 - 151*	*08/25/16 11:50*	*08/26/16 12:15*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	22		22		mg/Kg	☼		09/02/16 23:11	1

Client: MWH Americas Inc
Project/Site: Fields A#7A

TestAmerica Job ID: 400-126215-1

Client Sample ID: MW-4R (24-25)

Date Collected: 08/21/16 09:30
Date Received: 08/23/16 09:22

Lab Sample ID: 400-126215-5

Matrix: Solid
Percent Solids: 93.6

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) C6--C10	**26**		5.1		mg/Kg	☼	08/27/16 11:30	08/27/16 22:05	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid)	*103*		*65 - 125*	*08/27/16 11:30*	*08/27/16 22:05*	*50*

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.051		0.051		mg/Kg	☼	08/27/16 11:30	08/27/16 22:05	50
Ethylbenzene	**0.098**		0.051		mg/Kg	☼	08/27/16 11:30	08/27/16 22:05	50
Toluene	<0.26		0.26		mg/Kg	☼	08/27/16 11:30	08/27/16 22:05	50
Xylenes, Total	**0.55**		0.26		mg/Kg	☼	08/27/16 11:30	08/27/16 22:05	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*97*		*40 - 150*	*08/27/16 11:30*	*08/27/16 22:05*	*50*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	**6.7**		5.3		mg/Kg	☼	08/25/16 11:50	08/26/16 12:26	1
C28-C35	<5.3		5.3		mg/Kg	☼	08/25/16 11:50	08/26/16 12:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*114*		*27 - 151*	*08/25/16 11:50*	*08/26/16 12:26*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<21		21		mg/Kg	☼		09/02/16 23:34	1

Client: MWH Americas Inc
Project/Site: Fields A#7A

TestAmerica Job ID: 400-126215-1

Client Sample ID: MW-7 (13-14)
Date Collected: 08/21/16 13:45
Date Received: 08/23/16 09:22

Lab Sample ID: 400-126215-6
Matrix: Solid
Percent Solids: 91.5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) C6--C10	4000		210		mg/Kg	☼	08/27/16 11:30	08/29/16 22:26	2000

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid)	*92*		*65 - 125*	*08/27/16 11:30*	*08/29/16 22:26*	*2000*

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	5.6		2.1		mg/Kg	☼	08/27/16 11:30	08/29/16 22:26	2000
Ethylbenzene	28		2.1		mg/Kg	☼	08/27/16 11:30	08/29/16 22:26	2000
Toluene	53		10		mg/Kg	☼	08/27/16 11:30	08/29/16 22:26	2000
Xylenes, Total	210		10		mg/Kg	☼	08/27/16 11:30	08/29/16 22:26	2000

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*103*		*40 - 150*	*08/27/16 11:30*	*08/29/16 22:26*	*2000*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	640		5.5		mg/Kg	☼	08/25/16 11:50	08/26/16 12:38	1
C28-C35	<5.5		5.5		mg/Kg	☼	08/25/16 11:50	08/26/16 12:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*119*		*27 - 151*	*08/25/16 11:50*	*08/26/16 12:38*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<22		22		mg/Kg	☼		09/03/16 00:42	1

GC VOA

Prep Batch: 320009

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-126215-1	MW-11 (21-22)	Total/NA	Solid	5035	
400-126215-2	MW-10 (13-14)	Total/NA	Solid	5035	
400-126215-3	MW-8 (12-13)	Total/NA	Solid	5035	
400-126215-4	MW-6 (24-25)	Total/NA	Solid	5035	
400-126215-5	MW-4R (24-25)	Total/NA	Solid	5035	
400-126215-6	MW-7 (13-14)	Total/NA	Solid	5035	
MB 400-320009/1-A	Method Blank	Total/NA	Solid	5035	
LCS 400-320009/2-A	Lab Control Sample	Total/NA	Solid	5035	
400-126215-1 MS	MW-11 (21-22)	Total/NA	Solid	5035	
400-126215-1 MSD	MW-11 (21-22)	Total/NA	Solid	5035	

Prep Batch: 320010

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-126215-1	MW-11 (21-22)	Total/NA	Solid	5035	
400-126215-2	MW-10 (13-14)	Total/NA	Solid	5035	
400-126215-3	MW-8 (12-13)	Total/NA	Solid	5035	
400-126215-4	MW-6 (24-25)	Total/NA	Solid	5035	
400-126215-5	MW-4R (24-25)	Total/NA	Solid	5035	
400-126215-6	MW-7 (13-14)	Total/NA	Solid	5035	
MB 400-320010/1-A	Method Blank	Total/NA	Solid	5035	
LCS 400-320010/2-A	Lab Control Sample	Total/NA	Solid	5035	
400-126215-1 MS	MW-11 (21-22)	Total/NA	Solid	5035	
400-126215-1 MSD	MW-11 (21-22)	Total/NA	Solid	5035	

Analysis Batch: 320012

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-126215-1	MW-11 (21-22)	Total/NA	Solid	8021B	320009
400-126215-2	MW-10 (13-14)	Total/NA	Solid	8021B	320009
400-126215-3	MW-8 (12-13)	Total/NA	Solid	8021B	320009
400-126215-4	MW-6 (24-25)	Total/NA	Solid	8021B	320009
400-126215-5	MW-4R (24-25)	Total/NA	Solid	8021B	320009
400-126215-6	MW-7 (13-14)	Total/NA	Solid	8021B	320009
MB 400-320009/1-A	Method Blank	Total/NA	Solid	8021B	320009
LCS 400-320009/2-A	Lab Control Sample	Total/NA	Solid	8021B	320009
400-126215-1 MS	MW-11 (21-22)	Total/NA	Solid	8021B	320009
400-126215-1 MSD	MW-11 (21-22)	Total/NA	Solid	8021B	320009

Analysis Batch: 320014

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-126215-1	MW-11 (21-22)	Total/NA	Solid	8015B	320010
400-126215-2	MW-10 (13-14)	Total/NA	Solid	8015B	320010
400-126215-3	MW-8 (12-13)	Total/NA	Solid	8015B	320010
400-126215-4	MW-6 (24-25)	Total/NA	Solid	8015B	320010
400-126215-5	MW-4R (24-25)	Total/NA	Solid	8015B	320010
400-126215-6	MW-7 (13-14)	Total/NA	Solid	8015B	320010
MB 400-320010/1-A	Method Blank	Total/NA	Solid	8015B	320010
LCS 400-320010/2-A	Lab Control Sample	Total/NA	Solid	8015B	320010
400-126215-1 MS	MW-11 (21-22)	Total/NA	Solid	8015B	320010
400-126215-1 MSD	MW-11 (21-22)	Total/NA	Solid	8015B	320010

GC Semi VOA

Prep Batch: 320112

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-126215-1	MW-11 (21-22)	Total/NA	Solid	3546	
400-126215-2	MW-10 (13-14)	Total/NA	Solid	3546	
400-126215-3	MW-8 (12-13)	Total/NA	Solid	3546	
400-126215-4	MW-6 (24-25)	Total/NA	Solid	3546	
400-126215-5	MW-4R (24-25)	Total/NA	Solid	3546	
400-126215-6	MW-7 (13-14)	Total/NA	Solid	3546	
MB 400-320112/12-A	Method Blank	Total/NA	Solid	3546	
LCS 400-320112/13-A	Lab Control Sample	Total/NA	Solid	3546	
LCSD 400-320112/16-A	Lab Control Sample Dup	Total/NA	Solid	3546	
400-126225-A-2-B MS	Matrix Spike	Total/NA	Solid	3546	
400-126225-A-2-C MSD	Matrix Spike Duplicate	Total/NA	Solid	3546	

Analysis Batch: 320248

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-126215-1	MW-11 (21-22)	Total/NA	Solid	8015B	320112
400-126215-2	MW-10 (13-14)	Total/NA	Solid	8015B	320112
400-126215-3	MW-8 (12-13)	Total/NA	Solid	8015B	320112
400-126215-4	MW-6 (24-25)	Total/NA	Solid	8015B	320112
400-126215-5	MW-4R (24-25)	Total/NA	Solid	8015B	320112
400-126215-6	MW-7 (13-14)	Total/NA	Solid	8015B	320112
MB 400-320112/12-A	Method Blank	Total/NA	Solid	8015B	320112
LCS 400-320112/13-A	Lab Control Sample	Total/NA	Solid	8015B	320112
LCSD 400-320112/16-A	Lab Control Sample Dup	Total/NA	Solid	8015B	320112
400-126225-A-2-B MS	Matrix Spike	Total/NA	Solid	8015B	320112
400-126225-A-2-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B	320112

HPLC/IC

Leach Batch: 321108

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-126215-1	MW-11 (21-22)	Soluble	Solid	DI Leach	
400-126215-2	MW-10 (13-14)	Soluble	Solid	DI Leach	
400-126215-3	MW-8 (12-13)	Soluble	Solid	DI Leach	
400-126215-4	MW-6 (24-25)	Soluble	Solid	DI Leach	
400-126215-5	MW-4R (24-25)	Soluble	Solid	DI Leach	
400-126215-6	MW-7 (13-14)	Soluble	Solid	DI Leach	
MB 400-321108/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 400-321108/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 400-321108/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
400-126215-1 MS	MW-11 (21-22)	Soluble	Solid	DI Leach	
400-126215-1 MSD	MW-11 (21-22)	Soluble	Solid	DI Leach	

Analysis Batch: 321489

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-126215-1	MW-11 (21-22)	Soluble	Solid	300.0	321108
400-126215-2	MW-10 (13-14)	Soluble	Solid	300.0	321108
400-126215-3	MW-8 (12-13)	Soluble	Solid	300.0	321108
400-126215-4	MW-6 (24-25)	Soluble	Solid	300.0	321108
400-126215-5	MW-4R (24-25)	Soluble	Solid	300.0	321108
400-126215-6	MW-7 (13-14)	Soluble	Solid	300.0	321108

HPLC/IC (Continued)

Analysis Batch: 321489 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 400-321108/1-A	Method Blank	Soluble	Solid	300.0	321108
LCS 400-321108/2-A	Lab Control Sample	Soluble	Solid	300.0	321108
LCSD 400-321108/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	321108
400-126215-1 MS	MW-11 (21-22)	Soluble	Solid	300.0	321108
400-126215-1 MSD	MW-11 (21-22)	Soluble	Solid	300.0	321108

General Chemistry

Analysis Batch: 320114

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-126215-1	MW-11 (21-22)	Total/NA	Solid	Moisture	
400-126215-2	MW-10 (13-14)	Total/NA	Solid	Moisture	
400-126215-3	MW-8 (12-13)	Total/NA	Solid	Moisture	
400-126215-4	MW-6 (24-25)	Total/NA	Solid	Moisture	
400-126215-5	MW-4R (24-25)	Total/NA	Solid	Moisture	
400-126215-6	MW-7 (13-14)	Total/NA	Solid	Moisture	
400-126212-A-1 DU	Duplicate	Total/NA	Solid	Moisture	

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

Lab Sample ID: MB 400-320010/1-A
Matrix: Solid
Analysis Batch: 320014

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 320010

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) C6--C10	<5.0		5.0		mg/Kg		08/24/16 17:00	08/25/16 01:51	50

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid)	*105*		*65 - 125*	*08/24/16 17:00*	*08/25/16 01:51*	*50*

Lab Sample ID: LCS 400-320010/2-A
Matrix: Solid
Analysis Batch: 320014

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 320010

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO) C6--C10			50.0	59.4		mg/Kg		119	62 - 141		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
a,a,a-Trifluorotoluene (fid)	*104*		*65 - 125*

Lab Sample ID: 400-126215-1 MS
Matrix: Solid
Analysis Batch: 320014

Client Sample ID: MW-11 (21-22)
Prep Type: Total/NA
Prep Batch: 320010

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO) C6--C10	58		52.1	96.8		mg/Kg	☼	74	10 - 150		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
a,a,a-Trifluorotoluene (fid)	*93*		*65 - 125*

Lab Sample ID: 400-126215-1 MSD
Matrix: Solid
Analysis Batch: 320014

Client Sample ID: MW-11 (21-22)
Prep Type: Total/NA
Prep Batch: 320010

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	58		52.1	110		mg/Kg	☼	100	10 - 150	13	32

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
a,a,a-Trifluorotoluene (fid)	*95*		*65 - 125*

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 400-320009/1-A
Matrix: Solid
Analysis Batch: 320012

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 320009

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.050		0.050		mg/Kg		08/24/16 17:00	08/25/16 01:51	50
Ethylbenzene	<0.050		0.050		mg/Kg		08/24/16 17:00	08/25/16 01:51	50

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

Lab Sample ID: MB 400-320009/1-A
Matrix: Solid
Analysis Batch: 320012

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 320009

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Toluene	<0.25		0.25		mg/Kg		08/24/16 17:00	08/25/16 01:51	50
Xylenes, Total	<0.25		0.25		mg/Kg		08/24/16 17:00	08/25/16 01:51	50

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*101*		*40 - 150*	*08/24/16 17:00*	*08/25/16 01:51*	*50*

Lab Sample ID: LCS 400-320009/2-A
Matrix: Solid
Analysis Batch: 320012

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 320009

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			2.50	2.68		mg/Kg		107	74 - 127		
Ethylbenzene			2.50	2.53		mg/Kg		101	79 - 131		
Toluene			2.50	2.66		mg/Kg		106	76 - 127		
Xylenes, Total			7.50	7.64		mg/Kg		102	80 - 129		

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

Lab Sample ID: 400-126215-1 MS
Matrix: Solid
Analysis Batch: 320012

Client Sample ID: MW-11 (21-22)
Prep Type: Total/NA
Prep Batch: 320009

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	<0.052		2.61	3.02		mg/Kg	☼	116	10 - 150		
Ethylbenzene	0.12		2.61	3.19		mg/Kg	☼	117	10 - 150		
Toluene	<0.26		2.61	3.10		mg/Kg	☼	117	10 - 150		
Xylenes, Total	0.67		7.82	9.54		mg/Kg	☼	113	50 - 150		

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

Lab Sample ID: 400-126215-1 MSD
Matrix: Solid
Analysis Batch: 320012

Client Sample ID: MW-11 (21-22)
Prep Type: Total/NA
Prep Batch: 320009

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.052		2.61	2.95		mg/Kg	☼	113	10 - 150	2	34
Ethylbenzene	0.12		2.61	3.15		mg/Kg	☼	116	10 - 150	1	66
Toluene	<0.26		2.61	3.05		mg/Kg	☼	115	10 - 150	2	44
Xylenes, Total	0.67		7.82	9.46		mg/Kg	☼	112	50 - 150	1	46

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
a,a,a-Trifluorotoluene (pid)	*99*		*40 - 150*

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

Lab Sample ID: MB 400-320112/12-A
Matrix: Solid
Analysis Batch: 320248

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 320112

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	<5.0		5.0		mg/Kg		08/25/16 11:50	08/26/16 09:48	1
C28-C35	<5.0		5.0		mg/Kg		08/25/16 11:50	08/26/16 09:48	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*115*		*27 - 151*	*08/25/16 11:50*	*08/26/16 09:48*	*1*

Lab Sample ID: LCS 400-320112/13-A
Matrix: Solid
Analysis Batch: 320248

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 320112

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
C10-C28			323	377		mg/Kg		117	63 - 153		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*121*		*27 - 151*

Lab Sample ID: LCSD 400-320112/16-A
Matrix: Solid
Analysis Batch: 320248

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 320112

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
C10-C28			323	369		mg/Kg		114	63 - 153	11	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
o-Terphenyl	*138*		*27 - 151*

Lab Sample ID: 400-126225-A-2-B MS
Matrix: Solid
Analysis Batch: 320248

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 320112

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
C10-C28	5900	E	414	5730	4	mg/Kg	☼	-40	62 - 204		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
o-Terphenyl	*160*	*X*	*27 - 151*

Lab Sample ID: 400-126225-A-2-C MSD
Matrix: Solid
Analysis Batch: 320248

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 320112

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
C10-C28	5900	E	402	7940	4	mg/Kg	☼	509	62 - 204	26	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
o-Terphenyl	*200*	*X*	*27 - 151*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 400-321108/1-A
Matrix: Solid
Analysis Batch: 321489

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			09/02/16 20:09	1

Lab Sample ID: LCS 400-321108/2-A
Matrix: Solid
Analysis Batch: 321489

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			100	92.8		mg/Kg		93	80 - 120		

Lab Sample ID: LCSD 400-321108/3-A
Matrix: Solid
Analysis Batch: 321489

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	99.5		mg/Kg		100	80 - 120	7	15

Lab Sample ID: 400-126215-1 MS
Matrix: Solid
Analysis Batch: 321489

Client Sample ID: MW-11 (21-22)
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	<21		107	136		mg/Kg	☼	109	80 - 120		

Lab Sample ID: 400-126215-1 MSD
Matrix: Solid
Analysis Batch: 321489

Client Sample ID: MW-11 (21-22)
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	<21		106	129		mg/Kg	☼	103	80 - 120	6	15

Lab Chronicle

Client: MWH Americas Inc
Project/Site: Fields A#7A

TestAmerica Job ID: 400-126215-1

Client Sample ID: MW-11 (21-22)
Date Collected: 08/18/16 13:15
Date Received: 08/23/16 09:22

Lab Sample ID: 400-126215-1
Matrix: Solid

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			320114	08/25/16 12:16	JLB	TAL PEN
	Instrument ID: NOEQUIP									

Client Sample ID: MW-11 (21-22)
Date Collected: 08/18/16 13:15
Date Received: 08/23/16 09:22

Lab Sample ID: 400-126215-1
Matrix: Solid
Percent Solids: 93.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.12 g	5.00 g	320010	08/27/16 11:30	MKA	TAL PEN
Total/NA	Analysis	8015B		50	5 mL	5 mL	320014	08/29/16 17:51	SAB	TAL PEN
	Instrument ID: CH_RITA									
Total/NA	Prep	5035			5.12 g	5.00 g	320009	08/27/16 11:30	MKA	TAL PEN
Total/NA	Analysis	8021B		50	5 mL	5 mL	320012	08/29/16 17:51	MKA	TAL PEN
	Instrument ID: CH_RITA									
Total/NA	Prep	3546			15.08 g	1 mL	320112	08/25/16 11:50	RMC	TAL PEN
Total/NA	Analysis	8015B		1			320248	08/26/16 11:40	TJB	TAL PEN
	Instrument ID: WALLE									
Soluble	Leach	DI Leach			2.49 g	50 mL	321108	09/01/16 14:54	KH1	TAL PEN
Soluble	Analysis	300.0		1			321489	09/02/16 21:17	TAJ	TAL PEN
	Instrument ID: IC2									

Client Sample ID: MW-10 (13-14)
Date Collected: 08/19/16 10:10
Date Received: 08/23/16 09:22

Lab Sample ID: 400-126215-2
Matrix: Solid

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			320114	08/25/16 12:16	JLB	TAL PEN
	Instrument ID: NOEQUIP									

Client Sample ID: MW-10 (13-14)
Date Collected: 08/19/16 10:10
Date Received: 08/23/16 09:22

Lab Sample ID: 400-126215-2
Matrix: Solid
Percent Solids: 90.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.43 g	5.00 g	320010	08/27/16 11:30	MKA	TAL PEN
Total/NA	Analysis	8015B		1000	5 mL	5 mL	320014	08/29/16 21:32	SAB	TAL PEN
	Instrument ID: CH_RITA									
Total/NA	Prep	5035			5.43 g	5.00 g	320009	08/27/16 11:30	MKA	TAL PEN
Total/NA	Analysis	8021B		200	5 mL	5 mL	320012	08/27/16 23:27	MKA	TAL PEN
	Instrument ID: CH_RITA									
Total/NA	Prep	3546			15.24 g	1 mL	320112	08/25/16 11:50	RMC	TAL PEN
Total/NA	Analysis	8015B		1			320248	08/26/16 11:52	TJB	TAL PEN
	Instrument ID: WALLE									

Lab Chronicle

Client: MWH Americas Inc
Project/Site: Fields A#7A

TestAmerica Job ID: 400-126215-1

Client Sample ID: MW-10 (13-14)

Lab Sample ID: 400-126215-2
Date Collected: 08/19/16 10:10
Matrix: Solid
Date Received: 08/23/16 09:22
Percent Solids: 90.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			2.53 g	50 mL	321108	09/01/16 14:54	KH1	TAL PEN
Soluble	Analysis	300.0		1			321489	09/02/16 22:26	TAJ	TAL PEN
	Instrument ID: IC2									

Client Sample ID: MW-8 (12-13)

Lab Sample ID: 400-126215-3
Date Collected: 08/19/16 15:45
Matrix: Solid
Date Received: 08/23/16 09:22

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			320114	08/25/16 12:16	JLB	TAL PEN
	Instrument ID: NOEQUIP									

Client Sample ID: MW-8 (12-13)

Lab Sample ID: 400-126215-3
Date Collected: 08/19/16 15:45
Matrix: Solid
Date Received: 08/23/16 09:22
Percent Solids: 79.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.11 g	5.00 g	320010	08/27/16 11:30	MKA	TAL PEN
Total/NA	Analysis	8015B		1000	5 mL	5 mL	320014	08/29/16 21:59	SAB	TAL PEN
	Instrument ID: CH_RITA									
Total/NA	Prep	5035			5.11 g	5.00 g	320009	08/27/16 11:30	MKA	TAL PEN
Total/NA	Analysis	8021B		200	5 mL	5 mL	320012	08/27/16 23:54	MKA	TAL PEN
	Instrument ID: CH_RITA									
Total/NA	Prep	3546			15.08 g	1 mL	320112	08/25/16 11:50	RMC	TAL PEN
Total/NA	Analysis	8015B		1			320248	08/26/16 12:03	TJB	TAL PEN
	Instrument ID: WALLE									
Soluble	Leach	DI Leach			2.49 g	50 mL	321108	09/01/16 14:54	KH1	TAL PEN
Soluble	Analysis	300.0		1			321489	09/02/16 22:48	TAJ	TAL PEN
	Instrument ID: IC2									

Client Sample ID: MW-6 (24-25)

Lab Sample ID: 400-126215-4
Date Collected: 08/20/16 10:15
Matrix: Solid
Date Received: 08/23/16 09:22

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			320114	08/25/16 12:16	JLB	TAL PEN
	Instrument ID: NOEQUIP									

Lab Chronicle

Client: MWH Americas Inc
Project/Site: Fields A#7A

TestAmerica Job ID: 400-126215-1

Client Sample ID: MW-6 (24-25)

Lab Sample ID: 400-126215-4
Date Collected: 08/20/16 10:15
Matrix: Solid
Date Received: 08/23/16 09:22
Percent Solids: 92.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.15 g	5.00 g	320010	08/27/16 11:30	MKA	TAL PEN
Total/NA	Analysis	8015B		200	5 mL	5 mL	320014	08/28/16 00:21	SAB	TAL PEN
	Instrument ID: CH_RITA									
Total/NA	Prep	5035			5.15 g	5.00 g	320009	08/27/16 11:30	MKA	TAL PEN
Total/NA	Analysis	8021B		50	5 mL	5 mL	320012	08/29/16 20:10	MKA	TAL PEN
	Instrument ID: CH_RITA									
Total/NA	Prep	3546			15.06 g	1 mL	320112	08/25/16 11:50	RMC	TAL PEN
Total/NA	Analysis	8015B		1			320248	08/26/16 12:15	TJB	TAL PEN
	Instrument ID: WALLE									
Soluble	Leach	DI Leach			2.49 g	50 mL	321108	09/01/16 14:54	KH1	TAL PEN
Soluble	Analysis	300.0		1			321489	09/02/16 23:11	TAJ	TAL PEN
	Instrument ID: IC2									

Client Sample ID: MW-4R (24-25)

Lab Sample ID: 400-126215-5
Date Collected: 08/21/16 09:30
Matrix: Solid
Date Received: 08/23/16 09:22

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			320114	08/25/16 12:16	JLB	TAL PEN
	Instrument ID: NOEQUIP									

Client Sample ID: MW-4R (24-25)

Lab Sample ID: 400-126215-5
Date Collected: 08/21/16 09:30
Matrix: Solid
Date Received: 08/23/16 09:22
Percent Solids: 93.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.19 g	5.00 g	320010	08/27/16 11:30	MKA	TAL PEN
Total/NA	Analysis	8015B		50	5 mL	5 mL	320014	08/27/16 22:05	SAB	TAL PEN
	Instrument ID: CH_RITA									
Total/NA	Prep	5035			5.19 g	5.00 g	320009	08/27/16 11:30	MKA	TAL PEN
Total/NA	Analysis	8021B		50	5 mL	5 mL	320012	08/27/16 22:05	MKA	TAL PEN
	Instrument ID: CH_RITA									
Total/NA	Prep	3546			15.07 g	1 mL	320112	08/25/16 11:50	RMC	TAL PEN
Total/NA	Analysis	8015B		1			320248	08/26/16 12:26	TJB	TAL PEN
	Instrument ID: WALLE									
Soluble	Leach	DI Leach			2.55 g	50 mL	321108	09/01/16 14:54	KH1	TAL PEN
Soluble	Analysis	300.0		1			321489	09/02/16 23:34	TAJ	TAL PEN
	Instrument ID: IC2									

Lab Chronicle

Client: MWH Americas Inc
Project/Site: Fields A#7A

TestAmerica Job ID: 400-126215-1

Client Sample ID: MW-7 (13-14)

Date Collected: 08/21/16 13:45
Date Received: 08/23/16 09:22

Lab Sample ID: 400-126215-6
Matrix: Solid

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			320114	08/25/16 12:16	JLB	TAL PEN
	Instrument ID: NOEQUIP									

Client Sample ID: MW-7 (13-14)

Date Collected: 08/21/16 13:45
Date Received: 08/23/16 09:22

Lab Sample ID: 400-126215-6
Matrix: Solid
Percent Solids: 91.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.23 g	5.00 g	320010	08/27/16 11:30	MKA	TAL PEN
Total/NA	Analysis	8015B		2000	5 mL	5 mL	320014	08/29/16 22:26	SAB	TAL PEN
	Instrument ID: CH_RITA									
Total/NA	Prep	5035			5.23 g	5.00 g	320009	08/27/16 11:30	MKA	TAL PEN
Total/NA	Analysis	8021B		2000	5 mL	5 mL	320012	08/29/16 22:26	MKA	TAL PEN
	Instrument ID: CH_RITA									
Total/NA	Prep	3546			15.01 g	1 mL	320112	08/25/16 11:50	RMC	TAL PEN
Total/NA	Analysis	8015B		1			320248	08/26/16 12:38	TJB	TAL PEN
	Instrument ID: WALLE									
Soluble	Leach	DI Leach			2.50 g	50 mL	321108	09/01/16 14:54	KH1	TAL PEN
Soluble	Analysis	300.0		1			321489	09/03/16 00:42	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: Fields A#7A

TestAmerica Job ID: 400-126215-1

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	09-01-16 *
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	10-09-16
Iowa	State Program	7	367	07-31-16 *
Kansas	NELAP	7	E-10253	10-31-16
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	T104704286-15-9	09-30-16
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	08-31-16 *

* Certification renewal pending - certification considered valid.

Method Summary

Client: MWH Americas Inc
Project/Site: Fields A#7A

TestAmerica Job ID: 400-126215-1

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 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 Barton	Lab PM: Edwards, Marty P	Carrier Tracking No(s):	COC No: 400-56725-24604.1
Client Contact: Clint Oberbroeckling	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: 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)
City: Des Moines	TAT Requested (days): Per ARF			
State, Zip: IA, 50322-7904				
Phone: 303-291-2239(Tel)	PO #: Purchase Order Requested			
Email: clint.w.oberbroeckling@mwhglobal.com	WO #: ARF # FRG-MWH-06-29-16-CWO-01			
Project Name: Fields A#7A	Project #: 40005479			
Site: Fields A#7A	SSOW#:			Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Preservation Code	8015B_DRO - DRO C10-C28 / ORO, Chloride	8015B_GRO, 8021B		Special Instructions/Note:
MW-11 (21-22)	8/18/16	1315	G	S		N	N	1	1
MW-10 (13-14)	8/19/16	1010	G	S		N	N	1	1
MW-8 (12-13)	8/19/16	1545	G	S		N	N	1	1
MW-6 (24-25)	8/20/16	1015	G	S		N	N	1	1
MW-4R (24-25)	8/21/16	0930	G	S		N	N	1	1
MW-7 (13-14)	8/21/16	1345	G	S		N	N	1	1

400-126215 COC

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

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

Deliverable Requested: I, II, III, IV, Other (specify): 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 Bat	Date/Time: 8/22/16 0700	Company: MWH	Received by: Fed Ex gffice	Date/Time: 8/22/16 -	Company: Fed Ex
	Relinquished by: Fed Ex	Date/Time: 8/23/16 -	Company: Fed Ex	Received by:	Date/Time: 8/23/16 922	Company: TA

Custody Seals Intact: [ ] Yes [ ] No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 0.0 °C IR6

Login Sample Receipt Checklist

Client: MWH Americas Inc

Job Number: 400-126215-1

Login Number: 126215
List Number: 1
Creator: Hughes, Nicholas T

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.0°C - 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").	N/A	
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: 400-126386-1
Client Project/Site: Fields A#7A

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

Attn: Ms. Sarah Gardner

Carol M Webb

Authorized for release by:
9/12/2016 4:51:40 PM

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

Table of Contents

Client: MWH Americas Inc
Project/Site: Fields A#7A

TestAmerica Job ID: 400-126386-1

Qualifiers

GC VOA

Qualifier	Qualifier Description
X	Surrogate is outside control 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)

Job ID: 400-126386-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-126386-1

Comments
No additional comments.

Receipt
The samples were received on 8/26/2016 9:41 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.7º C.

HPLC/IC
Method 300.0: The following samples was diluted due to strong odor and the abundance of non-target analytes: SB-1 (15-16) (400-126386-4). Elevated reporting limits (RL) are provided.

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

GC VOA
Method 8021B: Surrogate recoveries for the following samples were outside control limits: SB-2 (4-5) (400-126386-6) and SB-2 (11-12) (400-126386-7). Evidence of matrix interference is present; therefore, re-extraction and/or preparation batch 400-320009 and analytical batch 400-320269 re-analysis was not performed.

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

GC Semi VOA
Method 8015B: The following sample was diluted to bring the concentration of target analytes within the calibration range: SB-2 (4-5) (400-126386-6). Elevated reporting limits (RLs) are provided.

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

Organic Prep
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.

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

Detection Summary

Client: MWH Americas Inc
Project/Site: Fields A#7A

TestAmerica Job ID: 400-126386-1

Client Sample ID: MW-5 (23-24) — Lab Sample ID: 400-126386-1

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Gasoline Range Organics (GRO) C6--C10	850		22		mg/Kg	200	☼	8015B	Total/NA
Benzene	3.0		0.22		mg/Kg	200	☼	8021B	Total/NA
Ethylbenzene	5.9		0.22		mg/Kg	200	☼	8021B	Total/NA
Toluene	15		1.1		mg/Kg	200	☼	8021B	Total/NA
Xylenes, Total	24		1.1		mg/Kg	200	☼	8021B	Total/NA
C10-C28	77		5.6		mg/Kg	1	☼	8015B	Total/NA
C28-C35	14		5.6		mg/Kg	1	☼	8015B	Total/NA

Client Sample ID: MW-9 (25-26) — Lab Sample ID: 400-126386-2

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Gasoline Range Organics (GRO) C6--C10	410		10		mg/Kg	100	☼	8015B	Total/NA
Benzene	0.42		0.10		mg/Kg	100	☼	8021B	Total/NA
Ethylbenzene	3.7		0.10		mg/Kg	100	☼	8021B	Total/NA
Toluene	7.7		0.52		mg/Kg	100	☼	8021B	Total/NA
Xylenes, Total	28		0.52		mg/Kg	100	☼	8021B	Total/NA
C10-C28	17		5.3		mg/Kg	1	☼	8015B	Total/NA
C28-C35	8.7		5.3		mg/Kg	1	☼	8015B	Total/NA

Client Sample ID: SB-1 (12-13) — Lab Sample ID: 400-126386-3

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Gasoline Range Organics (GRO) C6--C10	240		5.1		mg/Kg	50	☼	8015B	Total/NA
Benzene	0.18		0.051		mg/Kg	50	☼	8021B	Total/NA
Ethylbenzene	2.7		0.051		mg/Kg	50	☼	8021B	Total/NA
Toluene	0.44		0.26		mg/Kg	50	☼	8021B	Total/NA
Xylenes, Total	9.3		0.26		mg/Kg	50	☼	8021B	Total/NA
C10-C28	34		5.4		mg/Kg	1	☼	8015B	Total/NA
C28-C35	14		5.4		mg/Kg	1	☼	8015B	Total/NA

Client Sample ID: SB-1 (15-16) — Lab Sample ID: 400-126386-4

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Gasoline Range Organics (GRO) C6--C10	16		5.2		mg/Kg	50	☼	8015B	Total/NA
C10-C28	17		5.6		mg/Kg	1	☼	8015B	Total/NA
C28-C35	23		5.6		mg/Kg	1	☼	8015B	Total/NA

Client Sample ID: SB-1 (27-28) — Lab Sample ID: 400-126386-5

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Gasoline Range Organics (GRO) C6--C10	390		11		mg/Kg	100	☼	8015B	Total/NA
Benzene	1.5		0.11		mg/Kg	100	☼	8021B	Total/NA
Ethylbenzene	2.3		0.11		mg/Kg	100	☼	8021B	Total/NA
Toluene	7.5		0.55		mg/Kg	100	☼	8021B	Total/NA
Xylenes, Total	18		0.55		mg/Kg	100	☼	8021B	Total/NA
C10-C28	7.1		5.5		mg/Kg	1	☼	8015B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: MWH Americas Inc
Project/Site: Fields A#7A

TestAmerica Job ID: 400-126386-1

Client Sample ID: SB-2 (4-5) — Lab Sample ID: 400-126386-6

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Gasoline Range Organics (GRO) C6--C10	1700		110		mg/Kg	1000	☼	8015B	Total/NA
Benzene	0.30		0.11		mg/Kg	100	☼	8021B	Total/NA
Ethylbenzene	7.3		0.11		mg/Kg	100	☼	8021B	Total/NA
Toluene	3.0		0.54		mg/Kg	100	☼	8021B	Total/NA
Xylenes, Total	71		0.54		mg/Kg	100	☼	8021B	Total/NA
C10-C28	690		11		mg/Kg	2	☼	8015B	Total/NA
C28-C35	190		5.7		mg/Kg	1	☼	8015B	Total/NA

Client Sample ID: SB-2 (11-12) — Lab Sample ID: 400-126386-7

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Gasoline Range Organics (GRO) C6--C10	770		110		mg/Kg	1000	☼	8015B	Total/NA
Ethylbenzene	3.0		0.11		mg/Kg	100	☼	8021B	Total/NA
Toluene	1.9		0.56		mg/Kg	100	☼	8021B	Total/NA
Xylenes, Total	54		0.56		mg/Kg	100	☼	8021B	Total/NA
C10-C28	240		5.8		mg/Kg	1	☼	8015B	Total/NA
C28-C35	110		5.8		mg/Kg	1	☼	8015B	Total/NA

Client Sample ID: SB-2 (23-24) — Lab Sample ID: 400-126386-8

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Gasoline Range Organics (GRO) C6--C10	2300		100		mg/Kg	1000	☼	8015B	Total/NA
Benzene	24		1.0		mg/Kg	1000	☼	8021B	Total/NA
Ethylbenzene	30		1.0		mg/Kg	1000	☼	8021B	Total/NA
Toluene	120		5.1		mg/Kg	1000	☼	8021B	Total/NA
Xylenes, Total	210		5.1		mg/Kg	1000	☼	8021B	Total/NA
C10-C28	390		5.3		mg/Kg	1	☼	8015B	Total/NA
C28-C35	49		5.3		mg/Kg	1	☼	8015B	Total/NA

This Detection Summary does not include radiochemical test results.

Sample Summary

Client: MWH Americas Inc
Project/Site: Fields A#7A

TestAmerica Job ID: 400-126386-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-126386-1	MW-5 (23-24)	Solid	08/22/16 13:30	08/26/16 09:41
400-126386-2	MW-9 (25-26)	Solid	08/23/16 08:40	08/26/16 09:41
400-126386-3	SB-1 (12-13)	Solid	08/23/16 13:00	08/26/16 09:41
400-126386-4	SB-1 (15-16)	Solid	08/23/16 13:10	08/26/16 09:41
400-126386-5	SB-1 (27-28)	Solid	08/23/16 13:20	08/26/16 09:41
400-126386-6	SB-2 (4-5)	Solid	08/24/16 17:50	08/26/16 09:41
400-126386-7	SB-2 (11-12)	Solid	08/24/16 19:15	08/26/16 09:41
400-126386-8	SB-2 (23-24)	Solid	08/24/16 19:50	08/26/16 09:41

Client Sample ID: MW-5 (23-24)

Date Collected: 08/22/16 13:30
Date Received: 08/26/16 09:41

Lab Sample ID: 400-126386-1

Matrix: Solid
Percent Solids: 89.2

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) C6--C10	850		22		mg/Kg	☼	08/29/16 16:35	08/30/16 11:19	200

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid)	*87*		*65 - 125*	*08/29/16 16:35*	*08/30/16 11:19*	*200*

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	3.0		0.22		mg/Kg	☼	08/29/16 16:35	08/30/16 11:19	200
Ethylbenzene	5.9		0.22		mg/Kg	☼	08/29/16 16:35	08/30/16 11:19	200
Toluene	15		1.1		mg/Kg	☼	08/29/16 16:35	08/30/16 11:19	200
Xylenes, Total	24		1.1		mg/Kg	☼	08/29/16 16:35	08/30/16 11:19	200

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*99*		*40 - 150*	*08/29/16 16:35*	*08/30/16 11:19*	*200*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	77		5.6		mg/Kg	☼	08/27/16 10:31	08/29/16 16:35	1
C28-C35	14		5.6		mg/Kg	☼	08/27/16 10:31	08/29/16 16:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*110*		*27 - 151*	*08/27/16 10:31*	*08/29/16 16:35*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<22		22		mg/Kg	☼		09/08/16 01:07	1

Client Sample ID: MW-9 (25-26)

Date Collected: 08/23/16 08:40
Date Received: 08/26/16 09:41

Lab Sample ID: 400-126386-2

Matrix: Solid
Percent Solids: 92.6

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) C6--C10	410		10		mg/Kg	☼	08/29/16 16:35	08/30/16 11:46	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid)	*86*		*65 - 125*	*08/29/16 16:35*	*08/30/16 11:46*	*100*

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.42		0.10		mg/Kg	☼	08/29/16 16:35	08/30/16 11:46	100
Ethylbenzene	3.7		0.10		mg/Kg	☼	08/29/16 16:35	08/30/16 11:46	100
Toluene	7.7		0.52		mg/Kg	☼	08/29/16 16:35	08/30/16 11:46	100
Xylenes, Total	28		0.52		mg/Kg	☼	08/29/16 16:35	08/30/16 11:46	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*100*		*40 - 150*	*08/29/16 16:35*	*08/30/16 11:46*	*100*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	17		5.3		mg/Kg	☼	08/27/16 10:31	08/29/16 16:46	1
C28-C35	8.7		5.3		mg/Kg	☼	08/27/16 10:31	08/29/16 16:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*93*		*27 - 151*	*08/27/16 10:31*	*08/29/16 16:46*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<22		22		mg/Kg	☼		09/08/16 17:08	1

Client Sample ID: SB-1 (12-13)

Date Collected: 08/23/16 13:00
Date Received: 08/26/16 09:41

Lab Sample ID: 400-126386-3

Matrix: Solid
Percent Solids: 90.6

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) C6--C10	240		5.1		mg/Kg	☼	08/29/16 16:35	08/30/16 12:13	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid)	*79*		*65 - 125*	*08/29/16 16:35*	*08/30/16 12:13*	*50*

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.18		0.051		mg/Kg	☼	08/29/16 16:35	08/30/16 12:13	50
Ethylbenzene	2.7		0.051		mg/Kg	☼	08/29/16 16:35	08/30/16 12:13	50
Toluene	0.44		0.26		mg/Kg	☼	08/29/16 16:35	08/30/16 12:13	50
Xylenes, Total	9.3		0.26		mg/Kg	☼	08/29/16 16:35	08/30/16 12:13	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*100*		*40 - 150*	*08/29/16 16:35*	*08/30/16 12:13*	*50*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	34		5.4		mg/Kg	☼	08/27/16 10:31	08/29/16 16:58	1
C28-C35	14		5.4		mg/Kg	☼	08/27/16 10:31	08/29/16 16:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*112*		*27 - 151*	*08/27/16 10:31*	*08/29/16 16:58*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<22		22		mg/Kg	☼		09/08/16 17:31	1

Client: MWH Americas Inc
Project/Site: Fields A#7A

TestAmerica Job ID: 400-126386-1

Client Sample ID: SB-1 (15-16)
Date Collected: 08/23/16 13:10
Date Received: 08/26/16 09:41

Lab Sample ID: 400-126386-4
Matrix: Solid
Percent Solids: 89.9

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) C6--C10	16		5.2		mg/Kg	☼	08/29/16 16:35	08/30/16 13:37	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid)	*98*		*65 - 125*	*08/29/16 16:35*	*08/30/16 13:37*	*50*

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0011		0.0011		mg/Kg	☼	09/01/16 14:20	09/02/16 01:16	1
Ethylbenzene	<0.0011		0.0011		mg/Kg	☼	09/01/16 14:20	09/02/16 01:16	1
Toluene	<0.0053		0.0053		mg/Kg	☼	09/01/16 14:20	09/02/16 01:16	1
Xylenes, Total	<0.0053		0.0053		mg/Kg	☼	09/01/16 14:20	09/02/16 01:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*102*		*40 - 150*	*09/01/16 14:20*	*09/02/16 01:16*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	17		5.6		mg/Kg	☼	08/27/16 10:31	08/29/16 17:09	1
C28-C35	23		5.6		mg/Kg	☼	08/27/16 10:31	08/29/16 17:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*106*		*27 - 151*	*08/27/16 10:31*	*08/29/16 17:09*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<220		220		mg/Kg	☼		09/11/16 09:55	10

Client: MWH Americas Inc
Project/Site: Fields A#7A

TestAmerica Job ID: 400-126386-1

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

Date Collected: 08/23/16 13:20
Date Received: 08/26/16 09:41

Lab Sample ID: 400-126386-5

Matrix: Solid
Percent Solids: 90.9

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) C6--C10	390		11		mg/Kg	☼	08/29/16 16:35	08/30/16 12:40	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid)	*87*		*65 - 125*	*08/29/16 16:35*	*08/30/16 12:40*	*100*

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.5		0.11		mg/Kg	☼	08/29/16 16:35	08/30/16 12:40	100
Ethylbenzene	2.3		0.11		mg/Kg	☼	08/29/16 16:35	08/30/16 12:40	100
Toluene	7.5		0.55		mg/Kg	☼	08/29/16 16:35	08/30/16 12:40	100
Xylenes, Total	18		0.55		mg/Kg	☼	08/29/16 16:35	08/30/16 12:40	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*100*		*40 - 150*	*08/29/16 16:35*	*08/30/16 12:40*	*100*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	7.1		5.5		mg/Kg	☼	08/27/16 10:31	08/29/16 17:21	1
C28-C35	<5.5		5.5		mg/Kg	☼	08/27/16 10:31	08/29/16 17:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*108*		*27 - 151*	*08/27/16 10:31*	*08/29/16 17:21*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<22		22		mg/Kg	☼		09/08/16 18:16	1

Client: MWH Americas Inc
Project/Site: Fields A#7A

TestAmerica Job ID: 400-126386-1

Client Sample ID: SB-2 (4-5)
Date Collected: 08/24/16 17:50
Date Received: 08/26/16 09:41

Lab Sample ID: 400-126386-6
Matrix: Solid
Percent Solids: 87.6

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) C6--C10	1700		110		mg/Kg	☼	08/29/16 16:35	08/30/16 04:28	1000

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid)	*96*		*65 - 125*	*08/29/16 16:35*	*08/30/16 04:28*	*1000*

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.30		0.11		mg/Kg	☼	08/29/16 16:35	08/30/16 16:42	100
Ethylbenzene	7.3		0.11		mg/Kg	☼	08/29/16 16:35	08/30/16 16:42	100
Toluene	3.0		0.54		mg/Kg	☼	08/29/16 16:35	08/30/16 16:42	100
Xylenes, Total	71		0.54		mg/Kg	☼	08/29/16 16:35	08/30/16 16:42	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*1683*	*X*	*40 - 150*	*08/29/16 16:35*	*08/30/16 16:42*	*100*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	690		11		mg/Kg	☼	08/27/16 10:31	08/30/16 10:48	2
C28-C35	190		5.7		mg/Kg	☼	08/27/16 10:31	08/29/16 17:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*101*		*27 - 151*	*08/27/16 10:31*	*08/29/16 17:44*	*1*
o-Terphenyl	*104*		*27 - 151*	*08/27/16 10:31*	*08/30/16 10:48*	*2*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<22		22		mg/Kg	☼		09/08/16 18:39	1

Client: MWH Americas Inc
Project/Site: Fields A#7A

TestAmerica Job ID: 400-126386-1

Client Sample ID: SB-2 (11-12)

Date Collected: 08/24/16 19:15
Date Received: 08/26/16 09:41

Lab Sample ID: 400-126386-7

Matrix: Solid
Percent Solids: 85.9

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) C6--C10	770		110		mg/Kg	☼	08/29/16 16:35	08/30/16 04:55	1000

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid)	*97*		*65 - 125*	*08/29/16 16:35*	*08/30/16 04:55*	*1000*

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.11		0.11		mg/Kg	☼	08/29/16 16:35	08/30/16 15:38	100
Ethylbenzene	3.0		0.11		mg/Kg	☼	08/29/16 16:35	08/30/16 15:38	100
Toluene	1.9		0.56		mg/Kg	☼	08/29/16 16:35	08/30/16 15:38	100
Xylenes, Total	54		0.56		mg/Kg	☼	08/29/16 16:35	08/30/16 15:38	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*1173*	*X*	*40 - 150*	*08/29/16 16:35*	*08/30/16 15:38*	*100*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	240		5.8		mg/Kg	☼	08/27/16 10:31	08/29/16 17:55	1
C28-C35	110		5.8		mg/Kg	☼	08/27/16 10:31	08/29/16 17:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*106*		*27 - 151*	*08/27/16 10:31*	*08/29/16 17:55*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<23		23		mg/Kg	☼		09/08/16 19:02	1

Client Sample ID: SB-2 (23-24)

Date Collected: 08/24/16 19:50
Date Received: 08/26/16 09:41

Lab Sample ID: 400-126386-8

Matrix: Solid
Percent Solids: 92.8

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) C6--C10	2300		100		mg/Kg	☼	08/29/16 16:35	08/30/16 05:22	1000

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid)	*90*		*65 - 125*	*08/29/16 16:35*	*08/30/16 05:22*	*1000*

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	24		1.0		mg/Kg	☼	09/01/16 14:20	09/02/16 03:32	1000
Ethylbenzene	30		1.0		mg/Kg	☼	09/01/16 14:20	09/02/16 03:32	1000
Toluene	120		5.1		mg/Kg	☼	09/01/16 14:20	09/02/16 03:32	1000
Xylenes, Total	210		5.1		mg/Kg	☼	09/01/16 14:20	09/02/16 03:32	1000

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*98*		*40 - 150*	*09/01/16 14:20*	*09/02/16 03:32*	*1000*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	390		5.3		mg/Kg	☼	08/27/16 10:31	08/29/16 18:07	1
C28-C35	49		5.3		mg/Kg	☼	08/27/16 10:31	08/29/16 18:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*107*		*27 - 151*	*08/27/16 10:31*	*08/29/16 18:07*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<21		21		mg/Kg	☼		09/08/16 19:25	1

GC VOA

Prep Batch: 320009

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-126386-1	MW-5 (23-24)	Total/NA	Solid	5035	
400-126386-2	MW-9 (25-26)	Total/NA	Solid	5035	
400-126386-3	SB-1 (12-13)	Total/NA	Solid	5035	
400-126386-5	SB-1 (27-28)	Total/NA	Solid	5035	
400-126386-6	SB-2 (4-5)	Total/NA	Solid	5035	
400-126386-7	SB-2 (11-12)	Total/NA	Solid	5035	
MB 400-320009/1-A	Method Blank	Total/NA	Solid	5035	
LCS 400-320009/2-A	Lab Control Sample	Total/NA	Solid	5035	

Prep Batch: 320010

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-126386-1	MW-5 (23-24)	Total/NA	Solid	5035	
400-126386-2	MW-9 (25-26)	Total/NA	Solid	5035	
400-126386-3	SB-1 (12-13)	Total/NA	Solid	5035	
400-126386-4	SB-1 (15-16)	Total/NA	Solid	5035	
400-126386-5	SB-1 (27-28)	Total/NA	Solid	5035	
400-126386-6	SB-2 (4-5)	Total/NA	Solid	5035	
400-126386-7	SB-2 (11-12)	Total/NA	Solid	5035	
400-126386-8	SB-2 (23-24)	Total/NA	Solid	5035	
MB 400-320010/1-A	Method Blank	Total/NA	Solid	5035	
LCS 400-320010/2-A	Lab Control Sample	Total/NA	Solid	5035	
400-126215-B-1-F MS	Matrix Spike	Total/NA	Solid	5035	
400-126215-B-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	

Analysis Batch: 320012

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-126386-1	MW-5 (23-24)	Total/NA	Solid	8021B	320009
400-126386-2	MW-9 (25-26)	Total/NA	Solid	8021B	320009
400-126386-3	SB-1 (12-13)	Total/NA	Solid	8021B	320009
400-126386-5	SB-1 (27-28)	Total/NA	Solid	8021B	320009
MB 400-320009/1-A	Method Blank	Total/NA	Solid	8021B	320009
LCS 400-320009/2-A	Lab Control Sample	Total/NA	Solid	8021B	320009

Analysis Batch: 320014

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-126386-1	MW-5 (23-24)	Total/NA	Solid	8015B	320010
400-126386-2	MW-9 (25-26)	Total/NA	Solid	8015B	320010
400-126386-3	SB-1 (12-13)	Total/NA	Solid	8015B	320010
400-126386-4	SB-1 (15-16)	Total/NA	Solid	8015B	320010
400-126386-5	SB-1 (27-28)	Total/NA	Solid	8015B	320010
400-126386-6	SB-2 (4-5)	Total/NA	Solid	8015B	320010
400-126386-7	SB-2 (11-12)	Total/NA	Solid	8015B	320010
400-126386-8	SB-2 (23-24)	Total/NA	Solid	8015B	320010
MB 400-320010/1-A	Method Blank	Total/NA	Solid	8015B	320010
LCS 400-320010/2-A	Lab Control Sample	Total/NA	Solid	8015B	320010
400-126215-B-1-F MS	Matrix Spike	Total/NA	Solid	8015B	320010
400-126215-B-1-G MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B	320010

Analysis Batch: 320269

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-126386-6	SB-2 (4-5)	Total/NA	Solid	8021B	320009

GC VOA (Continued)

Analysis Batch: 320269 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-126386-7	SB-2 (11-12)	Total/NA	Solid	8021B	320009

Prep Batch: 321105

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-126386-8	SB-2 (23-24)	Total/NA	Solid	5035	
MB 400-321105/2-A	Method Blank	Total/NA	Solid	5035	
LCS 400-321105/1-A	Lab Control Sample	Total/NA	Solid	5035	

Prep Batch: 321107

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-126386-4	SB-1 (15-16)	Total/NA	Solid	5035	
MB 400-321107/2-A	Method Blank	Total/NA	Solid	5035	
LCS 400-321107/1-A	Lab Control Sample	Total/NA	Solid	5035	
400-126386-4 MS	SB-1 (15-16)	Total/NA	Solid	5035	
400-126386-4 MSD	SB-1 (15-16)	Total/NA	Solid	5035	

Analysis Batch: 321131

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-126386-4	SB-1 (15-16)	Total/NA	Solid	8021B	321107
MB 400-321107/2-A	Method Blank	Total/NA	Solid	8021B	321107
LCS 400-321107/1-A	Lab Control Sample	Total/NA	Solid	8021B	321107
400-126386-4 MS	SB-1 (15-16)	Total/NA	Solid	8021B	321107
400-126386-4 MSD	SB-1 (15-16)	Total/NA	Solid	8021B	321107

Analysis Batch: 321137

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-126386-8	SB-2 (23-24)	Total/NA	Solid	8021B	321105
MB 400-321105/2-A	Method Blank	Total/NA	Solid	8021B	321105
LCS 400-321105/1-A	Lab Control Sample	Total/NA	Solid	8021B	321105

GC Semi VOA

Prep Batch: 320437

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-126386-1	MW-5 (23-24)	Total/NA	Solid	3546	
400-126386-2	MW-9 (25-26)	Total/NA	Solid	3546	
400-126386-3	SB-1 (12-13)	Total/NA	Solid	3546	
400-126386-4	SB-1 (15-16)	Total/NA	Solid	3546	
400-126386-5	SB-1 (27-28)	Total/NA	Solid	3546	
400-126386-6	SB-2 (4-5)	Total/NA	Solid	3546	
400-126386-7	SB-2 (11-12)	Total/NA	Solid	3546	
400-126386-8	SB-2 (23-24)	Total/NA	Solid	3546	
MB 400-320437/1-A	Method Blank	Total/NA	Solid	3546	
LCS 400-320437/2-A	Lab Control Sample	Total/NA	Solid	3546	
LCSD 400-320437/23-A	Lab Control Sample Dup	Total/NA	Solid	3546	

Analysis Batch: 320665

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-126386-1	MW-5 (23-24)	Total/NA	Solid	8015B	320437
400-126386-2	MW-9 (25-26)	Total/NA	Solid	8015B	320437

GC Semi VOA (Continued)

Analysis Batch: 320665 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-126386-3	SB-1 (12-13)	Total/NA	Solid	8015B	320437
400-126386-4	SB-1 (15-16)	Total/NA	Solid	8015B	320437
400-126386-5	SB-1 (27-28)	Total/NA	Solid	8015B	320437
400-126386-6	SB-2 (4-5)	Total/NA	Solid	8015B	320437
400-126386-7	SB-2 (11-12)	Total/NA	Solid	8015B	320437
400-126386-8	SB-2 (23-24)	Total/NA	Solid	8015B	320437
MB 400-320437/1-A	Method Blank	Total/NA	Solid	8015B	320437
LCS 400-320437/2-A	Lab Control Sample	Total/NA	Solid	8015B	320437
LCSD 400-320437/23-A	Lab Control Sample Dup	Total/NA	Solid	8015B	320437

Analysis Batch: 320758

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-126386-6	SB-2 (4-5)	Total/NA	Solid	8015B	320437

HPLC/IC

Leach Batch: 321669

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-126386-1	MW-5 (23-24)	Soluble	Solid	DI Leach	
400-126386-2	MW-9 (25-26)	Soluble	Solid	DI Leach	
400-126386-3	SB-1 (12-13)	Soluble	Solid	DI Leach	
400-126386-4	SB-1 (15-16)	Soluble	Solid	DI Leach	
400-126386-5	SB-1 (27-28)	Soluble	Solid	DI Leach	
400-126386-6	SB-2 (4-5)	Soluble	Solid	DI Leach	
400-126386-7	SB-2 (11-12)	Soluble	Solid	DI Leach	
400-126386-8	SB-2 (23-24)	Soluble	Solid	DI Leach	
MB 400-321669/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 400-321669/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 400-321669/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	

Analysis Batch: 321759

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-126386-1	MW-5 (23-24)	Soluble	Solid	300.0	321669
MB 400-321669/1-A	Method Blank	Soluble	Solid	300.0	321669
LCS 400-321669/2-A	Lab Control Sample	Soluble	Solid	300.0	321669
LCSD 400-321669/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	321669

Analysis Batch: 321911

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-126386-2	MW-9 (25-26)	Soluble	Solid	300.0	321669
400-126386-3	SB-1 (12-13)	Soluble	Solid	300.0	321669
400-126386-5	SB-1 (27-28)	Soluble	Solid	300.0	321669
400-126386-6	SB-2 (4-5)	Soluble	Solid	300.0	321669
400-126386-7	SB-2 (11-12)	Soluble	Solid	300.0	321669
400-126386-8	SB-2 (23-24)	Soluble	Solid	300.0	321669
MB 400-321669/1-A	Method Blank	Soluble	Solid	300.0	321669
LCS 400-321669/2-A	Lab Control Sample	Soluble	Solid	300.0	321669
LCSD 400-321669/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	321669

HPLC/IC (Continued)

Analysis Batch: 322142

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-126386-4	SB-1 (15-16)	Soluble	Solid	300.0	321669

General Chemistry

Analysis Batch: 320561

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-126386-1	MW-5 (23-24)	Total/NA	Solid	Moisture	
400-126386-2	MW-9 (25-26)	Total/NA	Solid	Moisture	
400-126386-3	SB-1 (12-13)	Total/NA	Solid	Moisture	
400-126386-4	SB-1 (15-16)	Total/NA	Solid	Moisture	
400-126386-5	SB-1 (27-28)	Total/NA	Solid	Moisture	
400-126386-6	SB-2 (4-5)	Total/NA	Solid	Moisture	
400-126386-7	SB-2 (11-12)	Total/NA	Solid	Moisture	
400-126386-8	SB-2 (23-24)	Total/NA	Solid	Moisture	
400-126369-B-1 DU	Duplicate	Total/NA	Solid	Moisture	

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

Lab Sample ID: MB 400-320010/1-A
Matrix: Solid
Analysis Batch: 320014

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 320010

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) C6--C10	<5.0		5.0		mg/Kg		08/24/16 17:00	08/25/16 01:51	50

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid)	*105*		*65 - 125*	*08/24/16 17:00*	*08/25/16 01:51*	*50*

Lab Sample ID: LCS 400-320010/2-A
Matrix: Solid
Analysis Batch: 320014

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 320010

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO) C6--C10			50.0	59.4		mg/Kg		119	62 - 141		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
a,a,a-Trifluorotoluene (fid)	*104*		*65 - 125*

Lab Sample ID: 400-126215-B-1-F MS
Matrix: Solid
Analysis Batch: 320014

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 320010

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO) C6--C10	58		52.1	96.8		mg/Kg	☼	74	10 - 150		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
a,a,a-Trifluorotoluene (fid)	*93*		*65 - 125*

Lab Sample ID: 400-126215-B-1-G MSD
Matrix: Solid
Analysis Batch: 320014

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 320010

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	58		52.1	110		mg/Kg	☼	100	10 - 150	13	32

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
a,a,a-Trifluorotoluene (fid)	*95*		*65 - 125*

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 400-320009/1-A
Matrix: Solid
Analysis Batch: 320012

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 320009

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.050		0.050		mg/Kg		08/24/16 17:00	08/25/16 01:51	50
Ethylbenzene	<0.050		0.050		mg/Kg		08/24/16 17:00	08/25/16 01:51	50

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

Lab Sample ID: MB 400-320009/1-A
Matrix: Solid
Analysis Batch: 320012

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 320009

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Toluene	<0.25		0.25		mg/Kg		08/24/16 17:00	08/25/16 01:51	50
Xylenes, Total	<0.25		0.25		mg/Kg		08/24/16 17:00	08/25/16 01:51	50

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*101*		*40 - 150*	*08/24/16 17:00*	*08/25/16 01:51*	*50*

Lab Sample ID: LCS 400-320009/2-A
Matrix: Solid
Analysis Batch: 320012

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 320009

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			2.50	2.68		mg/Kg		107	74 - 127		
Ethylbenzene			2.50	2.53		mg/Kg		101	79 - 131		
Toluene			2.50	2.66		mg/Kg		106	76 - 127		
Xylenes, Total			7.50	7.64		mg/Kg		102	80 - 129		

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

Lab Sample ID: MB 400-321105/2-A
Matrix: Solid
Analysis Batch: 321137

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 321105

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.050		0.050		mg/Kg		09/01/16 14:20	09/02/16 03:05	50
Ethylbenzene	<0.050		0.050		mg/Kg		09/01/16 14:20	09/02/16 03:05	50
Toluene	<0.25		0.25		mg/Kg		09/01/16 14:20	09/02/16 03:05	50
Xylenes, Total	<0.25		0.25		mg/Kg		09/01/16 14:20	09/02/16 03:05	50

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*101*		*40 - 150*	*09/01/16 14:20*	*09/02/16 03:05*	*50*

Lab Sample ID: LCS 400-321105/1-A
Matrix: Solid
Analysis Batch: 321137

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 321105

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			2.50	2.78		mg/Kg		111	74 - 127		
Ethylbenzene			2.50	2.76		mg/Kg		110	79 - 131		
Toluene			2.50	2.82		mg/Kg		113	76 - 127		
Xylenes, Total			7.50	8.30		mg/Kg		111	80 - 129		

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

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

Lab Sample ID: MB 400-321107/2-A
Matrix: Solid
Analysis Batch: 321131

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 321107

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0010		0.0010		mg/Kg		09/01/16 14:20	09/02/16 00:48	1
Ethylbenzene	<0.0010		0.0010		mg/Kg		09/01/16 14:20	09/02/16 00:48	1
Toluene	<0.0050		0.0050		mg/Kg		09/01/16 14:20	09/02/16 00:48	1
Xylenes, Total	<0.0050		0.0050		mg/Kg		09/01/16 14:20	09/02/16 00:48	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*100*		*40 - 150*	*09/01/16 14:20*	*09/02/16 00:48*	*1*

Lab Sample ID: LCS 400-321107/1-A
Matrix: Solid
Analysis Batch: 321131

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 321107

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.0500	0.0478		mg/Kg		96	74 - 127		
Ethylbenzene			0.0500	0.0471		mg/Kg		94	79 - 131		
Toluene			0.0500	0.0477		mg/Kg		95	76 - 127		
Xylenes, Total			0.150	0.141		mg/Kg		94	80 - 129		

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

Lab Sample ID: 400-126386-4 MS
Matrix: Solid
Analysis Batch: 321131

Client Sample ID: SB-1 (15-16)
Prep Type: Total/NA
Prep Batch: 321107

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	<0.0011		0.0532	0.0491		mg/Kg	☼	92	10 - 150		
Ethylbenzene	<0.0011		0.0532	0.0453		mg/Kg	☼	84	10 - 150		
Toluene	<0.0053		0.0532	0.0476		mg/Kg	☼	90	10 - 150		
Xylenes, Total	<0.0053		0.160	0.135		mg/Kg	☼	85	50 - 150		

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

Lab Sample ID: 400-126386-4 MSD
Matrix: Solid
Analysis Batch: 321131

Client Sample ID: SB-1 (15-16)
Prep Type: Total/NA
Prep Batch: 321107

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.0011		0.0528	0.0497		mg/Kg	☼	94	10 - 150	1	34
Ethylbenzene	<0.0011		0.0528	0.0476		mg/Kg	☼	88	10 - 150	5	66
Toluene	<0.0053		0.0528	0.0489		mg/Kg	☼	93	10 - 150	3	44
Xylenes, Total	<0.0053		0.158	0.141		mg/Kg	☼	89	50 - 150	4	46

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

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

Lab Sample ID: MB 400-320437/1-A
Matrix: Solid
Analysis Batch: 320665

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 320437

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	<5.0		5.0		mg/Kg		08/27/16 10:31	08/29/16 15:38	1
C28-C35	<5.0		5.0		mg/Kg		08/27/16 10:31	08/29/16 15:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*107*		*27 - 151*	*08/27/16 10:31*	*08/29/16 15:38*	*1*

Lab Sample ID: LCS 400-320437/2-A
Matrix: Solid
Analysis Batch: 320665

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 320437

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
C10-C28			333	327		mg/Kg		98	63 - 153		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*114*		*27 - 151*

Lab Sample ID: LCSD 400-320437/23-A
Matrix: Solid
Analysis Batch: 320665

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 320437

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
C10-C28			333	339		mg/Kg		102	63 - 153	0	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
o-Terphenyl	*127*		*27 - 151*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 400-321669/1-A
Matrix: Solid
Analysis Batch: 321759

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			09/07/16 19:47	1

Lab Sample ID: LCS 400-321669/2-A
Matrix: Solid
Analysis Batch: 321759

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			99.6	88.7		mg/Kg		89	80 - 120		

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 400-321669/3-A
Matrix: Solid
Analysis Batch: 321759

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	95.5		mg/Kg		95	80 - 120	7	15

Lab Sample ID: MB 400-321669/1-A
Matrix: Solid
Analysis Batch: 321911

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			09/08/16 15:31	1

Lab Sample ID: LCS 400-321669/2-A
Matrix: Solid
Analysis Batch: 321911

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			99.6	88.7		mg/Kg		89	80 - 120		

Lab Sample ID: LCSD 400-321669/3-A
Matrix: Solid
Analysis Batch: 321911

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	93.6		mg/Kg		94	80 - 120	5	15

Lab Chronicle

Client: MWH Americas Inc
Project/Site: Fields A#7A

TestAmerica Job ID: 400-126386-1

Client Sample ID: MW-5 (23-24)
Date Collected: 08/22/16 13:30
Date Received: 08/26/16 09:41

Lab Sample ID: 400-126386-1
Matrix: Solid

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			320561	08/29/16 08:40	JLB	TAL PEN
	Instrument ID: NOEQUIP									

Client Sample ID: MW-5 (23-24)
Date Collected: 08/22/16 13:30
Date Received: 08/26/16 09:41

Lab Sample ID: 400-126386-1
Matrix: Solid
Percent Solids: 89.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.06 g	5.00 g	320010	08/29/16 16:35	MKA	TAL PEN
Total/NA	Analysis	8015B		200	5 mL	5 mL	320014	08/30/16 11:19	SAB	TAL PEN
	Instrument ID: CH_RITA									
Total/NA	Prep	5035			5.06 g	5.00 g	320009	08/29/16 16:35	MKA	TAL PEN
Total/NA	Analysis	8021B		200	5 mL	5 mL	320012	08/30/16 11:19	MKA	TAL PEN
	Instrument ID: CH_RITA									
Total/NA	Prep	3546			15.07 g	1 mL	320437	08/27/16 10:31	KLR	TAL PEN
Total/NA	Analysis	8015B		1			320665	08/29/16 16:35	TJB	TAL PEN
	Instrument ID: WALLE									
Soluble	Leach	DI Leach			2.55 g	50 mL	321669	09/07/16 14:45	KH1	TAL PEN
Soluble	Analysis	300.0		1			321759	09/08/16 01:07	TAJ	TAL PEN
	Instrument ID: IC2									

Client Sample ID: MW-9 (25-26)
Date Collected: 08/23/16 08:40
Date Received: 08/26/16 09:41

Lab Sample ID: 400-126386-2
Matrix: Solid

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			320561	08/29/16 08:40	JLB	TAL PEN
	Instrument ID: NOEQUIP									

Client Sample ID: MW-9 (25-26)
Date Collected: 08/23/16 08:40
Date Received: 08/26/16 09:41

Lab Sample ID: 400-126386-2
Matrix: Solid
Percent Solids: 92.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.21 g	5.00 g	320010	08/29/16 16:35	MKA	TAL PEN
Total/NA	Analysis	8015B		100	5 mL	5 mL	320014	08/30/16 11:46	SAB	TAL PEN
	Instrument ID: CH_RITA									
Total/NA	Prep	5035			5.21 g	5.00 g	320009	08/29/16 16:35	MKA	TAL PEN
Total/NA	Analysis	8021B		100	5 mL	5 mL	320012	08/30/16 11:46	MKA	TAL PEN
	Instrument ID: CH_RITA									
Total/NA	Prep	3546			15.17 g	1 mL	320437	08/27/16 10:31	KLR	TAL PEN
Total/NA	Analysis	8015B		1			320665	08/29/16 16:46	TJB	TAL PEN
	Instrument ID: WALLE									

Lab Chronicle

Client: MWH Americas Inc
Project/Site: Fields A#7A

TestAmerica Job ID: 400-126386-1

Client Sample ID: MW-9 (25-26)

Lab Sample ID: 400-126386-2
Date Collected: 08/23/16 08:40
Matrix: Solid
Date Received: 08/26/16 09:41
Percent Solids: 92.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			2.50 g	50 mL	321669	09/07/16 14:45	KH1	TAL PEN
Soluble	Analysis	300.0		1			321911	09/08/16 17:08	TAJ	TAL PEN
	Instrument ID: IC2									

Client Sample ID: SB-1 (12-13)

Lab Sample ID: 400-126386-3
Date Collected: 08/23/16 13:00
Matrix: Solid
Date Received: 08/26/16 09:41

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			320561	08/29/16 08:40	JLB	TAL PEN
	Instrument ID: NOEQUIP									

Client Sample ID: SB-1 (12-13)

Lab Sample ID: 400-126386-3
Date Collected: 08/23/16 13:00
Matrix: Solid
Date Received: 08/26/16 09:41
Percent Solids: 90.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.38 g	5.00 g	320010	08/29/16 16:35	MKA	TAL PEN
Total/NA	Analysis	8015B		50	5 mL	5 mL	320014	08/30/16 12:13	SAB	TAL PEN
	Instrument ID: CH_RITA									
Total/NA	Prep	5035			5.38 g	5.00 g	320009	08/29/16 16:35	MKA	TAL PEN
Total/NA	Analysis	8021B		50	5 mL	5 mL	320012	08/30/16 12:13	MKA	TAL PEN
	Instrument ID: CH_RITA									
Total/NA	Prep	3546			15.32 g	1 mL	320437	08/27/16 10:31	KLR	TAL PEN
Total/NA	Analysis	8015B		1			320665	08/29/16 16:58	TJB	TAL PEN
	Instrument ID: WALLE									
Soluble	Leach	DI Leach			2.50 g	50 mL	321669	09/07/16 14:45	KH1	TAL PEN
Soluble	Analysis	300.0		1			321911	09/08/16 17:31	TAJ	TAL PEN
	Instrument ID: IC2									

Client Sample ID: SB-1 (15-16)

Lab Sample ID: 400-126386-4
Date Collected: 08/23/16 13:10
Matrix: Solid
Date Received: 08/26/16 09:41

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			320561	08/29/16 08:40	JLB	TAL PEN
	Instrument ID: NOEQUIP									

Client Sample ID: SB-1 (15-16)

Lab Sample ID: 400-126386-4

Date Collected: 08/23/16 13:10
Matrix: Solid
Date Received: 08/26/16 09:41
Percent Solids: 89.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.33 g	5.00 g	320010	08/29/16 16:35	MKA	TAL PEN
Total/NA	Analysis	8015B		50	5 mL	5 mL	320014	08/30/16 13:37	SAB	TAL PEN
	Instrument ID: CH_RITA									
Total/NA	Prep	5035			5.25 g	5.0 g	321107	09/01/16 14:20	GRK	TAL PEN
Total/NA	Analysis	8021B		1	5 mL	5 mL	321131	09/02/16 01:16	GRK	TAL PEN
	Instrument ID: CH_RITA									
Total/NA	Prep	3546			15.02 g	1 mL	320437	08/27/16 10:31	KLR	TAL PEN
Total/NA	Analysis	8015B		1			320665	08/29/16 17:09	TJB	TAL PEN
	Instrument ID: WALLE									
Soluble	Leach	DI Leach			2.48 g	50 mL	321669	09/07/16 14:45	KH1	TAL PEN
Soluble	Analysis	300.0		10			322142	09/11/16 09:55	TAJ	TAL PEN
	Instrument ID: IC2									

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

Lab Sample ID: 400-126386-5

Date Collected: 08/23/16 13:20
Matrix: Solid
Date Received: 08/26/16 09:41

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			320561	08/29/16 08:40	JLB	TAL PEN
	Instrument ID: NOEQUIP									

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

Lab Sample ID: 400-126386-5

Date Collected: 08/23/16 13:20
Matrix: Solid
Date Received: 08/26/16 09:41
Percent Solids: 90.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.00 g	5.00 g	320010	08/29/16 16:35	MKA	TAL PEN
Total/NA	Analysis	8015B		100	5 mL	5 mL	320014	08/30/16 12:40	SAB	TAL PEN
	Instrument ID: CH_RITA									
Total/NA	Prep	5035			5.00 g	5.00 g	320009	08/29/16 16:35	MKA	TAL PEN
Total/NA	Analysis	8021B		100	5 mL	5 mL	320012	08/30/16 12:40	MKA	TAL PEN
	Instrument ID: CH_RITA									
Total/NA	Prep	3546			15.06 g	1 mL	320437	08/27/16 10:31	KLR	TAL PEN
Total/NA	Analysis	8015B		1			320665	08/29/16 17:21	TJB	TAL PEN
	Instrument ID: WALLE									
Soluble	Leach	DI Leach			2.45 g	50 mL	321669	09/07/16 14:45	KH1	TAL PEN
Soluble	Analysis	300.0		1			321911	09/08/16 18:16	TAJ	TAL PEN
	Instrument ID: IC2									

Client Sample ID: SB-2 (4-5)
Date Collected: 08/24/16 17:50
Date Received: 08/26/16 09:41

Lab Sample ID: 400-126386-6
Matrix: Solid

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			320561	08/29/16 08:40	JLB	TAL PEN
	Instrument ID: NOEQUIP									

Client Sample ID: SB-2 (4-5)
Date Collected: 08/24/16 17:50
Date Received: 08/26/16 09:41

Lab Sample ID: 400-126386-6
Matrix: Solid
Percent Solids: 87.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.26 g	5.00 g	320010	08/29/16 16:35	MKA	TAL PEN
Total/NA	Analysis	8015B		1000	5 mL	5 mL	320014	08/30/16 04:28	SAB	TAL PEN
	Instrument ID: CH_RITA									
Total/NA	Prep	5035			5.26 g	5.00 g	320009	08/29/16 16:35	MKA	TAL PEN
Total/NA	Analysis	8021B		100	5 mL	5 mL	320269	08/30/16 16:42	MKA	TAL PEN
	Instrument ID: CH_CAROL									
Total/NA	Prep	3546			15.13 g	1 mL	320437	08/27/16 10:31	KLR	TAL PEN
Total/NA	Analysis	8015B		2			320758	08/30/16 10:48	TJB	TAL PEN
	Instrument ID: Eva									
Total/NA	Prep	3546			15.13 g	1 mL	320437	08/27/16 10:31	KLR	TAL PEN
Total/NA	Analysis	8015B		1			320665	08/29/16 17:44	TJB	TAL PEN
	Instrument ID: WALLE									
Soluble	Leach	DI Leach			2.57 g	50 mL	321669	09/07/16 14:48	KH1	TAL PEN
Soluble	Analysis	300.0		1			321911	09/08/16 18:39	TAJ	TAL PEN
	Instrument ID: IC2									

Client Sample ID: SB-2 (11-12)
Date Collected: 08/24/16 19:15
Date Received: 08/26/16 09:41

Lab Sample ID: 400-126386-7
Matrix: Solid

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			320561	08/29/16 08:40	JLB	TAL PEN
	Instrument ID: NOEQUIP									

Client Sample ID: SB-2 (11-12)
Date Collected: 08/24/16 19:15
Date Received: 08/26/16 09:41

Lab Sample ID: 400-126386-7
Matrix: Solid
Percent Solids: 85.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.23 g	5.00 g	320010	08/29/16 16:35	MKA	TAL PEN
Total/NA	Analysis	8015B		1000	5 mL	5 mL	320014	08/30/16 04:55	SAB	TAL PEN
	Instrument ID: CH_RITA									
Total/NA	Prep	5035			5.23 g	5.00 g	320009	08/29/16 16:35	MKA	TAL PEN
Total/NA	Analysis	8021B		100	5 mL	5 mL	320269	08/30/16 15:38	MKA	TAL PEN
	Instrument ID: CH_CAROL									
Total/NA	Prep	3546			15.05 g	1 mL	320437	08/27/16 10:31	KLR	TAL PEN

Lab Chronicle

Client: MWH Americas Inc
Project/Site: Fields A#7A

TestAmerica Job ID: 400-126386-1

Client Sample ID: SB-2 (11-12)

Lab Sample ID: 400-126386-7
Date Collected: 08/24/16 19:15
Matrix: Solid
Date Received: 08/26/16 09:41
Percent Solids: 85.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8015B		1			320665	08/29/16 17:55	TJB	TAL PEN
	Instrument ID: WALLE									
Soluble	Leach	DI Leach			2.54 g	50 mL	321669	09/07/16 14:48	KH1	TAL PEN
Soluble	Analysis	300.0		1			321911	09/08/16 19:02	TAJ	TAL PEN
	Instrument ID: IC2									

Client Sample ID: SB-2 (23-24)

Lab Sample ID: 400-126386-8
Date Collected: 08/24/16 19:50
Matrix: Solid
Date Received: 08/26/16 09:41

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			320561	08/29/16 13:45	JLB	TAL PEN
	Instrument ID: NOEQUIP									

Client Sample ID: SB-2 (23-24)

Lab Sample ID: 400-126386-8
Date Collected: 08/24/16 19:50
Matrix: Solid
Date Received: 08/26/16 09:41
Percent Solids: 92.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.34 g	5.00 g	320010	08/29/16 16:35	MKA	TAL PEN
Total/NA	Analysis	8015B		1000	5 mL	5 mL	320014	08/30/16 05:22	SAB	TAL PEN
	Instrument ID: CH_RITA									
Total/NA	Prep	5035			5.30 g	5.0 g	321105	09/01/16 14:20	GRK	TAL PEN
Total/NA	Analysis	8021B		1000	5 mL	5 mL	321137	09/02/16 03:32	GRK	TAL PEN
	Instrument ID: CH_RITA									
Total/NA	Prep	3546			15.34 g	1 mL	320437	08/27/16 10:31	KLR	TAL PEN
Total/NA	Analysis	8015B		1			320665	08/29/16 18:07	TJB	TAL PEN
	Instrument ID: WALLE									
Soluble	Leach	DI Leach			2.53 g	50 mL	321669	09/07/16 14:48	KH1	TAL PEN
Soluble	Analysis	300.0		1			321911	09/08/16 19:25	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: Fields A#7A

TestAmerica Job ID: 400-126386-1

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	09-01-16 *
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	10-09-16
Iowa	State Program	7	367	07-31-16 *
Kansas	NELAP	7	E-10253	10-31-16
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	T104704286-15-9	09-30-16
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	08-31-16 *

* Certification renewal pending - certification considered valid.

Method Summary

Client: MWH Americas Inc
Project/Site: Fields A#7A

TestAmerica Job ID: 400-126386-1

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 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 Barton	Lab PM: Edwards, Marty P	Carrier Tracking No(s):	COC No: 400-56725-24604.2
Client Contact: Clint Oberbroeckling	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: clint.w.oberbroeckling@mwhglobal.com	WO #: ARF # ERG-MWH-06-29-16-CWO-01		400-126386 COC	
Project Name: Fields A#7A	Project #: 40005479			Other:
Site: Fields A#7A	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:	8015B_DRO - DRO C10-C28 / ORO, Chloride	8015B_GRO, 8021B													Total Number of containers	Special Instructions/Note:
MW-5 (23-24)	8/22/16	1330	G	S		N	I	I												2	
MW-9 (25-26)	8/23/16	0840	G	S		N	I	I												2	
SB-1 (12-13)	8/23/16	1300	G	S		N	I	I												2	
SB-1 (15-16)	8/23/16	1310	G	S		N	I	I												2	
SB-1 (27-28)	8/23/16	1320	G	S		N	I	I												2	
SB-2 (4-5)	8/24/16	1750	G	S		N	I	I												2	
SB-2 (11-12)	8/24/16	1915	G	S		N	I	I												2	
SB-2 (23-24)	8/24/16	1950	G	S		N	I	I												2	

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
1					8/26/16 941	
2	Brad Barton	8/25/16 0900	MWH	Fed Ex other	8/25/16 0900	Fed Ex
3	Fed Ex	8/26/16 —	Fed Ex			

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

Cooler Temperature(s) °C and Other Remarks: 3.7°C

Login Sample Receipt Checklist

Client: MWH Americas Inc

Job Number: 400-126386-1

Login Number: 126386
List Number: 1
Creator: Johnson, Jeremy N

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	3.7°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").	N/A	
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 # 55111
GENERATOR El Paso CGP
POINT OF ORIGIN Field's A#7A
TRANSPORTER Sierra Oil Field
DATE 8-30-16 JOB #

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-5	Con't soil & Drill cuttings	W12		12		54	1235	

RESULTS			LANDFARM EMPLOYEE	NOTES
	CHLORIDE TEST		Gary Robinson	All in Drum's
	PAINT FILTER TEST		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

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30 Years of Environmental Health and Safety Excellence

BASIN DISPOSAL

200 Montana, Bloomfield, NM 87413
505-632-8936 or 505-334-3013
OPEN 24 Hours per Day

NO.

NMOCD PERMIT: NM -001-0005
Oil Field Waste Document, Form C138
INVOICE:

DATE 8-26-16

DEL. TKT#.

GENERATOR: El PASO

BILL TO: Sierra Oil

HAULING CO. Sierra

DRIVER: Juan
(Print Full Name)

ORDERED BY:

CODES:

WASTE DESCRIPTION: ☒ **Exempt Oilfield Waste** ☐ Produced Water ☐ Drilling/Completion Fluids ☐ Reserve Pit

STATE: ☐ NM ☐ CO ☐ AZ ☐ UT

TREATMENT/DISPOSAL METHODS: ☒ EVAPORATION ☒ INJECTION ☒ TREATING PLANT

NO.	TRUCK	LOCATION(S)	VOLUME	COST	H2S	COST	TOTAL	TIME
1	54	Fields A # 7A	12	256			9	
2								
3								
4								
5								

I, _____ representitive or authorized agent for the above generator and hauler hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination that the above described waste is RCRA Exempt, Oil field wastes generated from oil and gas exploration and production operations and not mixed with non-exempt waste.

☐ Approved ☐ Denied ATTENDANT SIGNATURE _____

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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: 400-120369-1
Client Project/Site: Fields A#7A

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

Attn: Steve Varsa

Authorized for release by:
4/29/2016 9:41:25 AM

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

Table of Contents

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: Fields A#7A

TestAmerica Job ID: 400-120369-1

Job ID: 400-120369-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-120369-1

Comments
No additional comments.

Receipt
The samples were received on 4/16/2016 9:09 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.4° 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: Fields A#7A

TestAmerica Job ID: 400-120369-1

Client Sample ID: MW-1 — Lab Sample ID: 400-120369-1

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene	150		1.0		ug/L	1		8021B	Total/NA
Ethylbenzene	2.3		1.0		ug/L	1		8021B	Total/NA
Toluene	29		5.0		ug/L	1		8021B	Total/NA
Xylenes, Total	36		5.0		ug/L	1		8021B	Total/NA

Client Sample ID: TRIP BLANK — Lab Sample ID: 400-120369-2

No Detections.

This Detection Summary does not include radiochemical test results.

Sample Summary

Client: MWH Americas Inc
Project/Site: Fields A#7A

TestAmerica Job ID: 400-120369-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-120369-1	MW-1	Water	04/15/16 10:30	04/16/16 09:09
400-120369-2	TRIP BLANK	Water	04/15/16 00:00	04/16/16 09:09

Client: MWH Americas Inc
Project/Site: Fields A#7A

TestAmerica Job ID: 400-120369-1

Client Sample ID: MW-1
Date Collected: 04/15/16 10:30
Date Received: 04/16/16 09:09

Lab Sample ID: 400-120369-1
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	150		1.0		ug/L			04/22/16 19:51	1
Ethylbenzene	2.3		1.0		ug/L			04/22/16 19:51	1
Toluene	29		5.0		ug/L			04/22/16 19:51	1
Xylenes, Total	36		5.0		ug/L			04/22/16 19:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*102*		*78 - 124*		*04/22/16 19:51*	*1*

Client: MWH Americas Inc
Project/Site: Fields A#7A

TestAmerica Job ID: 400-120369-1

Client Sample ID: TRIP BLANK
Date Collected: 04/15/16 00:00
Date Received: 04/16/16 09:09

Lab Sample ID: 400-120369-2
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			04/22/16 19:22	1
Ethylbenzene	<1.0		1.0		ug/L			04/22/16 19:22	1
Toluene	<5.0		5.0		ug/L			04/22/16 19:22	1
Xylenes, Total	<5.0		5.0		ug/L			04/22/16 19:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*102*		*78 - 124*		*04/22/16 19:22*	*1*

QC Association Summary

Client: MWH Americas Inc
Project/Site: Fields A#7A

TestAmerica Job ID: 400-120369-1

GC VOA

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	
400-120369-1	MW-1	Total/NA	Water	8021B	
400-120369-2	TRIP BLANK	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	

Method: 8021B - Volatile Organic Compounds (GC)

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*

Lab Chronicle

Client: MWH Americas Inc
Project/Site: Fields A#7A

TestAmerica Job ID: 400-120369-1

Client Sample ID: MW-1

Lab Sample ID: 400-120369-1

Date Collected: 04/15/16 10:30

Matrix: Water

Date Received: 04/16/16 09:09

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	302977	04/22/16 19:51	MKA	TAL PEN
	Instrument ID: CH_RITA									

Client Sample ID: TRIP BLANK

Lab Sample ID: 400-120369-2

Date Collected: 04/15/16 00:00

Matrix: Water

Date Received: 04/16/16 09:09

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	302977	04/22/16 19:22	MKA	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: Fields A#7A

TestAmerica Job ID: 400-120369-1

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: Fields A#7A

TestAmerica Job ID: 400-120369-1

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

Client Contact: Ms. Sarah Gardner	Sampler: Clint Oberbroeckling	Lab PM: Edwards, Marty P	Carrier Tracking No(s):	COC No: 400-54740-21696.1
	Phone: 515.251.1005	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: 14 CAL DAYS			
City: Denver	TAT Requested (days):			
State, Zip: CO, 80202				
Phone: 303-291-2239(Tel)	PO #: Purchase Order Requested			
Email: sarah.gardner@mwhglobal.com	WO #:			
Project Name: Fields A#7A	Project #: 40005479			
Site: Fields A#7A	SSOW#:			

400-120369 COC

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	8021B - BTEX 8021	Total Number of containers	Special Instructions/Note:
				Preservation Code:			
MW-1	4/15/16	1030	G	Water	X	2	
TRIP BLANK	—	—	—	Water	X		
				Water			
				Water			
				Water			

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

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

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

Special Instructions/QC Requirements: PER ARP

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

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
			[signature]	4/16/16 0909	TA
[signature]	4/15/16 1530	MWH			

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: ARP # ERG-MWH-03-31-16-CW-01 | Cooler Temperature(s) °C and Other Remarks: 2.4°C IR6

Login Sample Receipt Checklist

Client: MWH Americas Inc

Job Number: 400-120369-1

Login Number: 120369

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	2.4°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	

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: 400-128743-1
Client Project/Site: Fields A#7A

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

Attn: Ms. Sarah Gardner

Carol M Webb

Authorized for release by:
10/27/2016 11:23:53 AM

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

Table of Contents

Definitions/Glossary

Client: MWH Americas Inc
Project/Site: Fields A#7A

TestAmerica Job ID: 400-128743-1

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: 400-128743-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-128743-1

Comments
No additional comments.

Receipt
The samples were received on 10/15/2016 9:13 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.6º C.

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

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: Fields A#7A

TestAmerica Job ID: 400-128743-1

Client Sample ID: MW-1 — Lab Sample ID: 400-128743-1

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene	22		1.0		ug/L	1		8021B	Total/NA

Client Sample ID: MW-4A — Lab Sample ID: 400-128743-2

No Detections.

Client Sample ID: MW-5 — Lab Sample ID: 400-128743-3

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene	130		1.0		ug/L	1		8021B	Total/NA
Ethylbenzene	19		1.0		ug/L	1		8021B	Total/NA
Toluene	6.4		5.0		ug/L	1		8021B	Total/NA
Xylenes, Total	57		5.0		ug/L	1		8021B	Total/NA

Client Sample ID: MW-6 — Lab Sample ID: 400-128743-4

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene	2100		50		ug/L	50		8021B	Total/NA
Ethylbenzene	490		50		ug/L	50		8021B	Total/NA
Toluene	880		250		ug/L	50		8021B	Total/NA
Xylenes, Total	2300		250		ug/L	50		8021B	Total/NA

Client Sample ID: MW-7 — Lab Sample ID: 400-128743-5

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene	410		2.0		ug/L	2		8021B	Total/NA
Ethylbenzene	31		2.0		ug/L	2		8021B	Total/NA
Toluene	340		10		ug/L	2		8021B	Total/NA
Xylenes, Total	270		10		ug/L	2		8021B	Total/NA

Client Sample ID: MW-8 — Lab Sample ID: 400-128743-6

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene	2.2		1.0		ug/L	1		8021B	Total/NA

Client Sample ID: MW-9 — Lab Sample ID: 400-128743-7

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene	12		1.0		ug/L	1		8021B	Total/NA
Ethylbenzene	4.6		1.0		ug/L	1		8021B	Total/NA
Toluene	8.1		5.0		ug/L	1		8021B	Total/NA
Xylenes, Total	34		5.0		ug/L	1		8021B	Total/NA

Client Sample ID: MW-10 — Lab Sample ID: 400-128743-8

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene	26		1.0		ug/L	1		8021B	Total/NA
Ethylbenzene	4.6		1.0		ug/L	1		8021B	Total/NA
Toluene	32		5.0		ug/L	1		8021B	Total/NA
Xylenes, Total	41		5.0		ug/L	1		8021B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: MWH Americas Inc
Project/Site: Fields A#7A

TestAmerica Job ID: 400-128743-1

Client Sample ID: MW-11 — Lab Sample ID: 400-128743-9

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Ethylbenzene	1.3		1.0		ug/L	1		8021B	Total/NA
Xylenes, Total	9.7		5.0		ug/L	1		8021B	Total/NA

Client Sample ID: TB — Lab Sample ID: 400-128743-10

No Detections.

This Detection Summary does not include radiochemical test results.

Sample Summary

Client: MWH Americas Inc
Project/Site: Fields A#7A

TestAmerica Job ID: 400-128743-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-128743-1	MW-1	Water	10/14/16 10:30	10/15/16 09:13
400-128743-2	MW-4A	Water	10/14/16 10:35	10/15/16 09:13
400-128743-3	MW-5	Water	10/14/16 10:39	10/15/16 09:13
400-128743-4	MW-6	Water	10/14/16 10:44	10/15/16 09:13
400-128743-5	MW-7	Water	10/14/16 10:48	10/15/16 09:13
400-128743-6	MW-8	Water	10/14/16 10:52	10/15/16 09:13
400-128743-7	MW-9	Water	10/14/16 10:57	10/15/16 09:13
400-128743-8	MW-10	Water	10/14/16 11:01	10/15/16 09:13
400-128743-9	MW-11	Water	10/14/16 11:07	10/15/16 09:13
400-128743-10	TB	Water	10/14/16 00:00	10/15/16 09:13

Client: MWH Americas Inc
Project/Site: Fields A#7A

TestAmerica Job ID: 400-128743-1

Client Sample ID: MW-1
Date Collected: 10/14/16 10:30
Date Received: 10/15/16 09:13

Lab Sample ID: 400-128743-1
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**22**		1.0		ug/L			10/25/16 21:59	1
Ethylbenzene	<1.0		1.0		ug/L			10/25/16 21:59	1
Toluene	<5.0		5.0		ug/L			10/25/16 21:59	1
Xylenes, Total	<5.0		5.0		ug/L			10/25/16 21:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*106*		*78 - 124*		*10/25/16 21:59*	*1*

Client: MWH Americas Inc
Project/Site: Fields A#7A

TestAmerica Job ID: 400-128743-1

Client Sample ID: MW-4A
Date Collected: 10/14/16 10:35
Date Received: 10/15/16 09:13

Lab Sample ID: 400-128743-2
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			10/22/16 00:08	1
Ethylbenzene	<1.0		1.0		ug/L			10/22/16 00:08	1
Toluene	<5.0		5.0		ug/L			10/22/16 00:08	1
Xylenes, Total	<5.0		5.0		ug/L			10/22/16 00:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*98*		*78 - 124*		*10/22/16 00:08*	*1*

Client: MWH Americas Inc
Project/Site: Fields A#7A

TestAmerica Job ID: 400-128743-1

Client Sample ID: MW-5
Date Collected: 10/14/16 10:39
Date Received: 10/15/16 09:13

Lab Sample ID: 400-128743-3
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	130		1.0		ug/L			10/25/16 03:47	1
Ethylbenzene	19		1.0		ug/L			10/25/16 03:47	1
Toluene	6.4		5.0		ug/L			10/25/16 03:47	1
Xylenes, Total	57		5.0		ug/L			10/25/16 03:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*105*		*78 - 124*		*10/25/16 03:47*	*1*

Client: MWH Americas Inc
Project/Site: Fields A#7A

TestAmerica Job ID: 400-128743-1

Client Sample ID: MW-6
Date Collected: 10/14/16 10:44
Date Received: 10/15/16 09:13

Lab Sample ID: 400-128743-4
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	2100		50		ug/L			10/21/16 17:48	50
Ethylbenzene	490		50		ug/L			10/21/16 17:48	50
Toluene	880		250		ug/L			10/21/16 17:48	50
Xylenes, Total	2300		250		ug/L			10/21/16 17:48	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*99*		*78 - 124*		*10/21/16 17:48*	*50*

Client: MWH Americas Inc
Project/Site: Fields A#7A

TestAmerica Job ID: 400-128743-1

Client Sample ID: MW-7
Date Collected: 10/14/16 10:48
Date Received: 10/15/16 09:13

Lab Sample ID: 400-128743-5
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	410		2.0		ug/L			10/25/16 22:57	2
Ethylbenzene	31		2.0		ug/L			10/25/16 22:57	2
Toluene	340		10		ug/L			10/25/16 22:57	2
Xylenes, Total	270		10		ug/L			10/25/16 22:57	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*107*		*78 - 124*		*10/25/16 22:57*	*2*

Client: MWH Americas Inc
Project/Site: Fields A#7A

TestAmerica Job ID: 400-128743-1

Client Sample ID: MW-8
Date Collected: 10/14/16 10:52
Date Received: 10/15/16 09:13

Lab Sample ID: 400-128743-6
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**2.2**		1.0		ug/L			10/22/16 02:24	1
Ethylbenzene	<1.0		1.0		ug/L			10/22/16 02:24	1
Toluene	<5.0		5.0		ug/L			10/22/16 02:24	1
Xylenes, Total	<5.0		5.0		ug/L			10/22/16 02:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*98*		*78 - 124*		*10/22/16 02:24*	*1*

Client: MWH Americas Inc
Project/Site: Fields A#7A

TestAmerica Job ID: 400-128743-1

Client Sample ID: MW-9
Date Collected: 10/14/16 10:57
Date Received: 10/15/16 09:13

Lab Sample ID: 400-128743-7
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	12		1.0		ug/L			10/25/16 05:46	1
Ethylbenzene	4.6		1.0		ug/L			10/25/16 05:46	1
Toluene	8.1		5.0		ug/L			10/25/16 05:46	1
Xylenes, Total	34		5.0		ug/L			10/25/16 05:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*105*		*78 - 124*		*10/25/16 05:46*	*1*

Client: MWH Americas Inc
Project/Site: Fields A#7A

TestAmerica Job ID: 400-128743-1

Client Sample ID: MW-10
Date Collected: 10/14/16 11:01
Date Received: 10/15/16 09:13

Lab Sample ID: 400-128743-8
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	26		1.0		ug/L			10/26/16 00:56	1
Ethylbenzene	4.6		1.0		ug/L			10/26/16 00:56	1
Toluene	32		5.0		ug/L			10/26/16 00:56	1
Xylenes, Total	41		5.0		ug/L			10/26/16 00:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*103*		*78 - 124*		*10/26/16 00:56*	*1*

Client: MWH Americas Inc
Project/Site: Fields A#7A

TestAmerica Job ID: 400-128743-1

Client Sample ID: MW-11
Date Collected: 10/14/16 11:07
Date Received: 10/15/16 09:13

Lab Sample ID: 400-128743-9
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			10/25/16 07:44	1
Ethylbenzene	**1.3**		1.0		ug/L			10/25/16 07:44	1
Toluene	<5.0		5.0		ug/L			10/25/16 07:44	1
Xylenes, Total	**9.7**		5.0		ug/L			10/25/16 07:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*101*		*78 - 124*		*10/25/16 07:44*	*1*

Client: MWH Americas Inc
Project/Site: Fields A#7A

TestAmerica Job ID: 400-128743-1

Client Sample ID: TB
Date Collected: 10/14/16 00:00
Date Received: 10/15/16 09:13

Lab Sample ID: 400-128743-10
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			10/21/16 16:39	1
Ethylbenzene	<1.0		1.0		ug/L			10/21/16 16:39	1
Toluene	<5.0		5.0		ug/L			10/21/16 16:39	1
Xylenes, Total	<5.0		5.0		ug/L			10/21/16 16:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*95*		*78 - 124*		*10/21/16 16:39*	*1*

QC Association Summary

Client: MWH Americas Inc
Project/Site: Fields A#7A

TestAmerica Job ID: 400-128743-1

GC VOA

Analysis Batch: 327760

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-128743-2	MW-4A	Total/NA	Water	8021B	
400-128743-4	MW-6	Total/NA	Water	8021B	
400-128743-6	MW-8	Total/NA	Water	8021B	
400-128743-10	TB	Total/NA	Water	8021B	
MB 400-327760/5	Method Blank	Total/NA	Water	8021B	
LCS 400-327760/1002	Lab Control Sample	Total/NA	Water	8021B	
400-128744-A-1 MS	Matrix Spike	Total/NA	Water	8021B	
400-128744-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8021B	

Analysis Batch: 327992

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-128743-3	MW-5	Total/NA	Water	8021B	
400-128743-7	MW-9	Total/NA	Water	8021B	
400-128743-9	MW-11	Total/NA	Water	8021B	
MB 400-327992/4	Method Blank	Total/NA	Water	8021B	
LCS 400-327992/1025	Lab Control Sample	Total/NA	Water	8021B	
400-128739-B-2 MS	Matrix Spike	Total/NA	Water	8021B	
400-128739-B-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8021B	

Analysis Batch: 328189

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-128743-1	MW-1	Total/NA	Water	8021B	
400-128743-5	MW-7	Total/NA	Water	8021B	
400-128743-8	MW-10	Total/NA	Water	8021B	
MB 400-328189/26	Method Blank	Total/NA	Water	8021B	
LCS 400-328189/1025	Lab Control Sample	Total/NA	Water	8021B	
400-128739-A-7 MS	Matrix Spike	Total/NA	Water	8021B	
400-128739-A-7 MSD	Matrix Spike Duplicate	Total/NA	Water	8021B	

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 400-327760/5
Matrix: Water
Analysis Batch: 327760

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			10/21/16 14:56	1
Ethylbenzene	<1.0		1.0		ug/L			10/21/16 14:56	1
Toluene	<5.0		5.0		ug/L			10/21/16 14:56	1
Xylenes, Total	<5.0		5.0		ug/L			10/21/16 14:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*95*		*78 - 124*		*10/21/16 14:56*	*1*

Lab Sample ID: LCS 400-327760/1002
Matrix: Water
Analysis Batch: 327760

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	48.4		ug/L		97	85 - 115		
Ethylbenzene			50.0	48.4		ug/L		97	85 - 115		
Toluene			50.0	47.8		ug/L		96	85 - 115		
Xylenes, Total			150	144		ug/L		96	85 - 115		

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

Lab Sample ID: 400-128744-A-1 MS
Matrix: Water
Analysis Batch: 327760

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	54.3		ug/L		109	44 - 150		
Ethylbenzene	<1.0		50.0	53.8		ug/L		108	70 - 142		
Toluene	<5.0		50.0	53.3		ug/L		107	69 - 136		
Xylenes, Total	<5.0		150	159		ug/L		106	68 - 142		

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

Lab Sample ID: 400-128744-A-1 MSD
Matrix: Water
Analysis Batch: 327760

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	53.2		ug/L		106	44 - 150	2	16
Ethylbenzene	<1.0		50.0	54.1		ug/L		108	70 - 142	1	16
Toluene	<5.0		50.0	53.3		ug/L		107	69 - 136	0	16
Xylenes, Total	<5.0		150	160		ug/L		107	68 - 142	1	15

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

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

Lab Sample ID: MB 400-327992/4
Matrix: Water
Analysis Batch: 327992

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			10/24/16 15:57	1
Ethylbenzene	<1.0		1.0		ug/L			10/24/16 15:57	1
Toluene	<5.0		5.0		ug/L			10/24/16 15:57	1
Xylenes, Total	<5.0		5.0		ug/L			10/24/16 15:57	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*104*		*78 - 124*		*10/24/16 15:57*	*1*

Lab Sample ID: LCS 400-327992/1025
Matrix: Water
Analysis Batch: 327992

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	49.6		ug/L		99	85 - 115		
Ethylbenzene			50.0	48.3		ug/L		97	85 - 115		
Toluene			50.0	49.3		ug/L		99	85 - 115		
Xylenes, Total			150	148		ug/L		99	85 - 115		

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

Lab Sample ID: 400-128739-B-2 MS
Matrix: Water
Analysis Batch: 327992

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	48.8		ug/L		98	44 - 150		
Ethylbenzene	<1.0		50.0	48.6		ug/L		97	70 - 142		
Toluene	<5.0		50.0	48.6		ug/L		97	69 - 136		
Xylenes, Total	<5.0		150	145		ug/L		97	68 - 142		

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

Lab Sample ID: 400-128739-B-2 MSD
Matrix: Water
Analysis Batch: 327992

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	41.9		ug/L		84	44 - 150	15	16
Ethylbenzene	<1.0		50.0	41.2		ug/L		82	70 - 142	16	16
Toluene	<5.0		50.0	41.8		ug/L		84	69 - 136	15	16
Xylenes, Total	<5.0		150	125		ug/L		83	68 - 142	15	15

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

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

Lab Sample ID: MB 400-328189/26
Matrix: Water
Analysis Batch: 328189

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 13:40	1
Ethylbenzene	<1.0		1.0		ug/L			10/25/16 13:40	1
Toluene	<5.0		5.0		ug/L			10/25/16 13:40	1
Xylenes, Total	<5.0		5.0		ug/L			10/25/16 13:40	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*104*		*78 - 124*		*10/25/16 13:40*	*1*

Lab Sample ID: LCS 400-328189/1025
Matrix: Water
Analysis Batch: 328189

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	49.6		ug/L		99	85 - 115		
Ethylbenzene			50.0	48.3		ug/L		97	85 - 115		
Toluene			50.0	49.3		ug/L		99	85 - 115		
Xylenes, Total			150	148		ug/L		99	85 - 115		

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

Lab Sample ID: 400-128739-A-7 MS
Matrix: Water
Analysis Batch: 328189

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	1.4		50.0	64.6		ug/L		126	44 - 150		
Ethylbenzene	<1.0		50.0	52.1		ug/L		104	70 - 142		
Toluene	<5.0		50.0	60.0		ug/L		120	69 - 136		
Xylenes, Total	<5.0		150	179		ug/L		118	68 - 142		

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

Lab Sample ID: 400-128739-A-7 MSD
Matrix: Water
Analysis Batch: 328189

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	1.4		50.0	66.7		ug/L		130	44 - 150	3	16
Ethylbenzene	<1.0		50.0	53.3		ug/L		107	70 - 142	2	16
Toluene	<5.0		50.0	61.8		ug/L		124	69 - 136	3	16
Xylenes, Total	<5.0		150	182		ug/L		120	68 - 142	2	15

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

Lab Chronicle

Client: MWH Americas Inc
Project/Site: Fields A#7A

TestAmerica Job ID: 400-128743-1

Client Sample ID: MW-1
Date Collected: 10/14/16 10:30
Date Received: 10/15/16 09:13

Lab Sample ID: 400-128743-1
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		1	5 mL	5 mL	328189	10/25/16 21:59	MKA	TAL PEN
	Instrument ID: ETHYL									

Client Sample ID: MW-4A
Date Collected: 10/14/16 10:35
Date Received: 10/15/16 09:13

Lab Sample ID: 400-128743-2
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	327760	10/22/16 00:08	SAB	TAL PEN
	Instrument ID: CH_JOAN									

Client Sample ID: MW-5
Date Collected: 10/14/16 10:39
Date Received: 10/15/16 09:13

Lab Sample ID: 400-128743-3
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	327992	10/25/16 03:47	CMW	TAL PEN
	Instrument ID: ETHYL									

Client Sample ID: MW-6
Date Collected: 10/14/16 10:44
Date Received: 10/15/16 09:13

Lab Sample ID: 400-128743-4
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		50	5 mL	5 mL	327760	10/21/16 17:48	SAB	TAL PEN
	Instrument ID: CH_JOAN									

Client Sample ID: MW-7
Date Collected: 10/14/16 10:48
Date Received: 10/15/16 09:13

Lab Sample ID: 400-128743-5
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		2	5 mL	5 mL	328189	10/25/16 22:57	MKA	TAL PEN
	Instrument ID: ETHYL									

Client Sample ID: MW-8
Date Collected: 10/14/16 10:52
Date Received: 10/15/16 09:13

Lab Sample ID: 400-128743-6
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	327760	10/22/16 02:24	SAB	TAL PEN
	Instrument ID: CH_JOAN									

Lab Chronicle

Client: MWH Americas Inc
Project/Site: Fields A#7A

TestAmerica Job ID: 400-128743-1

Client Sample ID: MW-9

Date Collected: 10/14/16 10:57
Date Received: 10/15/16 09:13

Lab Sample ID: 400-128743-7
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	327992	10/25/16 05:46	CMW	TAL PEN
	Instrument ID: ETHYL									

Client Sample ID: MW-10

Date Collected: 10/14/16 11:01
Date Received: 10/15/16 09:13

Lab Sample ID: 400-128743-8
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	328189	10/26/16 00:56	MKA	TAL PEN
	Instrument ID: ETHYL									

Client Sample ID: MW-11

Date Collected: 10/14/16 11:07
Date Received: 10/15/16 09:13

Lab Sample ID: 400-128743-9
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	327992	10/25/16 07:44	CMW	TAL PEN
	Instrument ID: ETHYL									

Client Sample ID: TB

Date Collected: 10/14/16 00:00
Date Received: 10/15/16 09:13

Lab Sample ID: 400-128743-10
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	327760	10/21/16 16:39	SAB	TAL PEN
	Instrument ID: CH_JOAN									

Laboratory References:

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

Certification Summary

Client: MWH Americas Inc
Project/Site: Fields A#7A

TestAmerica Job ID: 400-128743-1

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: Fields A#7A

TestAmerica Job ID: 400-128743-1

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: 80994

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 GPC
ADDRESS:
PAGE: 1 OF 1

PROJECT NAME: Fields 7A
PROJECT NO.:
CLIENT PROJECT MANAGER: Clint Oberbroeckling
PROJECT LOC. (STATE): NM

SAMPLED BY: CWO
~~CONTRACT / P.O. NO.~~ AFE# ERG-MW#-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: BTEX 8021B

400-128743 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
10/14/16	1030	MW-1		2									7				2
"	1035	MW-4A		2									"				2
"	1039	MW-5		2									"				2
"	1044	MW-6		2									"				2
"	1048	MW-7		2									"				2
"	1052	MW-8		2									"				2
"	1057	MW-9		2									"				2
"	1101	MW-10		2									"				2
"	1107	MW-11		2									"				2
↓	—	TB		2									6				2

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
EMPTY CONTAINERS				10/14/16	16.00			
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME
EMPTY CONTAINERS							10/15/16	0913

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY:	DATE	TIME	CUSTODY INTACT? △ YES △ NO	CUSTODY SEAL NO.	REMARKS:
					0.6C IRS

TAL-8251 (1207)

681-Atlanta
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10/27/2016

Login Sample Receipt Checklist

Client: MWH Americas Inc

Job Number: 400-128743-1

Login Number: 128743
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	0.6°C IR5
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	