2016 ANNUAL GROUNDWATER REPORT

Lateral L-40 Line Drip
NMOCD CASE#: 3RP-212-0
Meter Code: LD174
T28N, R4W, Sec13, Unit H

SITE DETAILS

Site Location: Latitude: 36.659672 N, Longitude: -107.194520 W
Land Type: Federal
Operator: Enterprise

SITE BACKGROUND

- **Site Assessment:** 1/95
- **Excavation:** 1/95 (60 cy)

Environmental Remediation activities at the Lateral L-40 Line Drip (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 (EPCPG) program methods. Currently, the Site is operated by Enterprise and is not active.

The Site is located on Federal land. Various site investigations have occurred since 1995. A monitoring well was installed in 1995 (MW-1), and additional monitoring wells were installed in 2016 (MW-2, MW-3, MW-4, MW-5, and soil boring SB-1). Historically, free product has been observed and recovered at the Site. Free product was not observed in 2016. Currently, groundwater sampling is conducted on a semi-annual basis.

MONITORING WELL INSTALLATION ACTIVITIES

In September 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 January 28, 2016.

Four new wells (MW-2, MW-3, MW-4, and MW-5) were drilled in October 2016, to further characterize the extent of the dissolved-phase hydrocarbons and to define the groundwater gradient at the Site. Soil boring SB-1 was also advanced in the vicinity of the former pit to evaluate soil concentrations at this location. 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 30 feet below ground surface (bgs) to 50 feet bgs and bisects the observed water table located at depths ranging from 33-37 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.

The 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. Borehole logs and well construction diagrams are provided in Appendix A. Monitoring well MW-2 was installed north of the former pit location. Monitoring well MW-3 was installed to the west of well MW-1. Monitoring well MW-4 was installed east of the former pit, and well MW-5 was installed to the south 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. Pertinent site features and soil boring/monitoring well locations are shown on maps in Figures 1 through 5.

During advancement of the monitoring wells and the soil boring completed in October 2016, the soil sample interval exhibiting the highest photoionization detector (PID) reading was collected and placed in a 4-ounce jar for laboratory analysis. Additional soil samples were retained from SB-1 to quantify petroleum hydrocarbon concentrations at additional intervals. 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 downhole pump until visibly clear groundwater was observed. Purged groundwater 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 October 11, 2016, Sierra Oilfield Services, Inc. removed 10 drums of soil cuttings from the Site and delivered them to Envirotech. Disposal documentation is contained in Appendix C.

GROUNDWATER SAMPLING ACTIVITIES

On April 19 and October 16, 2016, water levels were gauged at MW-1. New monitoring wells MW-2, MW-3, MW-5, and MW-5 were also gauged during the October 2016 sampling event. Groundwater samples were collected from each well using HydraSleeve™ (HydraSleeve) no-purge groundwater sampling devices. The HydraSleeves were set during the previous sampling event or after new well installation. 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 contour 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 during the October gauging event indicate a flow direction to the south-southeast (see Figure 4).

- Groundwater samples collected in 2016 from MW-1, MW-2, and MW-5 exceeded the New Mexico Water Quality Control Commission (NMWQCC) standard (10 micrograms per liter [µg/L]) for benzene in groundwater. Benzene was below the NMWQCC standard in monitoring wells MW-3 and MW-4.

- The groundwater sample collected in October 2016 from MW-5 exceeded the NMWQCC standard (750 µg/L) for toluene in groundwater. Toluene was either below the NMWQCC standard or not detected in monitoring wells MW-1, MW-2, MW-3, and MW-4.

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

- Groundwater samples collected in 2016 from MW-1 and MW-5 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-2, MW-3, and MW-4.

SOIL RESULTS

- Soil samples were collected from the borings for monitoring wells MW-2 through MW-5 and soil boring SB-1. For benzene, concentrations exceeded the New Mexico Oil Conservation Division (NMOCD) 2013 Pit Rule Guidance (10 milligrams per kilogram (mg/kg) at MW-2 (13 mg/kg). Total BTEX concentration exceeded the applicable limit in the NMOCD 2013 Pit Rule Guidance (50 mg/kg) at MW-2.

- TPH ranged from non-detect at MW-3 and MW-4, to 8,686 mg/kg in MW-2. TPH concentrations exceeded the 2013 Pit Rule Guidance (100 mg/kg) at MW-2, and in the soil sample SB-1 16-17.

- Chloride was not detected in any of the soil samples submitted for analysis.

PLANNED FUTURE ACTIVITIES

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

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TABLES

TABLE 1 - GROUNDWATER ANALYTICAL RESULTS

Lat. L-40 Line Drip					
Location	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
NMWQCC Standards:		10	750	750	620
MW-1	09/26/95	121	218	7.4	75.1
MW-1	11/11/96	12000	20400	612	6075
MW-1	03/31/97	11100	24700	702	7440
MW-1	05/09/97	12900	22900	761	7730
MW-1	11/06/00	8.2	<0.5	15	6.9
MW-1	01/02/01	NS	NS	NS	NS
MW-1	06/08/01	NS	NS	NS	NS
MW-1	07/02/01	NS	NS	NS	NS
MW-1	08/03/01	NS	NS	NS	NS
MW-1	09/12/01	NS	NS	NS	NS
MW-1	10/12/01	NS	NS	NS	NS
MW-1	12/13/01	NS	NS	NS	NS
MW-1	03/12/02	NS	NS	NS	NS
MW-1	04/03/02	NS	NS	NS	NS
MW-1	05/20/02	NS	NS	NS	NS
MW-1	06/10/02	NS	NS	NS	NS
MW-1	07/19/02	NS	NS	NS	NS
MW-1	10/11/02	NS	NS	NS	NS
MW-1	05/06/03	NS	NS	NS	NS
MW-1	07/17/03	NS	NS	NS	NS
MW-1	10/13/03	NS	NS	NS	NS
MW-1	04/20/04	NS	NS	NS	NS
MW-1	07/27/04	NS	NS	NS	NS
MW-1	10/26/04	NS	NS	NS	NS
MW-1	04/22/05	NS	NS	NS	NS
MW-1	07/19/05	NS	NS	NS	NS
MW-1	10/21/05	NS	NS	NS	NS
MW-1	01/24/06	NS	NS	NS	NS
MW-1	05/10/06	NS	NS	NS	NS
MW-1	07/26/06	NS	NS	NS	NS
MW-1	10/22/06	NS	NS	NS	NS
MW-1	04/29/07	NS	NS	NS	NS
MW-1	07/31/07	NS	NS	NS	NS
MW-1	10/30/07	NS	NS	NS	NS
MW-1	04/17/08	396	<50	484	2770
MW-1	07/23/08	NS	NS	NS	NS

TABLE 1 - GROUNDWATER ANALYTICAL RESULTS

Lat. L-40 Line Drip					
Location	**Date**	**Benzene (µg/L)**	**Toluene (µg/L)**	**Ethylbenzene (µg/L)**	**Total Xylenes (µg/L)**
NMWQCC Standards:		10	750	750	620
MW-1	10/09/08	NS	NS	NS	NS
MW-1	04/08/09	387	7.9 J	466	2680
MW-1	06/03/10	272	<50	384	2240
MW-1	09/24/10	NS	NS	NS	NS
MW-1	11/02/10	NS	NS	NS	NS
MW-1	05/03/11	115	4.8	430	2160
MW-1	09/28/11	NS	NS	NS	NS
MW-1	11/02/11	NS	NS	NS	NS
MW-1	05/09/12	302	10.2	404	1830
MW-1	06/09/13	150	13	330	2800
MW-1	09/11/13	160	330	15 J	2600
MW-1	12/14/13	160	15	320	2500
MW-1	04/06/14	150	30 J	400	2900
MW-1	10/26/14	120	9.9 J	350	2000
MW-1	06/01/15	83	12 J	250	1500
MW-1	11/23/15	150	<100	360	2100
MW-1	04/19/16	100	<25	300	1900
MW-1	10/16/16	180	<50	410	2500
MW-2	10/16/16	180	430	17	150
MW-3	10/16/16	3.4	<5.0	<1.0	<5.0
MW-4	10/16/16	8.7	15	<1.0	6.1
MW-5	10/16/16	750	3000	190	1600

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

TABLE 2 GROUNDWATER ELEVATION TABLE

Lat. L-40 Line Drip						
Location	Date	TOC	Depth to Water (ft.)	Depth to LNAPL (ft.)	LNAPL Thickness (ft.)	GW Elevation (ft.)
MW-1	09/26/95	7259.57	36.68	NR		7222.89
MW-1	11/11/96	7259.57	36.62	36.16	0.46	7223.30
MW-1	03/31/97	7259.57	36.68	36.18	0.50	7223.27
MW-1	05/09/97	7259.57	36.57	36.45	0.12	7223.09
MW-1	11/06/00	7259.57	35.06	NR		7224.51
MW-1	01/02/01	7259.57	39.08	37.95	1.13	7221.34
MW-1	06/08/01	7259.57	39.00	37.89	1.11	7221.40
MW-1	07/02/01	7259.57	39.14	37.93	1.21	7221.34
MW-1	08/03/01	7259.57	39.10	37.83	1.27	7221.42
MW-1	09/12/01	7259.57	38.96	38.02	0.94	7221.32
MW-1	10/12/01	7259.57	38.43	38.19	0.24	7221.32
MW-1	12/13/01	7259.57	38.75	38.40	0.35	7221.08
MW-1	03/12/02	7259.57	38.76	38.42	0.34	7221.07
MW-1	04/03/02	7259.57	38.66	38.39	0.27	7221.11
MW-1	05/20/02	7259.57	38.56	38.46	0.10	7221.09
MW-1	06/10/02	7259.57	38.56	38.51	0.05	7221.05
MW-1	07/19/02	7259.57	38.64	NR		7220.93
MW-1	10/11/02	7259.57	38.87	38.84	0.03	7220.72
MW-1	05/06/03	7259.57	37.97	37.94	0.03	7221.62
MW-1	07/17/03	7259.57	38.95	ND		7220.62
MW-1	10/13/03	7259.57	39.06	ND		7220.51
MW-1	04/20/04	7259.57	39.18	ND		7220.39
MW-1	07/27/04	7259.57	39.22	ND		7220.35
MW-1	10/26/04	7259.57	39.35	ND		7220.22
MW-1	04/22/05	7259.57	39.52	ND		7220.05
MW-1	07/19/05	7259.57	39.34	ND		7220.23
MW-1	10/21/05	7259.57	39.57	ND		7220.00
MW-1	01/24/06	7259.57	38.67	ND		7220.90
MW-1	05/10/06	7259.57	38.72	ND		7220.85
MW-1	07/26/06	7259.57	38.72	ND		7220.85
MW-1	10/22/06	7259.57	38.91	ND		7220.66
MW-1	04/29/07	7259.57	38.92	ND		7220.65

TABLE 2 GROUNDWATER ELEVATION TABLE

Lat. L-40 Line Drip						
Location	**Date**	**TOC**	**Depth to Water (ft.)**	**Depth to LNAPL (ft.)**	**LNAPL Thickness (ft.)**	**GW Elevation (ft.)**
MW-1	07/31/07	7259.57	38.85	ND		7220.72
MW-1	10/30/07	7259.57	38.79	ND		7220.78
MW-1	04/17/08	7259.57	38.98	ND		7220.59
MW-1	07/23/08	7259.57	38.99	ND		7220.58
MW-1	10/09/08	7259.57	38.95	ND		7220.62
MW-1	04/08/09	7259.57	39.04	ND		7220.53
MW-1	06/03/10	7259.57	39.40	ND		7220.17
MW-1	09/24/10	7259.57	39.45	ND		7220.12
MW-1	11/02/10	7259.57	39.47	ND		7220.10
MW-1	05/03/11	7259.57	39.55	ND		7220.02
MW-1	09/28/11	7259.57	39.63	ND		7219.94
MW-1	11/02/11	7259.57	39.73	ND		7219.84
MW-1	05/09/12	7259.57	39.73	ND		7219.84
MW-1	06/09/13	7259.57	37.97	ND		7221.60
MW-1	09/11/13	7259.57	38.86	ND		7220.71
MW-1	12/14/13	7259.57	40.09	ND		7219.48
MW-1	04/06/14	7259.57	40.09	ND		7219.48
MW-1	10/26/14	7259.57	40.22	ND		7219.35
MW-1	06/01/15	7259.57	46.45	ND		7213.12
MW-1	11/23/15	7259.57	42.13	ND		7217.44
MW-1	04/19/16	7259.57	40.59	ND		7218.98
MW-1	10/16/16	7259.57	40.71	ND		7218.86
MW-2	10/16/16	7259.65	40.65	ND		7219.00
MW-3	10/16/16	7259.10	40.21	ND		7218.89
MW-4	10/16/16	7261.59	42.80	ND		7218.79
MW-5	10/16/16	7260.08	41.23	ND		7218.85

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

TABLE 3 - SOIL ANALYTICAL RESULTS

Lat. L-40 Line Drip											
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-2 (12-13)	10/06/16	**13**	110	29	410	**562**	8400	280	5.5	**8686**	BRL
MW-3 (29-30)	10/06/16	BRL	0.0063	BRL	0.015	0.0213	BRL	BRL	BRL	BRL	BRL
MW-4 (20-21)	10/06/16	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
MW-5 (20-21)	10/05/16	BRL	BRL	BRL	0.0073	0.0073	0.12	6.2	BRL	6.32	BRL
SB-1 (12-13)	10/06/16	BRL	BRL	0.0054	0.052	0.057	0.89	22	BRL	22.89	BRL
SB-1 (16-17)	10/06/16	0.059	0.90	1.8	14	17	170	45	BRL	**215**	BRL
SB-1 (21-22)	10/06/16	BRL	BRL	0.18	0.98	1.16	50	21	BRL	71	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

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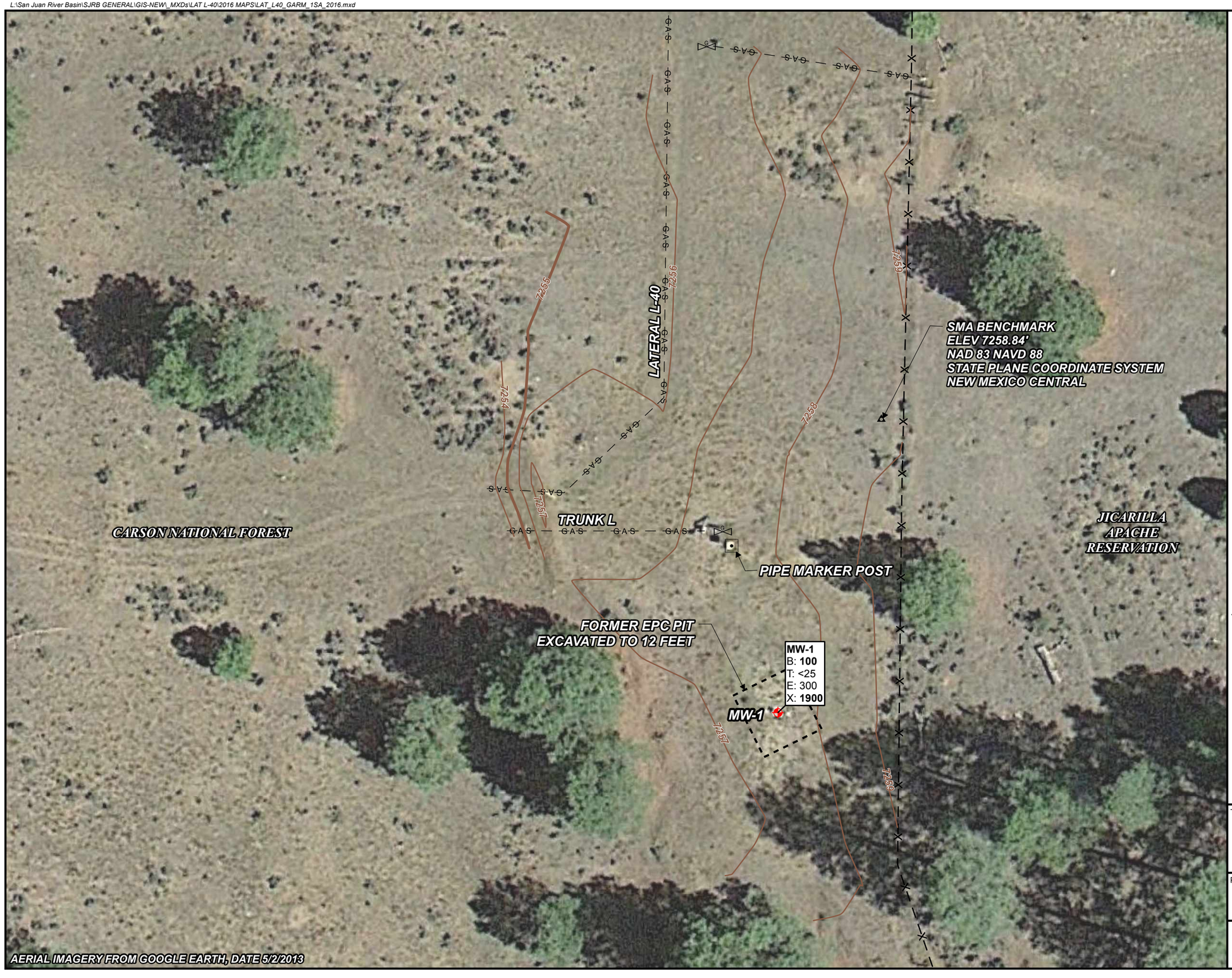

LEGEND:

- 7259 — APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
- GAS — NATURAL GAS LINE
- FENCE
- MONITORING WELL
- SMA BENCHMARK
- GAS LINE VALVE

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
<100 = 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
	5/6/2016	SLG	SLG	SRV

TITLE:

GROUNDWATER ANALYTICAL RESULTS
APRIL 19, 2016

PROJECT:
LAT L-40
SAN JUAN RIVER BASIN
RIO ARRIBA COUNTY, NEW MEXICO

MWH

Figure No.: 1

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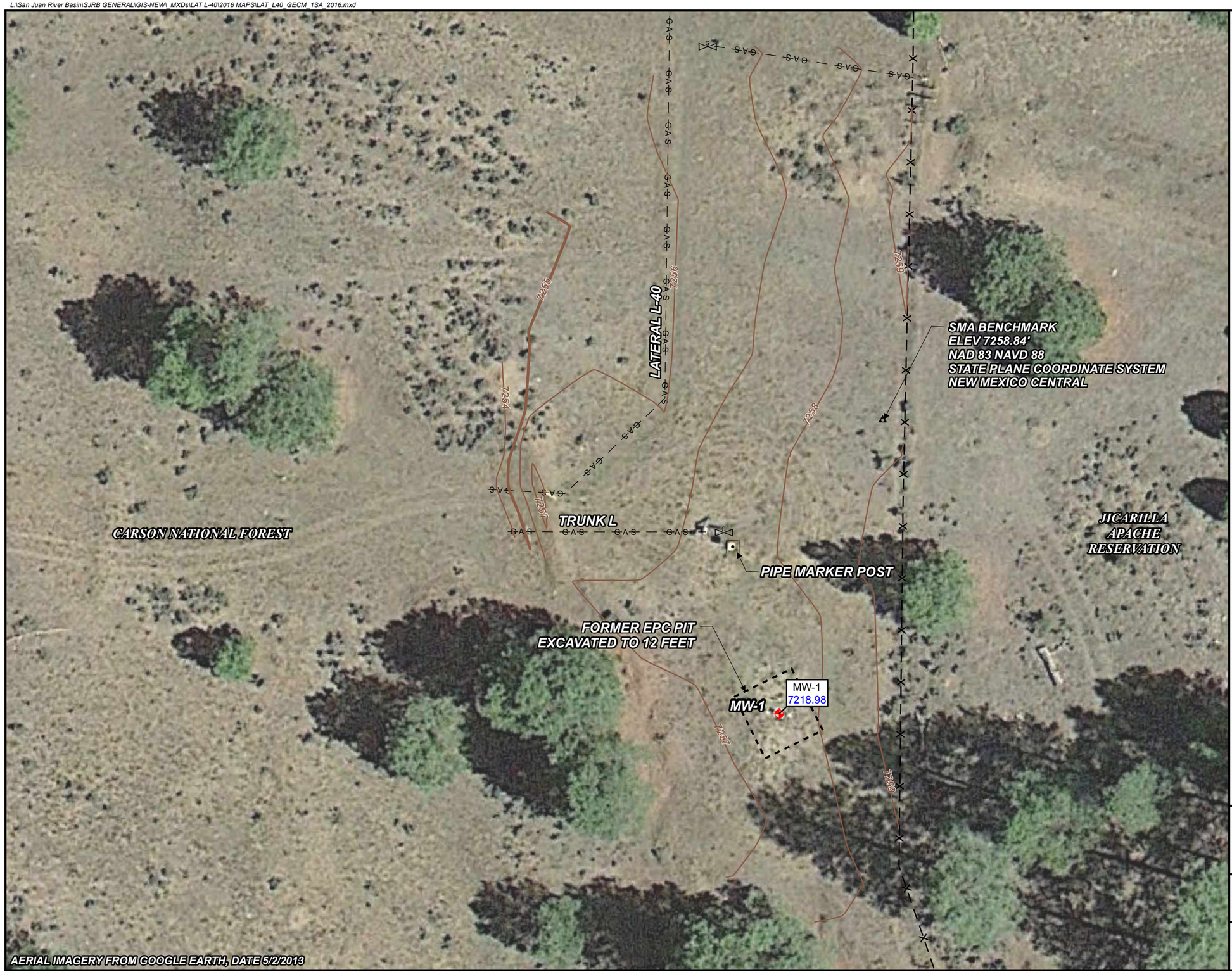

LEGEND:

- 7259 — APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
- GAS — NATURAL GAS LINE
- FENCE
- MONITORING WELL
- SMA BENCHMARK
- GAS LINE VALVE

NOTES:

7217.44 GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL).

N

SCALE IN FEET

0 30 60

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
	5/6/2016	SLG	SLG	SRV

TITLE:

GROUNDWATER ELEVATION MAP
APRIL 19, 2016

PROJECT:

LAT L-40
SAN JUAN RIVER BASIN
RIO ARRIBA COUNTY, NEW MEXICO

MWH

Figure No.: 2

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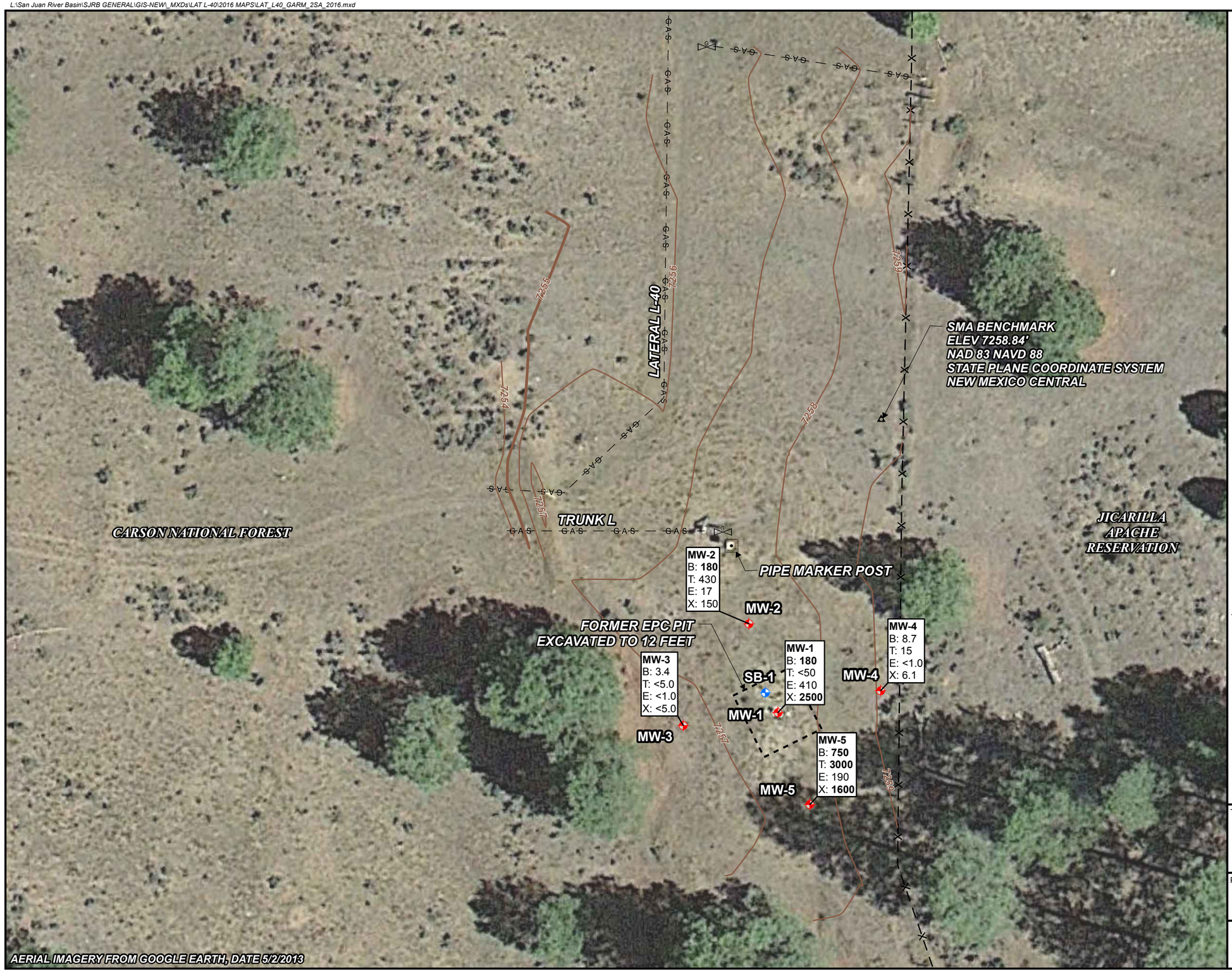

LEGEND:

- 7259 — APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
- GAS — NATURAL GAS LINE
- X — FENCE
- MONITORING WELL
- SOIL BORING
- SMA BENCHMARK
- GAS LINE VALVE

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
<100 = 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
	11/9/2016	SLG	SLG	SRV

TITLE:

GROUNDWATER ANALYTICAL RESULTS
OCTOBER 16, 2016

PROJECT:
LAT L-40
SAN JUAN RIVER BASIN
RIO ARRIBA COUNTY, NEW MEXICO

MWH

Figure No.: 3

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LEGEND:

- 7259 — APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
- GAS — NATURAL GAS LINE
- X — FENCE
- MONITORING WELL
- SMA BENCHMARK
- GAS LINE VALVE

NOTES:

- 5489.39 — GROUNDWATER ELEVATION (CORRECTED FOR PRODUCT THICKNESS WHEN PRESENT) FEET ABOVE MEAN SEA LEVEL
- -5489×25- — CORRECTED WATER ELEVATION CONTOUR DASHED WHERE INFERRED (FEET ABOVE MEAN SEA LEVEL) 0.2 FOOT CONTOUR INTERVAL)
- DIRECTION OF APPARENT GROUNDWATER FLOW

LATERAL L-40

TRUNK L

PIPE MARKER POST

SMA BENCHMARK
ELEV 7258.84'
NAD 83 NAVD 88
STATE PLANE COORDINATE SYSTEM
NEW MEXICO CENTRAL

CARSON NATIONAL FOREST

JICARILLA APACHE RESERVATION

FORMER EPC PIT EXCAVATED TO 12 FEET

MW-1 7218.86
MW-2 7219.00
MW-3 7218.89
MW-4 7218.79
MW-5 7218.85

7218.95
7218.9
7218.85
7218.8

7255
7256
7257
7258
7259

SCALE IN FEET
0 30 60

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

TITLE:

GROUNDWATER ELEVATION MAP
OCTOBER 16, 2016

PROJECT:

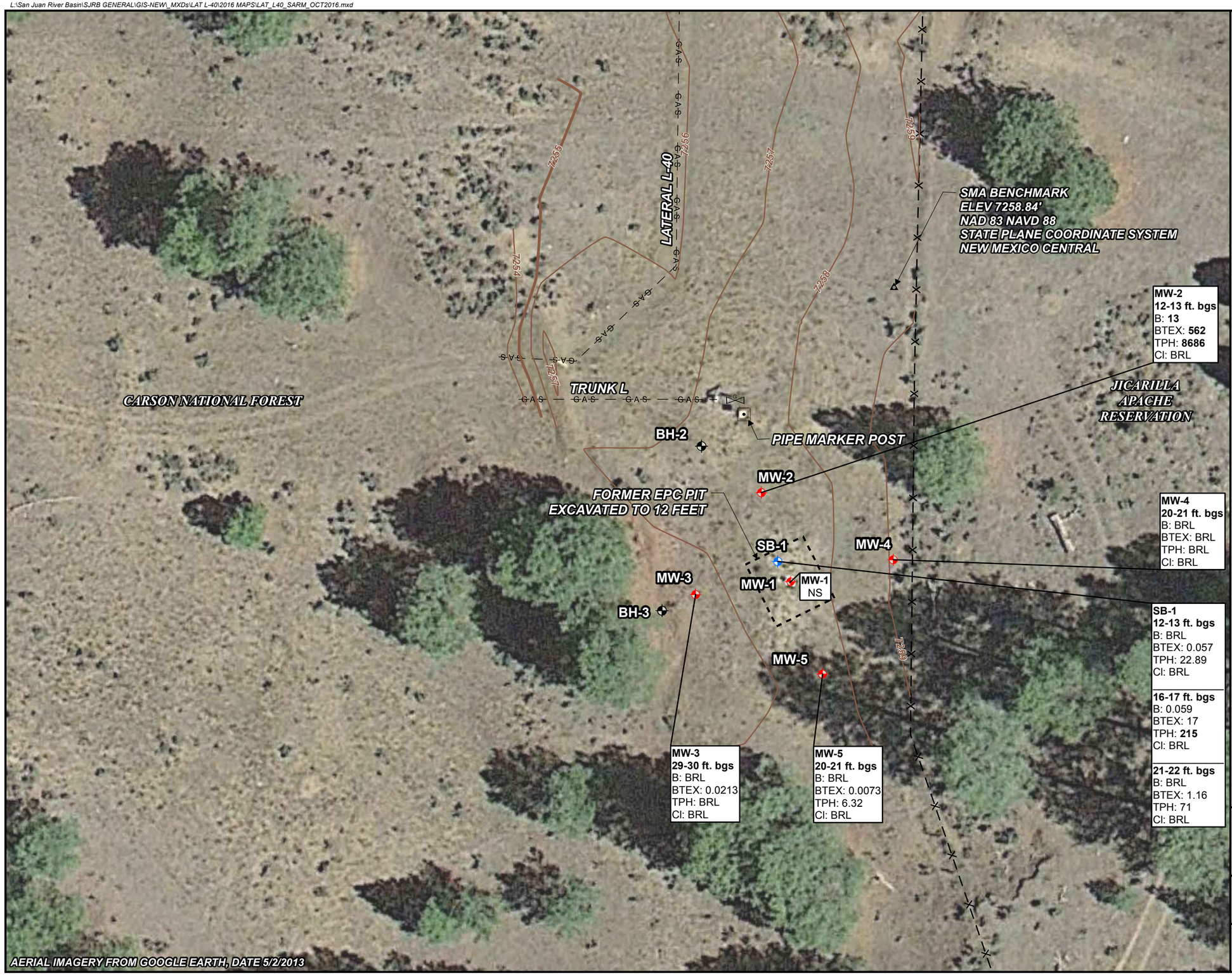
LAT L-40
SAN JUAN RIVER BASIN
RIO ARRIBA COUNTY, NEW MEXICO

MWH

Figure No.: 4

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

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\LAT L-40\2016 MAPS\LAT_L40_SARM_OCT2016.mxd



LEGEND:

- APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
- NATURAL GAS LINE
- FENCE
- MONITORING WELL
- SOIL BORING
- BOREHOLE
- SMA BENCHMARK
- GAS LINE VALVE

NOTES:

MW-5 SAMPLES COLLECTED 10/5/2016; MW-2, MW-3, MW-4 AND SB-1 SAMPLES COLLECTED 10/6/2016.

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
	1/31/2017	SLG	SLG	SRV

TITLE:

SOIL ANALYTICAL RESULTS

PROJECT:
LAT L-40
SAN JUAN RIVER BASIN
RIO ARRIBA COUNTY, NEW MEXICO

MWH

Figure No.: 5

APPENDICES

APPENDIX A – BOREHOLE AND WELL CONSTRUCTION LOGS

APPENDIX B – SOIL SAMPLING ANALYTICAL REPORTS

APPENDIX C – WASTE DISPOSAL DOCUMENTATION

APPENDIX D – MAY 3, 2016 GROUNDWATER SAMPLING ANALYTICAL REPORT
OCTOBER 28, 2016 GROUNDWATER SAMPLING ANALYTICAL REPORT

APPENDIX A

Drilling Log

MWH

Monitoring Well **MW-2**

Project *Lateral L 40* Owner *El Paso CGP Company, LLC*

Location *Rio Arriba County, New Mexico* Project Number *10509743*

Surface Elev. *7257.15 ft* North *2060769.273* East *1363400.279*

Top of Casing *7259.65 ft* Water Level Initial ▽ *7217.15* 10/06/16 00:00 Static ▼ *7216.74* 10/10/16 00:00

Hole Depth *51.0 ft* Screen: Diameter *2 in* Length *20.0 ft* Type/Size *PVC/0.01 in*

Hole Diameter *4.0 in* Casing: Diameter *2 in* Length *29.7 ft* Type *PVC*

Drill Co. *National EWP* Drilling Method *HSA/Air Rotary* Sand Pack *10/20 Silica*

Driller *Gary* Driller Reg. # *WD-1210* Log By *Brad Barton*

Start Date *10/6/2016* Completion Date *10/9/2016* Checked By *S. Varsa*

COMMENTS
30' S of Enterprise Pipeline.
Surface has light vegetation.

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%			CL	Clay with silt, dark brown, medium stiff to stiff, dry, low plasticity, no hydrocarbon odor. Soil from 0-8' removed with a hydro-vacuum.	
5	0.0	100%					
	0.0						
10	7.6					Sand, poorly-graded, very fine-grained, light brown to light olive-brown, loose (compressed in split spoon), dry, strong hydrocarbon odor at 11'.	
	42.9	66%			SP		
	1343						
	2242	MW-2 12-13'					
	1681						
15	394					Sand, poorly-graded, olive-brown, compressed in split spoon, auger refusal at 18' - switched to air rotary.	
	1709	60%			SP		
	1705						
	1879					Sandstone, pulverized, olive-brown, dry, strong to medium hydrocarbon odor.	
20	16.9						
		100%					
25						At 25.5' color changes to dark olive-brown.	
	9.9						
30							

Continued Next Page

Drilling Log

MWH

Monitoring Well **MW-2**

Project *Lateral L 40* Owner *El Paso CGP Company, LLC*

Location *Rio Arriba County, New Mexico* Project Number *10509743*

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						At 30.5' cuttings form balls, moisture becomes slight.	
	12.1						
35						At 35.5' color becomes dark gray and dark olive-brown, sand is fine-grained, hydrocarbon odor lessens.	
	0.7					Shale, clayey, dark gray cuttings, cuttings form balls.	
40		100%				At 40' fine sand and clay is present, color is dark gray, water becomes present and cuttings are a mixture of both dry and wet, no hydrocarbon odor.	
	0.0						
45						At 45.5' cuttings show very fine sand with clay, color is gray to dark gray, dry to slightly moist, no hydrocarbon odor.	
	0.0						
50						End of boring = 51'.	
55							
60							
65							
70							

Drilling Log

MWH

Monitoring Well **MW-3**

Project *Lateral L 40* Owner *El Paso CGP Company, LLC*

Location *Rio Arriba County, New Mexico* Project Number *10509743*

Surface Elev. *7256.59 ft* North *2060737.431* East *1363379.708*

Top of Casing *7259.10 ft* Water Level Initial ▽ *7216.59* 10/05/16 00:00 Static ▼ *7216.71* 10/10/16 00:00

Hole Depth *51.0 ft* Screen: Diameter *2 in* Length *20.0 ft* Type/Size *PVC/0.01 in*

Hole Diameter *4.0 in* Casing: Diameter *2 in* Length *29.7 ft* Type *PVC*

Drill Co. *National EWP* Drilling Method *HSA/Air Rotary* Sand Pack *10/20 Silica*

Driller *Gary* Driller Reg. # *WD-1210* Log By *Brad Barton*

Start Date *10/5/2016* Completion Date *10/9/2016* Checked By *S. Varsa*

COMMENTS
Surface has light vegetation.

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%			CL	Clay with silt, dark brown, medium stiff, dry, low plasticity, no hydrocarbon odor. Soil from 0-8' removed with a hydro-vacuum.	
5	0.0	100%					
	0.0						
10	0.0	74%				Sand, poorly-graded, to weakly cemented pulverized sandstone, light olive-brown, dry to slightly moist at 26'5', compressed in split spoon until 28', no hydrocarbon odor, auger refusal at 30' - switched to air rotary.	
	0.0						
	0.0						
	0.0						
15	0.0	40%					
	0.0						
	0.0						
	0.0						
20	0.0	50%			SP		
	0.0						
	1.4						
	2.6						
25	1.0	60%					
	7.9						
	11.0						
	26.8						
	18.1						
30	5.7	100%					

Continued Next Page

Drilling Log

MWH

Monitoring Well **MW-3**

Project *Lateral L 40* Owner *El Paso CGP Company, LLC*

Location *Rio Arriba County, New Mexico* Project Number *10509743*

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	27.8					Sandstone, olive-brown, slightly moist, no hydrocarbon odor.	
	0.8						
35						At 35.5' cuttings show very fine sand, color becomes dark gray.	
	0.2						
40		100% MW-3 29-30'				Shale, clayey, cuttings are very moist and form balls, color is dark gray with olive-brown.	
	0.0					At 42.5' cutting are wet.	
45							
	0.0					At 47.5' minor fine to medium sand is present, cuttings are wet, color is dark gray.	
50						End of boring = 51'.	
55							
60							
65							
70							

Drilling Log

MWH

Monitoring Well **MW-4**

Project *Lateral L 40* Owner *El Paso CGP Company, LLC*

Location *Rio Arriba County, New Mexico* Project Number *10509743*

Surface Elev. *7259.00 ft* North *2060748.306* East *1363441.48*

Top of Casing *7261.49 ft* Water Level Initial ▽ *7218.9* 10/05/16 00:00 Static ▼ *7216.52* 10/09/16 00:00

Hole Depth *51.0 ft* Screen: Diameter *2 in* Length *20.0 ft* Type/Size *PVC/0.01 in*

Hole Diameter *4.0 in* Casing: Diameter *2 in* Length *29.7 ft* Type *PVC*

Drill Co. *National EWP* Drilling Method *HSA/Air Rotary* Sand Pack *10/20 Silica*

Driller *Gary* Driller Reg. # *WD-1210* Log By *Brad Barton*

Start Date *10/5/2016* Completion Date *10/9/2016* Checked By *S. Varsa*

COMMENTS
Surface has light 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							
	0.0	100%			CL	Clay with silt, dark brown, medium stiff, low plasticity, no hydrocarbon odor. Soil from 0-8' removed with a hydro-vacuum.	
5	0.0	100%					
		0%				No recovery.	
	0.0				CL	Clay with silt, dark brown, dry to slightly moist, medium stiff to stiff, low to moderate plasticity, no hydrocarbon odor.	
10	0.0						
	NR	30%				No recovery.	
	NR						
	NR						
	0.0					Sand, poorly-graded, to a weakly cemented pulverized sandstone, more strongly cemented at 18', light brown to light olive-brown, dry, compressed in split spoon until 18.5', no hydrocarbon odor, auger refusal at 21' - switched to air rotary.	
15	0.0						
	0.0	66%					
	0.0				SP		
	0.0						
20	0.0	100% MW-4 20-21'					
						Sandstone, pulverized, light brown to olive-brown cuttings, dry, no hydrocarbon odor.	
	0.0						
25		100%				At 25.5' color changes to light brown, cuttings are dry to slightly moist and form balls.	
	2.2						
30							

Continued Next Page

Drilling Log

MWH

Monitoring Well **MW-4**

Project *Lateral L 40* Owner *El Paso CGP Company, LLC*

Location *Rio Arriba County, New Mexico* Project Number *10509743*

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						At 30.5' fine sand is present, color changes to light olive-brown, cuttings are dry, and there is no hydrocarbon odor.	
	0.5						
35						At 35.5' color becomes dark olive-brown, cuttings are dry to slightly moist and form balls, no hydrocarbon odor.	
	0.3						
40 ▽		100%				At 40' color grades from brown to dark gray, cuttings are moist.	
▼	2.6					Shale, clayey, dark gray, wet, cuttings form balls.	
45						At 46' cuttings become light gray and form balls, no hydrocarbon odor.	
	0.0						
50						End of boring = 51'.	
55							
60							
65							
70							

Drilling Log

MWH

Monitoring Well **MW-5**

Project *Lateral L 40* Owner *El Paso CGP Company, LLC*

Location *Rio Arriba County, New Mexico* Project Number *10509743*

Surface Elev. *7257.72 ft* North *2060712.658* East *1363419.348*

Top of Casing *7260.08 ft* Water Level Initial ▽ *7217.72* 10/05/16 00:00 Static ▼ *7215.49* 10/10/16 00:00

Hole Depth *51.0 ft* Screen: Diameter *2 in* Length *20.0 ft* Type/Size *PVC/0.01 in*

Hole Diameter *4.0 in* Casing: Diameter *2 in* Length *29.7 ft* Type *PVC*

Drill Co. *National EWP* Drilling Method *HSA/Air Rotary* Sand Pack *10/20 Silica*

Driller *Gary* Driller Reg. # *WD-1210* Log By *Brad Barton*

Start Date *10/5/2016* Completion Date *10/9/2016* Checked By *S. Varsa*

COMMENTS
Surface has light vegetation.

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%			CL	Clay with silt, dark brown to light olive-brown at 9.5', dry, stiff, low plasticity, no hydrocarbon odor. Soil from 0-8' removed with a hydro-vacuum.	
5	0.0	100%					
	0.0						
10	0.0						
	0.0	70%			SP	Sand, very fine-grained, poorly-graded, light olive-brown, dry to slightly moist, no hydrocarbon odor.	
	0.0						
	1.2						
	3.4						
15	3.4						
	1.4	100%			SP	Sand, fine to very fine-grained, poorly-graded, to weakly cemented sandstone, olive-brown, dry to slightly moist, becomes hard at 15' to very hard at 20', slight hydrocarbon odor at 18.5' increasing at 20.5', auger refusal at 22' - switched to air rotary.	
	2.7						
	5.7						
	55.7						
20	22.0	100%					
	269.2	MW-5 20-21'					
	50.4	100%				Sandstone, fine to very fine-grained, light olive-brown to light brown, dry cuttings, no hydrocarbon odor.	
25	2.1	100%				At 25.5' color changes to dark gray to dark olive-brown, cuttings become slightly moist and form balls, slight hydrocarbon odor present.	
30							

Continued Next Page

Drilling Log

MWH

Monitoring Well **MW-5**

Project *Lateral L 40* Owner *El Paso CGP Company, LLC*

Location *Rio Arriba County, New Mexico* Project Number *10509743*

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							
	0.7						
35							
	2.4						
40		100%				Shale, gray, cuttings form balls, no hydrocarbon odor.	
	0.0						
45							
	0.0						
50						End of boring = 51'.	
55							
60							
65							
70							

Drilling Log

MWH

Soil Boring **SB-1**

Project *Lateral L 40* Owner *El Paso CGP Company, LLC*

Location *Rio Arriba County, New Mexico* Project Number *10509743*

Surface Elev. *7257.09 ft* North *2060747.746* East *1363405.412*

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

Hole Depth *23.0 ft* Screen: Diameter *NA* Length *NA* Type/Size *NA*

Hole Diameter *3.25 in* Casing: Diameter *NA* Length *NA* Type *NA*

Drill Co. *National EWP* Drilling Method *HSA* Sand Pack *NA*

Driller *Gary* Driller Reg. # *WD-1210* Log By *Brad Barton*

Start Date *10/6/2016* Completion Date *10/7/2016* Checked By *S. Varsa*

COMMENTS
7' from MW-1. Surface has light vegetation.

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

Depth (ft)	PID (ppm)	% Recovery	Blow Count Recovery	Graphic Log	USCS	Description (Color, Moisture, Texture, Structure, Odor) Geologic Descriptions are Based on the USCS.
0						
	0.0	100%			CL	Clay with silt, dark brown, medium stiff, dry, low plasticity, no hydrocarbon odor. Soil from 0-8' removed with a hydro-vacuum.
5	0.0	100%				
	0.0					
10	13.0					
	92.3	40%				Sand, fine-grained, poorly-graded, to a weakly cemented pulverized sandstone, light gray to light olive to light brown at 18.5', dry, loose, compressed in split spoons, hydrocarbon odor present, auger refusal at 23'.
	423.1					
	1340	SB-1 12-13'				
	277.3					
15	674					
	1083	60%			SP	
	1647	SB-1 16-17'				
	1301					
	411					
20	958.1					
	816	50%				
	1781	SB-1 21-22'				
	1253					
25						End of boring = 23'.
30						

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: 400-128425-1
Client Project/Site: Lat L 40

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

Attn: Ms. Sarah Gardner

Madonna Myers

Authorized for release by:
10/21/2016 8:21:39 AM
Madonna Myers, Project Manager II
(615)796-1870
madonna.myers@testamericainc.com

Designee for

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

Table of Contents

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
X	Surrogate is outside control limits

HPLC/IC

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.
E	Result exceeded calibration range.

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: 400-128425-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-128425-1

Comments
No additional comments.

Receipt
The samples were received on 10/8/2016 9:05 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.8º C.

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

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

GC Semi VOA
Method(s) 8015B: Surrogate recovery for the following sample was outside control limits: MW-2 (12-13) (400-128425-2). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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: Lat L 40

TestAmerica Job ID: 400-128425-1

Client Sample ID: MW-5 (20-21) — Lab Sample ID: 400-128425-1

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Gasoline Range Organics (GRO) C6--C10	0.12		0.11		mg/Kg	1	☼	8015B	Total/NA
Xylenes, Total	0.0073		0.0053		mg/Kg	1	☼	8021B	Total/NA
C10-C28	6.2		5.4		mg/Kg	1	☼	8015B	Total/NA

Client Sample ID: MW-2 (12-13) — Lab Sample ID: 400-128425-2

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Gasoline Range Organics (GRO) C6--C10	8400		210		mg/Kg	2000	☼	8015B	Total/NA
Benzene	13		1.1		mg/Kg	1000	☼	8021B	Total/NA
Ethylbenzene	29		1.1		mg/Kg	1000	☼	8021B	Total/NA
Toluene	110		5.3		mg/Kg	1000	☼	8021B	Total/NA
Xylenes, Total	410		5.3		mg/Kg	1000	☼	8021B	Total/NA
C10-C28	280		5.4		mg/Kg	1	☼	8015B	Total/NA
C28-C35	5.5	*	5.4		mg/Kg	1	☼	8015B	Total/NA

Client Sample ID: MW-4 (20-21) — Lab Sample ID: 400-128425-3

No Detections.

Client Sample ID: MW-3 (29-30) — Lab Sample ID: 400-128425-4

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Toluene	0.0063		0.0050		mg/Kg	1	☼	8021B	Total/NA
Xylenes, Total	0.015		0.0050		mg/Kg	1	☼	8021B	Total/NA

Client Sample ID: SB-1 (12-13) — Lab Sample ID: 400-128425-5

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Gasoline Range Organics (GRO) C6--C10	0.89		0.10		mg/Kg	1	☼	8015B	Total/NA
Ethylbenzene	0.0054		0.0010		mg/Kg	1	☼	8021B	Total/NA
Xylenes, Total	0.052		0.0052		mg/Kg	1	☼	8021B	Total/NA
C10-C28	22		5.2		mg/Kg	1	☼	8015B	Total/NA

Client Sample ID: SB-1 (16-17) — Lab Sample ID: 400-128425-6

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Gasoline Range Organics (GRO) C6--C10	170		5.3		mg/Kg	50	☼	8015B	Total/NA
Benzene	0.059		0.053		mg/Kg	50	☼	8021B	Total/NA
Ethylbenzene	1.8		0.053		mg/Kg	50	☼	8021B	Total/NA
Toluene	0.90		0.26		mg/Kg	50	☼	8021B	Total/NA
Xylenes, Total	14		0.26		mg/Kg	50	☼	8021B	Total/NA
C10-C28	45		5.5		mg/Kg	1	☼	8015B	Total/NA

Client Sample ID: SB-1 (21-22) — Lab Sample ID: 400-128425-7

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Gasoline Range Organics (GRO) C6--C10	50		4.8		mg/Kg	50	☼	8015B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: SB-1 (21-22) (Continued)

Lab Sample ID: 400-128425-7

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Ethylbenzene	0.18		0.048		mg/Kg	50	☼	8021B	Total/NA
Xylenes, Total	0.98		0.24		mg/Kg	50	☼	8021B	Total/NA
C10-C28	21		5.2		mg/Kg	1	☼	8015B	Total/NA

This Detection Summary does not include radiochemical test results.

Sample Summary

Client: MWH Americas Inc
Project/Site: Lat L 40

TestAmerica Job ID: 400-128425-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-128425-1	MW-5 (20-21)	Solid	10/05/16 14:50	10/08/16 09:05
400-128425-2	MW-2 (12-13)	Solid	10/06/16 13:00	10/08/16 09:05
400-128425-3	MW-4 (20-21)	Solid	10/06/16 14:00	10/08/16 09:05
400-128425-4	MW-3 (29-30)	Solid	10/06/16 15:45	10/08/16 09:05
400-128425-5	SB-1 (12-13)	Solid	10/06/16 16:20	10/08/16 09:05
400-128425-6	SB-1 (16-17)	Solid	10/06/16 16:30	10/08/16 09:05
400-128425-7	SB-1 (21-22)	Solid	10/06/16 16:45	10/08/16 09:05

Client: MWH Americas Inc
Project/Site: Lat L 40

TestAmerica Job ID: 400-128425-1

Client Sample ID: MW-5 (20-21)
Date Collected: 10/05/16 14:50
Date Received: 10/08/16 09:05

Lab Sample ID: 400-128425-1
Matrix: Solid
Percent Solids: 90.4

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) C6--C10	0.12		0.11		mg/Kg	☼	10/12/16 10:05	10/12/16 14:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid)	*94*		*65 - 125*	*10/12/16 10:05*	*10/12/16 14:50*	*1*

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0011		0.0011		mg/Kg	☼	10/12/16 10:05	10/12/16 14:50	1
Ethylbenzene	<0.0011		0.0011		mg/Kg	☼	10/12/16 10:05	10/12/16 14:50	1
Toluene	<0.0053		0.0053		mg/Kg	☼	10/12/16 10:05	10/12/16 14:50	1
Xylenes, Total	0.0073		0.0053		mg/Kg	☼	10/12/16 10:05	10/12/16 14:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*96*		*40 - 150*	*10/12/16 10:05*	*10/12/16 14:50*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	6.2		5.4		mg/Kg	☼	10/11/16 13:02	10/12/16 21:05	1
C28-C35	<5.4	*	5.4		mg/Kg	☼	10/11/16 13:02	10/12/16 21:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*59*		*27 - 151*	*10/11/16 13:02*	*10/12/16 21:05*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<22		22		mg/Kg	☼		10/18/16 12:32	1

Client: MWH Americas Inc
Project/Site: Lat L 40

TestAmerica Job ID: 400-128425-1

Client Sample ID: MW-2 (12-13)
Date Collected: 10/06/16 13:00
Date Received: 10/08/16 09:05

Lab Sample ID: 400-128425-2
Matrix: Solid
Percent Solids: 89.4

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) C6--C10	8400		210		mg/Kg	☼	10/13/16 10:40	10/19/16 11:34	2000

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid)	*84*		*65 - 125*	*10/13/16 10:40*	*10/19/16 11:34*	*2000*

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	13		1.1		mg/Kg	☼	10/13/16 10:40	10/14/16 19:03	1000
Ethylbenzene	29		1.1		mg/Kg	☼	10/13/16 10:40	10/14/16 19:03	1000
Toluene	110		5.3		mg/Kg	☼	10/13/16 10:40	10/14/16 19:03	1000
Xylenes, Total	410		5.3		mg/Kg	☼	10/13/16 10:40	10/14/16 19:03	1000

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*83*		*40 - 150*	*10/13/16 10:40*	*10/14/16 19:03*	*1000*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	280		5.4		mg/Kg	☼	10/11/16 13:02	10/12/16 21:16	1
C28-C35	5.5	*	5.4		mg/Kg	☼	10/11/16 13:02	10/12/16 21:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*168*	*X*	*27 - 151*	*10/11/16 13:02*	*10/12/16 21:16*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<23		23		mg/Kg	☼		10/18/16 12:55	1

Client: MWH Americas Inc
Project/Site: Lat L 40

TestAmerica Job ID: 400-128425-1

Client Sample ID: MW-4 (20-21)

Date Collected: 10/06/16 14:00
Date Received: 10/08/16 09:05

Lab Sample ID: 400-128425-3

Matrix: Solid
Percent Solids: 94.7

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) C6--C10	<0.10		0.10		mg/Kg	☼	10/13/16 11:05	10/13/16 12:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid)	*93*		*65 - 125*	*10/13/16 11:05*	*10/13/16 12:29*	*1*

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0010		0.0010		mg/Kg	☼	10/13/16 11:05	10/13/16 12:29	1
Ethylbenzene	<0.0010		0.0010		mg/Kg	☼	10/13/16 11:05	10/13/16 12:29	1
Toluene	<0.0050		0.0050		mg/Kg	☼	10/13/16 11:05	10/13/16 12:29	1
Xylenes, Total	<0.0050		0.0050		mg/Kg	☼	10/13/16 11:05	10/13/16 12:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*94*		*40 - 150*	*10/13/16 11:05*	*10/13/16 12:29*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	<5.2		5.2		mg/Kg	☼	10/11/16 13:02	10/12/16 21:27	1
C28-C35	<5.2	*	5.2		mg/Kg	☼	10/11/16 13:02	10/12/16 21:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*84*		*27 - 151*	*10/11/16 13:02*	*10/12/16 21:27*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<21		21		mg/Kg	☼		10/18/16 13:18	1

Client: MWH Americas Inc
Project/Site: Lat L 40

TestAmerica Job ID: 400-128425-1

Client Sample ID: MW-3 (29-30)
Date Collected: 10/06/16 15:45
Date Received: 10/08/16 09:05

Lab Sample ID: 400-128425-4
Matrix: Solid
Percent Solids: 95.7

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) C6--C10	<0.10		0.10		mg/Kg	☼	10/12/16 10:05	10/12/16 11:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid)	*94*		*65 - 125*	*10/12/16 10:05*	*10/12/16 11:55*	*1*

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0010		0.0010		mg/Kg	☼	10/12/16 10:05	10/12/16 11:55	1
Ethylbenzene	<0.0010		0.0010		mg/Kg	☼	10/12/16 10:05	10/12/16 11:55	1
Toluene	**0.0063**		0.0050		mg/Kg	☼	10/12/16 10:05	10/12/16 11:55	1
Xylenes, Total	**0.015**		0.0050		mg/Kg	☼	10/12/16 10:05	10/12/16 11:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*96*		*40 - 150*	*10/12/16 10:05*	*10/12/16 11:55*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	<5.2		5.2		mg/Kg	☼	10/11/16 13:02	10/12/16 21:38	1
C28-C35	<5.2	*	5.2		mg/Kg	☼	10/11/16 13:02	10/12/16 21:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*81*		*27 - 151*	*10/11/16 13:02*	*10/12/16 21:38*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<21		21		mg/Kg	☼		10/18/16 13:41	1

Client: MWH Americas Inc
Project/Site: Lat L 40

TestAmerica Job ID: 400-128425-1

Client Sample ID: SB-1 (12-13)
Date Collected: 10/06/16 16:20
Date Received: 10/08/16 09:05

Lab Sample ID: 400-128425-5
Matrix: Solid
Percent Solids: 92.7

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) C6--C10	0.89		0.10		mg/Kg	☼	10/12/16 10:05	10/12/16 17:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid)	*97*		*65 - 125*	*10/12/16 10:05*	*10/12/16 17:44*	*1*

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0010		0.0010		mg/Kg	☼	10/12/16 10:05	10/12/16 17:44	1
Ethylbenzene	0.0054		0.0010		mg/Kg	☼	10/12/16 10:05	10/12/16 17:44	1
Toluene	<0.0052		0.0052		mg/Kg	☼	10/12/16 10:05	10/12/16 17:44	1
Xylenes, Total	0.052		0.0052		mg/Kg	☼	10/12/16 10:05	10/12/16 17:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*98*		*40 - 150*	*10/12/16 10:05*	*10/12/16 17:44*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	22		5.2		mg/Kg	☼	10/11/16 13:02	10/12/16 21:49	1
C28-C35	<5.2	*	5.2		mg/Kg	☼	10/11/16 13:02	10/12/16 21:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*82*		*27 - 151*	*10/11/16 13:02*	*10/12/16 21:49*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<22		22		mg/Kg	☼		10/18/16 14:03	1

Client: MWH Americas Inc
Project/Site: Lat L 40

TestAmerica Job ID: 400-128425-1

Client Sample ID: SB-1 (16-17)
Date Collected: 10/06/16 16:30
Date Received: 10/08/16 09:05

Lab Sample ID: 400-128425-6
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	170		5.3		mg/Kg	☼	10/13/16 10:40	10/14/16 18:29	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid)	*93*		*65 - 125*	*10/13/16 10:40*	*10/14/16 18:29*	*50*

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.059		0.053		mg/Kg	☼	10/13/16 10:40	10/14/16 18:29	50
Ethylbenzene	1.8		0.053		mg/Kg	☼	10/13/16 10:40	10/14/16 18:29	50
Toluene	0.90		0.26		mg/Kg	☼	10/13/16 10:40	10/14/16 18:29	50
Xylenes, Total	14		0.26		mg/Kg	☼	10/13/16 10:40	10/14/16 18:29	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*97*		*40 - 150*	*10/13/16 10:40*	*10/14/16 18:29*	*50*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	45		5.5		mg/Kg	☼	10/11/16 13:02	10/12/16 22:11	1
C28-C35	<5.5	*	5.5		mg/Kg	☼	10/11/16 13:02	10/12/16 22:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*76*		*27 - 151*	*10/11/16 13:02*	*10/12/16 22:11*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<22		22		mg/Kg	☼		10/18/16 14:26	1

Client: MWH Americas Inc
Project/Site: Lat L 40

TestAmerica Job ID: 400-128425-1

Client Sample ID: SB-1 (21-22)

Date Collected: 10/06/16 16:45
Date Received: 10/08/16 09:05

Lab Sample ID: 400-128425-7

Matrix: Solid
Percent Solids: 95.4

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) C6--C10	50		4.8		mg/Kg	☼	10/18/16 16:30	10/19/16 10:59	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid)	*99*		*65 - 125*	*10/18/16 16:30*	*10/19/16 10:59*	*50*

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.048		0.048		mg/Kg	☼	10/18/16 16:30	10/19/16 10:59	50
Ethylbenzene	0.18		0.048		mg/Kg	☼	10/18/16 16:30	10/19/16 10:59	50
Toluene	<0.24		0.24		mg/Kg	☼	10/18/16 16:30	10/19/16 10:59	50
Xylenes, Total	0.98		0.24		mg/Kg	☼	10/18/16 16:30	10/19/16 10:59	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*99*		*40 - 150*	*10/18/16 16:30*	*10/19/16 10:59*	*50*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	21		5.2		mg/Kg	☼	10/11/16 13:02	10/12/16 20:54	1
C28-C35	<5.2	*	5.2		mg/Kg	☼	10/11/16 13:02	10/12/16 20:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*82*		*27 - 151*	*10/11/16 13:02*	*10/12/16 20:54*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<21		21		mg/Kg	☼		10/18/16 14:49	1

GC VOA

Analysis Batch: 326373

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-128425-1	MW-5 (20-21)	Total/NA	Solid	8021B	326448
400-128425-4	MW-3 (29-30)	Total/NA	Solid	8021B	326448
400-128425-5	SB-1 (12-13)	Total/NA	Solid	8021B	326448
MB 400-326448/3-A	Method Blank	Total/NA	Solid	8021B	326448
LCS 400-326448/1-A	Lab Control Sample	Total/NA	Solid	8021B	326448
400-128425-4 MS	MW-3 (29-30)	Total/NA	Solid	8021B	326448
400-128425-4 MSD	MW-3 (29-30)	Total/NA	Solid	8021B	326448

Analysis Batch: 326374

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-128425-1	MW-5 (20-21)	Total/NA	Solid	8015B	326448
400-128425-4	MW-3 (29-30)	Total/NA	Solid	8015B	326448
400-128425-5	SB-1 (12-13)	Total/NA	Solid	8015B	326448
MB 400-326448/3-A	Method Blank	Total/NA	Solid	8015B	326448
LCS 400-326448/2-A	Lab Control Sample	Total/NA	Solid	8015B	326448
400-128425-4 MS	MW-3 (29-30)	Total/NA	Solid	8015B	326448
400-128425-4 MSD	MW-3 (29-30)	Total/NA	Solid	8015B	326448

Prep Batch: 326448

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-128425-1	MW-5 (20-21)	Total/NA	Solid	5035	
400-128425-4	MW-3 (29-30)	Total/NA	Solid	5035	
400-128425-5	SB-1 (12-13)	Total/NA	Solid	5035	
MB 400-326448/3-A	Method Blank	Total/NA	Solid	5035	
LCS 400-326448/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCS 400-326448/2-A	Lab Control Sample	Total/NA	Solid	5035	
400-128425-4 MS	MW-3 (29-30)	Total/NA	Solid	5035	
400-128425-4 MS	MW-3 (29-30)	Total/NA	Solid	5035	
400-128425-4 MSD	MW-3 (29-30)	Total/NA	Solid	5035	
400-128425-4 MSD	MW-3 (29-30)	Total/NA	Solid	5035	

Analysis Batch: 326574

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-128425-3	MW-4 (20-21)	Total/NA	Solid	8021B	326717
MB 400-326717/3-A	Method Blank	Total/NA	Solid	8021B	326717
LCS 400-326717/1-A	Lab Control Sample	Total/NA	Solid	8021B	326717
400-128425-3 MS	MW-4 (20-21)	Total/NA	Solid	8021B	326717
400-128425-3 MSD	MW-4 (20-21)	Total/NA	Solid	8021B	326717

Analysis Batch: 326575

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-128425-3	MW-4 (20-21)	Total/NA	Solid	8015B	326717
MB 400-326717/3-A	Method Blank	Total/NA	Solid	8015B	326717
LCS 400-326717/2-A	Lab Control Sample	Total/NA	Solid	8015B	326717
400-128425-3 MS	MW-4 (20-21)	Total/NA	Solid	8015B	326717
400-128425-3 MSD	MW-4 (20-21)	Total/NA	Solid	8015B	326717

Prep Batch: 326717

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-128425-3	MW-4 (20-21)	Total/NA	Solid	5035	
MB 400-326717/3-A	Method Blank	Total/NA	Solid	5035	

GC VOA (Continued)

Prep Batch: 326717 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 400-326717/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCS 400-326717/2-A	Lab Control Sample	Total/NA	Solid	5035	
400-128425-3 MS	MW-4 (20-21)	Total/NA	Solid	5035	
400-128425-3 MS	MW-4 (20-21)	Total/NA	Solid	5035	
400-128425-3 MSD	MW-4 (20-21)	Total/NA	Solid	5035	
400-128425-3 MSD	MW-4 (20-21)	Total/NA	Solid	5035	

Prep Batch: 326719

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-128425-2	MW-2 (12-13)	Total/NA	Solid	5035	
400-128425-6	SB-1 (16-17)	Total/NA	Solid	5035	
400-128425-7	SB-1 (21-22)	Total/NA	Solid	5035	
MB 400-326719/1-A	Method Blank	Total/NA	Solid	5035	
LCS 400-326719/2-A	Lab Control Sample	Total/NA	Solid	5035	
LCS 400-326719/3-A	Lab Control Sample	Total/NA	Solid	5035	
400-128425-6 MS	SB-1 (16-17)	Total/NA	Solid	5035	
400-128425-6 MS	SB-1 (16-17)	Total/NA	Solid	5035	
400-128425-6 MSD	SB-1 (16-17)	Total/NA	Solid	5035	
400-128425-6 MSD	SB-1 (16-17)	Total/NA	Solid	5035	

Analysis Batch: 326720

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-128425-2	MW-2 (12-13)	Total/NA	Solid	8021B	326719
400-128425-6	SB-1 (16-17)	Total/NA	Solid	8021B	326719
400-128425-7	SB-1 (21-22)	Total/NA	Solid	8021B	326719
MB 400-326719/1-A	Method Blank	Total/NA	Solid	8021B	326719
LCS 400-326719/2-A	Lab Control Sample	Total/NA	Solid	8021B	326719
400-128425-6 MS	SB-1 (16-17)	Total/NA	Solid	8021B	326719
400-128425-6 MSD	SB-1 (16-17)	Total/NA	Solid	8021B	326719

Analysis Batch: 326721

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-128425-2	MW-2 (12-13)	Total/NA	Solid	8015B	326719
400-128425-6	SB-1 (16-17)	Total/NA	Solid	8015B	326719
400-128425-7	SB-1 (21-22)	Total/NA	Solid	8015B	326719
MB 400-326719/1-A	Method Blank	Total/NA	Solid	8015B	326719
LCS 400-326719/3-A	Lab Control Sample	Total/NA	Solid	8015B	326719
400-128425-6 MS	SB-1 (16-17)	Total/NA	Solid	8015B	326719
400-128425-6 MSD	SB-1 (16-17)	Total/NA	Solid	8015B	326719

GC Semi VOA

Prep Batch: 326278

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-128425-1	MW-5 (20-21)	Total/NA	Solid	3546	
400-128425-2	MW-2 (12-13)	Total/NA	Solid	3546	
400-128425-3	MW-4 (20-21)	Total/NA	Solid	3546	
400-128425-4	MW-3 (29-30)	Total/NA	Solid	3546	
400-128425-5	SB-1 (12-13)	Total/NA	Solid	3546	
400-128425-6	SB-1 (16-17)	Total/NA	Solid	3546	

GC Semi VOA (Continued)

Prep Batch: 326278 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-128425-7	SB-1 (21-22)	Total/NA	Solid	3546	
MB 400-326278/22-A	Method Blank	Total/NA	Solid	3546	
LCS 400-326278/21-A	Lab Control Sample	Total/NA	Solid	3546	
400-128425-7 MS	SB-1 (21-22)	Total/NA	Solid	3546	
400-128425-7 MSD	SB-1 (21-22)	Total/NA	Solid	3546	

Analysis Batch: 326548

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-128425-1	MW-5 (20-21)	Total/NA	Solid	8015B	326278
400-128425-2	MW-2 (12-13)	Total/NA	Solid	8015B	326278
400-128425-3	MW-4 (20-21)	Total/NA	Solid	8015B	326278
400-128425-4	MW-3 (29-30)	Total/NA	Solid	8015B	326278
400-128425-5	SB-1 (12-13)	Total/NA	Solid	8015B	326278
400-128425-6	SB-1 (16-17)	Total/NA	Solid	8015B	326278
400-128425-7	SB-1 (21-22)	Total/NA	Solid	8015B	326278
MB 400-326278/22-A	Method Blank	Total/NA	Solid	8015B	326278
LCS 400-326278/21-A	Lab Control Sample	Total/NA	Solid	8015B	326278
400-128425-7 MS	SB-1 (21-22)	Total/NA	Solid	8015B	326278
400-128425-7 MSD	SB-1 (21-22)	Total/NA	Solid	8015B	326278

HPLC/IC

Leach Batch: 326521

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-128425-1	MW-5 (20-21)	Soluble	Solid	DI Leach	
400-128425-2	MW-2 (12-13)	Soluble	Solid	DI Leach	
400-128425-3	MW-4 (20-21)	Soluble	Solid	DI Leach	
400-128425-4	MW-3 (29-30)	Soluble	Solid	DI Leach	
400-128425-5	SB-1 (12-13)	Soluble	Solid	DI Leach	
400-128425-6	SB-1 (16-17)	Soluble	Solid	DI Leach	
400-128425-7	SB-1 (21-22)	Soluble	Solid	DI Leach	
MB 400-326521/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 400-326521/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 400-326521/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
400-127992-B-5-B MS	Matrix Spike	Soluble	Solid	DI Leach	
400-127992-B-5-C MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	

Analysis Batch: 326745

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 400-326521/1-A	Method Blank	Soluble	Solid	300.0	326521
LCS 400-326521/2-A	Lab Control Sample	Soluble	Solid	300.0	326521
LCSD 400-326521/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	326521
400-127992-B-5-B MS	Matrix Spike	Soluble	Solid	300.0	326521
400-127992-B-5-C MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	326521

Analysis Batch: 327230

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-128425-1	MW-5 (20-21)	Soluble	Solid	300.0	326521
400-128425-2	MW-2 (12-13)	Soluble	Solid	300.0	326521
400-128425-3	MW-4 (20-21)	Soluble	Solid	300.0	326521

HPLC/IC (Continued)

Analysis Batch: 327230 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-128425-4	MW-3 (29-30)	Soluble	Solid	300.0	326521
400-128425-5	SB-1 (12-13)	Soluble	Solid	300.0	326521
400-128425-6	SB-1 (16-17)	Soluble	Solid	300.0	326521
400-128425-7	SB-1 (21-22)	Soluble	Solid	300.0	326521

General Chemistry

Analysis Batch: 326473

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-128425-1	MW-5 (20-21)	Total/NA	Solid	Moisture	
400-128425-2	MW-2 (12-13)	Total/NA	Solid	Moisture	
400-128425-3	MW-4 (20-21)	Total/NA	Solid	Moisture	
400-128425-4	MW-3 (29-30)	Total/NA	Solid	Moisture	
400-128425-5	SB-1 (12-13)	Total/NA	Solid	Moisture	
400-128425-6	SB-1 (16-17)	Total/NA	Solid	Moisture	
400-128425-7	SB-1 (21-22)	Total/NA	Solid	Moisture	
400-128426-C-11 MS	Matrix Spike	Total/NA	Solid	Moisture	
400-128426-C-11 MSD	Matrix Spike Duplicate	Total/NA	Solid	Moisture	
400-128426-C-6 DU	Duplicate	Total/NA	Solid	Moisture	

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

Lab Sample ID: MB 400-326448/3-A
Matrix: Solid
Analysis Batch: 326374

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 326448

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) C6--C10	<0.10		0.10		mg/Kg		10/12/16 09:30	10/12/16 11:21	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid)	*93*		*65 - 125*	*10/12/16 09:30*	*10/12/16 11:21*	*1*

Lab Sample ID: LCS 400-326448/2-A
Matrix: Solid
Analysis Batch: 326374

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 326448

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO) C6--C10			1.00	0.943		mg/Kg		94	62 - 141		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
a,a,a-Trifluorotoluene (fid)	*98*		*65 - 125*

Lab Sample ID: 400-128425-4 MS
Matrix: Solid
Analysis Batch: 326374

Client Sample ID: MW-3 (29-30)
Prep Type: Total/NA
Prep Batch: 326448

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO) C6--C10	<0.10		0.988	0.971		mg/Kg	☼	93	10 - 150		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
a,a,a-Trifluorotoluene (fid)	*98*		*65 - 125*

Lab Sample ID: 400-128425-4 MSD
Matrix: Solid
Analysis Batch: 326374

Client Sample ID: MW-3 (29-30)
Prep Type: Total/NA
Prep Batch: 326448

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) C6--C10	<0.10		0.978	1.02		mg/Kg	☼	99	10 - 150	5	32

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
a,a,a-Trifluorotoluene (fid)	*99*		*65 - 125*

Lab Sample ID: MB 400-326717/3-A
Matrix: Solid
Analysis Batch: 326575

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 326717

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) C6--C10	<0.10		0.10		mg/Kg		10/13/16 10:00	10/13/16 11:55	1

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

Lab Sample ID: MB 400-326717/3-A
Matrix: Solid
Analysis Batch: 326575

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 326717

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid)	92		65 - 125	10/13/16 10:00	10/13/16 11:55	1

Lab Sample ID: LCS 400-326717/2-A
Matrix: Solid
Analysis Batch: 326575

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 326717

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO) C6--C10			1.00	1.02		mg/Kg		102	62 - 141		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
a,a,a-Trifluorotoluene (fid)	96		65 - 125

Lab Sample ID: 400-128425-3 MS
Matrix: Solid
Analysis Batch: 326575

Client Sample ID: MW-4 (20-21)
Prep Type: Total/NA
Prep Batch: 326717

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO) C6--C10	<0.10		1.04	1.24		mg/Kg	☼	119	10 - 150		

Surrogate	MS %Recovery	MS Qualifier	Limits
a,a,a-Trifluorotoluene (fid)	99		65 - 125

Lab Sample ID: 400-128425-3 MSD
Matrix: Solid
Analysis Batch: 326575

Client Sample ID: MW-4 (20-21)
Prep Type: Total/NA
Prep Batch: 326717

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) C6--C10	<0.10		1.05	1.14		mg/Kg	☼	108	10 - 150	9	32

Surrogate	MSD %Recovery	MSD Qualifier	Limits
a,a,a-Trifluorotoluene (fid)	99		65 - 125

Lab Sample ID: MB 400-326719/1-A
Matrix: Solid
Analysis Batch: 326721

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 326719

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) C6--C10	<5.0		5.0		mg/Kg		10/13/16 10:40	10/14/16 13:50	50

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid)	93		65 - 125	10/13/16 10:40	10/14/16 13:50	50

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

Lab Sample ID: LCS 400-326719/3-A
Matrix: Solid
Analysis Batch: 326721

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 326719

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO) C6--C10			50.0	58.2		mg/Kg		116	62 - 141		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
a,a,a-Trifluorotoluene (fid)	*99*		*65 - 125*

Lab Sample ID: 400-128425-6 MS
Matrix: Solid
Analysis Batch: 326721

Client Sample ID: SB-1 (16-17)
Prep Type: Total/NA
Prep Batch: 326719

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO) C6--C10	170		52.7	220		mg/Kg	☼	86	10 - 150		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
a,a,a-Trifluorotoluene (fid)	*91*		*65 - 125*

Lab Sample ID: 400-128425-6 MSD
Matrix: Solid
Analysis Batch: 326721

Client Sample ID: SB-1 (16-17)
Prep Type: Total/NA
Prep Batch: 326719

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	170		52.7	223		mg/Kg	☼	91	10 - 150	1	32

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
a,a,a-Trifluorotoluene (fid)	*92*		*65 - 125*

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 400-326448/3-A
Matrix: Solid
Analysis Batch: 326373

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 326448

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0010		0.0010		mg/Kg		10/12/16 09:30	10/12/16 11:21	1
Ethylbenzene	<0.0010		0.0010		mg/Kg		10/12/16 09:30	10/12/16 11:21	1
Toluene	<0.0050		0.0050		mg/Kg		10/12/16 09:30	10/12/16 11:21	1
Xylenes, Total	<0.0050		0.0050		mg/Kg		10/12/16 09:30	10/12/16 11:21	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*95*		*40 - 150*	*10/12/16 09:30*	*10/12/16 11:21*	*1*

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

Lab Sample ID: LCS 400-326448/1-A
Matrix: Solid
Analysis Batch: 326373

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 326448

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			0.0500	0.0441		mg/Kg		88	74 - 127		
Ethylbenzene			0.0500	0.0455		mg/Kg		91	79 - 131		
Toluene			0.0500	0.0452		mg/Kg		90	76 - 127		
Xylenes, Total			0.150	0.134		mg/Kg		90	80 - 129		

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

Lab Sample ID: 400-128425-4 MS
Matrix: Solid
Analysis Batch: 326373

Client Sample ID: MW-3 (29-30)
Prep Type: Total/NA
Prep Batch: 326448

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	<0.0010		0.0503	0.0510		mg/Kg	☼	101	10 - 150		
Ethylbenzene	<0.0010		0.0503	0.0514		mg/Kg	☼	100	10 - 150		
Toluene	0.0063		0.0503	0.0555		mg/Kg	☼	98	10 - 150		
Xylenes, Total	0.015		0.151	0.162		mg/Kg	☼	98	50 - 150		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
a,a,a-Trifluorotoluene (pid)	*101*		*40 - 150*

Lab Sample ID: 400-128425-4 MSD
Matrix: Solid
Analysis Batch: 326373

Client Sample ID: MW-3 (29-30)
Prep Type: Total/NA
Prep Batch: 326448

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.0010		0.0508	0.0516		mg/Kg	☼	102	10 - 150	1	34
Ethylbenzene	<0.0010		0.0508	0.0526		mg/Kg	☼	102	10 - 150	2	66
Toluene	0.0063		0.0508	0.0577		mg/Kg	☼	101	10 - 150	4	44
Xylenes, Total	0.015		0.152	0.168		mg/Kg	☼	101	50 - 150	4	46

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

Lab Sample ID: MB 400-326717/3-A
Matrix: Solid
Analysis Batch: 326574

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 326717

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0010		0.0010		mg/Kg		10/13/16 10:00	10/13/16 11:55	1
Ethylbenzene	<0.0010		0.0010		mg/Kg		10/13/16 10:00	10/13/16 11:55	1
Toluene	<0.0050		0.0050		mg/Kg		10/13/16 10:00	10/13/16 11:55	1
Xylenes, Total	<0.0050		0.0050		mg/Kg		10/13/16 10:00	10/13/16 11:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*94*		*40 - 150*	*10/13/16 10:00*	*10/13/16 11:55*	*1*

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

Lab Sample ID: LCS 400-326717/1-A
Matrix: Solid
Analysis Batch: 326574

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 326717

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.0500	0.0454		mg/Kg		91	74 - 127
Ethylbenzene	0.0500	0.0455		mg/Kg		91	79 - 131
Toluene	0.0500	0.0450		mg/Kg		90	76 - 127
Xylenes, Total	0.150	0.135		mg/Kg		90	80 - 129

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

Lab Sample ID: 400-128425-3 MS
Matrix: Solid
Analysis Batch: 326574

Client Sample ID: MW-4 (20-21)
Prep Type: Total/NA
Prep Batch: 326717

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.0010		0.0494	0.0484		mg/Kg	☼	98	10 - 150
Ethylbenzene	<0.0010		0.0494	0.0508		mg/Kg	☼	103	10 - 150
Toluene	<0.0050		0.0494	0.0499		mg/Kg	☼	101	10 - 150
Xylenes, Total	<0.0050		0.148	0.149		mg/Kg	☼	100	50 - 150

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

Lab Sample ID: 400-128425-3 MSD
Matrix: Solid
Analysis Batch: 326574

Client Sample ID: MW-4 (20-21)
Prep Type: Total/NA
Prep Batch: 326717

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.0010		0.0517	0.0490		mg/Kg	☼	95	10 - 150	1	34
Ethylbenzene	<0.0010		0.0517	0.0527		mg/Kg	☼	102	10 - 150	4	66
Toluene	<0.0050		0.0517	0.0519		mg/Kg	☼	101	10 - 150	4	44
Xylenes, Total	<0.0050		0.155	0.154		mg/Kg	☼	99	50 - 150	3	46

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

Lab Sample ID: MB 400-326719/1-A
Matrix: Solid
Analysis Batch: 326720

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 326719

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.050		0.050	mg/Kg		10/13/16 10:40	10/14/16 13:50	50
Ethylbenzene	<0.050		0.050	mg/Kg		10/13/16 10:40	10/14/16 13:50	50
Toluene	<0.25		0.25	mg/Kg		10/13/16 10:40	10/14/16 13:50	50
Xylenes, Total	<0.25		0.25	mg/Kg		10/13/16 10:40	10/14/16 13:50	50

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*95*		*40 - 150*	*10/13/16 10:40*	*10/14/16 13:50*	*50*

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

Lab Sample ID: LCS 400-326719/2-A
Matrix: Solid
Analysis Batch: 326720

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 326719

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	2.50	2.66		mg/Kg		106	74 - 127
Ethylbenzene	2.50	2.74		mg/Kg		110	79 - 131
Toluene	2.50	2.68		mg/Kg		107	76 - 127
Xylenes, Total	7.50	8.09		mg/Kg		108	80 - 129

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

Lab Sample ID: 400-128425-6 MS
Matrix: Solid
Analysis Batch: 326720

Client Sample ID: SB-1 (16-17)
Prep Type: Total/NA
Prep Batch: 326719

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.059		2.63	2.44		mg/Kg	☼	90	10 - 150
Ethylbenzene	1.8		2.63	3.74		mg/Kg	☼	73	10 - 150
Toluene	0.90		2.63	3.25		mg/Kg	☼	89	10 - 150
Xylenes, Total	14		7.90	17.9		mg/Kg	☼	53	50 - 150

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
a,a,a-Trifluorotoluene (pid)	*97*		*40 - 150*

Lab Sample ID: 400-128425-6 MSD
Matrix: Solid
Analysis Batch: 326720

Client Sample ID: SB-1 (16-17)
Prep Type: Total/NA
Prep Batch: 326719

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	0.059		2.63	2.42		mg/Kg	☼	90	10 - 150	1	34
Ethylbenzene	1.8		2.63	4.48		mg/Kg	☼	101	10 - 150	18	66
Toluene	0.90		2.63	3.50		mg/Kg	☼	99	10 - 150	7	44
Xylenes, Total	14		7.90	20.4		mg/Kg	☼	85	50 - 150	13	46

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
a,a,a-Trifluorotoluene (pid)	*97*		*40 - 150*

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

Lab Sample ID: MB 400-326278/22-A
Matrix: Solid
Analysis Batch: 326548

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 326278

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	<5.0		5.0	mg/Kg		10/11/16 13:02	10/12/16 20:09	1
C28-C35	<5.0		5.0	mg/Kg		10/11/16 13:02	10/12/16 20:09	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*86*		*27 - 151*	*10/11/16 13:02*	*10/12/16 20:09*	*1*

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

Lab Sample ID: LCS 400-326278/21-A
Matrix: Solid
Analysis Batch: 326548

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 326278

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
C10-C28			333	247		mg/Kg		74	63 - 153		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*84*		*27 - 151*

Lab Sample ID: 400-128425-7 MS
Matrix: Solid
Analysis Batch: 326548

Client Sample ID: SB-1 (21-22)
Prep Type: Total/NA
Prep Batch: 326278

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
C10-C28	21		346	273		mg/Kg	☼	73	62 - 204		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
o-Terphenyl	*83*		*27 - 151*

Lab Sample ID: 400-128425-7 MSD
Matrix: Solid
Analysis Batch: 326548

Client Sample ID: SB-1 (21-22)
Prep Type: Total/NA
Prep Batch: 326278

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
C10-C28	21		345	313		mg/Kg	☼	85	62 - 204	14	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
o-Terphenyl	*90*		*27 - 151*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 400-326521/1-A
Matrix: Solid
Analysis Batch: 326745

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			10/13/16 16:21	1

Lab Sample ID: LCS 400-326521/2-A
Matrix: Solid
Analysis Batch: 326745

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			100	91.8		mg/Kg		92	80 - 120		

Lab Sample ID: LCSD 400-326521/3-A
Matrix: Solid
Analysis Batch: 326745

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	99.3		mg/Kg		99	80 - 120	8	15

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 400-127992-B-5-B MS
Matrix: Solid
Analysis Batch: 326745

Client Sample ID: Matrix Spike
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	860		124	1160	4	mg/Kg	☼	245	80 - 120

Lab Sample ID: 400-127992-B-5-C MSD
Matrix: Solid
Analysis Batch: 326745

Client Sample ID: Matrix Spike Duplicate
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	860		120	1310	E 4	mg/Kg	☼	375	80 - 120	12	15

Lab Chronicle

Client: MWH Americas Inc
Project/Site: Lat L 40

TestAmerica Job ID: 400-128425-1

Client Sample ID: MW-5 (20-21)

Lab Sample ID: 400-128425-1
Matrix: Solid
Date Collected: 10/05/16 14:50
Date Received: 10/08/16 09:05

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			326473	10/12/16 13:43	NTH	TAL PEN
	Instrument ID: NOEQUIP									

Client Sample ID: MW-5 (20-21)

Lab Sample ID: 400-128425-1
Matrix: Solid
Date Collected: 10/05/16 14:50
Date Received: 10/08/16 09:05
Percent Solids: 90.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.23 g	5.00 g	326448	10/12/16 10:05	SAB	TAL PEN
Total/NA	Analysis	8015B		1	5 mL	5 mL	326374	10/12/16 14:50	SAB	TAL PEN
	Instrument ID: CH_JOAN									
Total/NA	Prep	5035			5.23 g	5.00 g	326448	10/12/16 10:05	SAB	TAL PEN
Total/NA	Analysis	8021B		1	5 mL	5 mL	326373	10/12/16 14:50	SAB	TAL PEN
	Instrument ID: CH_JOAN									
Total/NA	Prep	3546			15.40 g	1.0 mL	326278	10/11/16 13:02	RDT	TAL PEN
Total/NA	Analysis	8015B		1			326548	10/12/16 21:05	TJB	TAL PEN
	Instrument ID: Eva									
Soluble	Leach	DI Leach			2.49 g	50 mL	326521	10/12/16 16:02	KH1	TAL PEN
Soluble	Analysis	300.0		1			327230	10/18/16 12:32	TAJ	TAL PEN
	Instrument ID: IC2									

Client Sample ID: MW-2 (12-13)

Lab Sample ID: 400-128425-2
Matrix: Solid
Date Collected: 10/06/16 13:00
Date Received: 10/08/16 09:05

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			326473	10/12/16 13:43	NTH	TAL PEN
	Instrument ID: NOEQUIP									

Client Sample ID: MW-2 (12-13)

Lab Sample ID: 400-128425-2
Matrix: Solid
Date Collected: 10/06/16 13:00
Date Received: 10/08/16 09:05
Percent Solids: 89.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.25 g	5.00 g	326719	10/13/16 10:40	SAB	TAL PEN
Total/NA	Analysis	8015B		2000	5 mL	5 mL	326721	10/19/16 11:34	SAB	TAL PEN
	Instrument ID: CH_JOAN									
Total/NA	Prep	5035			5.25 g	5.00 g	326719	10/13/16 10:40	SAB	TAL PEN
Total/NA	Analysis	8021B		1000	5 mL	5 mL	326720	10/14/16 19:03	SAB	TAL PEN
	Instrument ID: CH_JOAN									
Total/NA	Prep	3546			15.50 g	1.0 mL	326278	10/11/16 13:02	RDT	TAL PEN
Total/NA	Analysis	8015B		1			326548	10/12/16 21:16	TJB	TAL PEN
	Instrument ID: Eva									

Client Sample ID: MW-2 (12-13)

Lab Sample ID: 400-128425-2

Date Collected: 10/06/16 13:00
Matrix: Solid
Date Received: 10/08/16 09:05
Percent Solids: 89.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			2.48 g	50 mL	326521	10/12/16 16:02	KH1	TAL PEN
Soluble	Analysis	300.0		1			327230	10/18/16 12:55	TAJ	TAL PEN
	Instrument ID: IC2									

Client Sample ID: MW-4 (20-21)

Lab Sample ID: 400-128425-3

Date Collected: 10/06/16 14:00
Matrix: Solid
Date Received: 10/08/16 09:05

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			326473	10/12/16 13:43	NTH	TAL PEN
	Instrument ID: NOEQUIP									

Client Sample ID: MW-4 (20-21)

Lab Sample ID: 400-128425-3

Date Collected: 10/06/16 14:00
Matrix: Solid
Date Received: 10/08/16 09:05
Percent Solids: 94.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.23 g	5.00 g	326717	10/13/16 11:05	SAB	TAL PEN
Total/NA	Analysis	8015B		1	5 mL	5 mL	326575	10/13/16 12:29	SAB	TAL PEN
	Instrument ID: CH_JOAN									
Total/NA	Prep	5035			5.23 g	5.00 g	326717	10/13/16 11:05	SAB	TAL PEN
Total/NA	Analysis	8021B		1	5 mL	5 mL	326574	10/13/16 12:29	SAB	TAL PEN
	Instrument ID: CH_JOAN									
Total/NA	Prep	3546			15.10 g	1.0 mL	326278	10/11/16 13:02	RDT	TAL PEN
Total/NA	Analysis	8015B		1			326548	10/12/16 21:27	TJB	TAL PEN
	Instrument ID: Eva									
Soluble	Leach	DI Leach			2.50 g	50 mL	326521	10/12/16 16:02	KH1	TAL PEN
Soluble	Analysis	300.0		1			327230	10/18/16 13:18	TAJ	TAL PEN
	Instrument ID: IC2									

Client Sample ID: MW-3 (29-30)

Lab Sample ID: 400-128425-4

Date Collected: 10/06/16 15:45
Matrix: Solid
Date Received: 10/08/16 09:05

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			326473	10/12/16 13:43	NTH	TAL PEN
	Instrument ID: NOEQUIP									

Lab Chronicle

Client: MWH Americas Inc
Project/Site: Lat L 40

TestAmerica Job ID: 400-128425-1

Client Sample ID: MW-3 (29-30)

Lab Sample ID: 400-128425-4

Date Collected: 10/06/16 15:45
Matrix: Solid
Date Received: 10/08/16 09:05
Percent Solids: 95.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.25 g	5.00 g	326448	10/12/16 10:05	SAB	TAL PEN
Total/NA	Analysis	8015B		1	5 mL	5 mL	326374	10/12/16 11:55	SAB	TAL PEN
	Instrument ID: CH_JOAN									
Total/NA	Prep	5035			5.25 g	5.00 g	326448	10/12/16 10:05	SAB	TAL PEN
Total/NA	Analysis	8021B		1	5 mL	5 mL	326373	10/12/16 11:55	SAB	TAL PEN
	Instrument ID: CH_JOAN									
Total/NA	Prep	3546			15.11 g	1.0 mL	326278	10/11/16 13:02	RDT	TAL PEN
Total/NA	Analysis	8015B		1			326548	10/12/16 21:38	TJB	TAL PEN
	Instrument ID: Eva									
Soluble	Leach	DI Leach			2.50 g	50 mL	326521	10/12/16 16:02	KH1	TAL PEN
Soluble	Analysis	300.0		1			327230	10/18/16 13:41	TAJ	TAL PEN
	Instrument ID: IC2									

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

Lab Sample ID: 400-128425-5

Date Collected: 10/06/16 16:20
Matrix: Solid
Date Received: 10/08/16 09:05

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			326473	10/12/16 13:43	NTH	TAL PEN
	Instrument ID: NOEQUIP									

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

Lab Sample ID: 400-128425-5

Date Collected: 10/06/16 16:20
Matrix: Solid
Date Received: 10/08/16 09:05
Percent Solids: 92.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.15 g	5.00 g	326448	10/12/16 10:05	SAB	TAL PEN
Total/NA	Analysis	8015B		1	5 mL	5 mL	326374	10/12/16 17:44	SAB	TAL PEN
	Instrument ID: CH_JOAN									
Total/NA	Prep	5035			5.15 g	5.00 g	326448	10/12/16 10:05	SAB	TAL PEN
Total/NA	Analysis	8021B		1	5 mL	5 mL	326373	10/12/16 17:44	SAB	TAL PEN
	Instrument ID: CH_JOAN									
Total/NA	Prep	3546			15.49 g	1.0 mL	326278	10/11/16 13:02	RDT	TAL PEN
Total/NA	Analysis	8015B		1			326548	10/12/16 21:49	TJB	TAL PEN
	Instrument ID: Eva									
Soluble	Leach	DI Leach			2.49 g	50 mL	326521	10/12/16 16:02	KH1	TAL PEN
Soluble	Analysis	300.0		1			327230	10/18/16 14:03	TAJ	TAL PEN
	Instrument ID: IC2									

Lab Chronicle

Client: MWH Americas Inc
Project/Site: Lat L 40

TestAmerica Job ID: 400-128425-1

Client Sample ID: SB-1 (16-17)

Lab Sample ID: 400-128425-6

Date Collected: 10/06/16 16:30
Matrix: Solid
Date Received: 10/08/16 09:05

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			326473	10/12/16 13:43	NTH	TAL PEN
	Instrument ID: NOEQUIP									

Client Sample ID: SB-1 (16-17)

Lab Sample ID: 400-128425-6

Date Collected: 10/06/16 16:30
Matrix: Solid
Date Received: 10/08/16 09:05
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			5.32 g	5.00 g	326719	10/13/16 10:40	SAB	TAL PEN
Total/NA	Analysis	8015B		50	5 mL	5 mL	326721	10/14/16 18:29	SAB	TAL PEN
	Instrument ID: CH_JOAN									
Total/NA	Prep	5035			5.32 g	5.00 g	326719	10/13/16 10:40	SAB	TAL PEN
Total/NA	Analysis	8021B		50	5 mL	5 mL	326720	10/14/16 18:29	SAB	TAL PEN
	Instrument ID: CH_JOAN									
Total/NA	Prep	3546			15.19 g	1.0 mL	326278	10/11/16 13:02	RDT	TAL PEN
Total/NA	Analysis	8015B		1			326548	10/12/16 22:11	TJB	TAL PEN
	Instrument ID: Eva									
Soluble	Leach	DI Leach			2.50 g	50 mL	326521	10/12/16 16:02	KH1	TAL PEN
Soluble	Analysis	300.0		1			327230	10/18/16 14:26	TAJ	TAL PEN
	Instrument ID: IC2									

Client Sample ID: SB-1 (21-22)

Lab Sample ID: 400-128425-7

Date Collected: 10/06/16 16:45
Matrix: Solid
Date Received: 10/08/16 09:05

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			326473	10/12/16 13:43	NTH	TAL PEN
	Instrument ID: NOEQUIP									

Client Sample ID: SB-1 (21-22)

Lab Sample ID: 400-128425-7

Date Collected: 10/06/16 16:45
Matrix: Solid
Date Received: 10/08/16 09:05
Percent Solids: 95.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.41 g	5.00 g	326719	10/18/16 16:30	SAB	TAL PEN
Total/NA	Analysis	8015B		50	5 mL	5 mL	326721	10/19/16 10:59	SAB	TAL PEN
	Instrument ID: CH_JOAN									
Total/NA	Prep	5035			5.41 g	5.00 g	326719	10/18/16 16:30	SAB	TAL PEN
Total/NA	Analysis	8021B		50	5 mL	5 mL	326720	10/19/16 10:59	SAB	TAL PEN
	Instrument ID: CH_JOAN									
Total/NA	Prep	3546			15.09 g	1.0 mL	326278	10/11/16 13:02	RDT	TAL PEN
Total/NA	Analysis	8015B		1			326548	10/12/16 20:54	TJB	TAL PEN
	Instrument ID: Eva									
Soluble	Leach	DI Leach			2.50 g	50 mL	326521	10/12/16 16:02	KH1	TAL PEN

Lab Chronicle

Client: MWH Americas Inc
Project/Site: Lat L 40

TestAmerica Job ID: 400-128425-1

Client Sample ID: SB-1 (21-22)
Date Collected: 10/06/16 16:45
Date Received: 10/08/16 09:05

Lab Sample ID: 400-128425-7
Matrix: Solid
Percent Solids: 95.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Analysis	300.0		1			327230	10/18/16 14:49	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: Lat L 40

TestAmerica Job ID: 400-128425-1

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: Lat L 40

TestAmerica Job ID: 400-128425-1

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: Webb, Carol M	Carrier Tracking No(s):	COC No: 400-58390-25146.1
Client Contact: Clint Oberbroeckling	Phone: 316 305 2789	E-Mail: caroi.webb@testamericainc.com		Page: Page 1 of 1
Company: MWH Americas Inc				Job #:
Address: 11153 Aurora Avenue	Due Date Requested: Per ARF			
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 # ERG-MWH-09-9-16-CWO-01			
Project Name: Lat L 40	Project #: 40005479			
Site: Lat L 40	SSOW#:			

Analysis Requested

400-128425 COC

Preservation Codes:

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

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015B_DRO - DRO C10-C28 / ORO, Chloride	8015B_GRO, 8021B	Total Number of containers	Special Instructions/Note:
MW-5 (20-21)	10/5/16	1450	G	S	N	N	1	1	2	
MW-2 (12-13)	10/6/16	~~1300~~ 1300	G	S	N	N	1	1	2	
MW-4 (20-21)	10/6/16	1400	G	S	N	N	1	1	2	
MW-3 (29-30)	10/6/16	1545	G	S	N	N	1	1	2	
SB-1 (12-13)	10/6/16	1620	G	S	N	N	1	1	2	
SB-1 (16-17)	10/6/16	1630	G	S	N	N	1	1	2	
SB-1 (21-22)	10/6/16	1645	G	S	N	N	1	1	2	

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
Brad Bat	10/7/16 0900	MWH	Fed Ex office	10/7/16 0900	Fed Ex
Fed Ex	10/8/16 -	Fed Ex		10/8/16 0905	

Custody Seals Intact: [ ] Yes [ ] No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 4.8°C IR S

10/21/2016

Login Sample Receipt Checklist

Client: MWH Americas Inc

Job Number: 400-128425-1

Login Number: 128425

List Source: TestAmerica Pensacola

List Number: 1

Creator: Perez, Trina M

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	4.8°C IR-5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (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 # 55282
GENERATOR El Paso
POINT OF ORIGIN Lat L40
TRANSPORTER Sierra
DATE 10.11.16 JOB # 14073-0021

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	Const soil	Q21		10		17	1447	Norman Hartley
					10				

RESULTS			LANDFARM EMPLOYEE	NOTES
<305	CHLORIDE TEST	1	Gary Robinson EL	all in Drums
	PAINT FILTER TEST	1	Certification of above receival & placement	

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

Generator Onsite Contact _____ Phone _____

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

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. 671851

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

DATE 10-11-16

DEL. TKT#.

GENERATOR: El Paso

BILL TO: El Paso

HAULING CO. Sierra Oil Field

DRIVER: Jose
(Print Full Name)

ORDERED BY: Jason Vaidez

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	SP8	Atlantic L 40	1	75	-		[illegible]	[illegible]
2								
3	1	Lindrith	1	75			75	
4								
5								

I, Jim Brown 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

san juan reproduction 168-6

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: 400-120550-1
Client Project/Site: Lat L 40

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

Attn: Steve Varsa

Authorized for release by:
5/3/2016 5:35:34 PM

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

Table of Contents

Client: MWH Americas Inc
Project/Site: Lat L 40

TestAmerica Job ID: 400-120550-1

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)

Case Narrative

Client: MWH Americas Inc
Project/Site: Lat L 40

TestAmerica Job ID: 400-120550-1

Job ID: 400-120550-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-120550-1

Comments
No additional comments.

Receipt
The samples were received on 4/20/2016 9:06 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.0º C.

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

Detection Summary

Client: MWH Americas Inc
Project/Site: Lat L 40

TestAmerica Job ID: 400-120550-1

Client Sample ID: MW-1 — Lab Sample ID: 400-120550-1

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene	100		5.0		ug/L	5		8021B	Total/NA
Ethylbenzene	300		5.0		ug/L	5		8021B	Total/NA
Xylenes, Total	1900		25		ug/L	5		8021B	Total/NA

Client Sample ID: TRIP BLANK — Lab Sample ID: 400-120550-2

No Detections.

This Detection Summary does not include radiochemical test results.

Sample Summary

Client: MWH Americas Inc
Project/Site: Lat L 40

TestAmerica Job ID: 400-120550-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-120550-1	MW-1	Water	04/19/16 13:00	04/20/16 09:06
400-120550-2	TRIP BLANK	Water	04/19/16 00:00	04/20/16 09:06

Client Sample Results

Client: MWH Americas Inc
Project/Site: Lat L 40

TestAmerica Job ID: 400-120550-1

Client Sample ID: MW-1
Date Collected: 04/19/16 13:00
Date Received: 04/20/16 09:06

Lab Sample ID: 400-120550-1
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**100**		5.0		ug/L			04/29/16 17:18	5
Ethylbenzene	**300**		5.0		ug/L			04/29/16 17:18	5
Toluene	<25		25		ug/L			04/29/16 17:18	5
Xylenes, Total	**1900**		25		ug/L			04/29/16 17:18	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*103*		*78 - 124*		*04/29/16 17:18*	*5*

Client: MWH Americas Inc
Project/Site: Lat L 40

TestAmerica Job ID: 400-120550-1

Client Sample ID: TRIP BLANK
Date Collected: 04/19/16 00:00
Date Received: 04/20/16 09:06

Lab Sample ID: 400-120550-2
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			04/29/16 08:08	1
Ethylbenzene	<1.0		1.0		ug/L			04/29/16 08:08	1
Toluene	<5.0		5.0		ug/L			04/29/16 08:08	1
Xylenes, Total	<5.0		5.0		ug/L			04/29/16 08:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*103*		*78 - 124*		*04/29/16 08:08*	*1*

QC Association Summary

Client: MWH Americas Inc
Project/Site: Lat L 40

TestAmerica Job ID: 400-120550-1

GC VOA

Analysis Batch: 303827

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-120432-A-6 MS	Matrix Spike	Total/NA	Water	8021B	
400-120432-A-6 MSD	Matrix Spike Duplicate	Total/NA	Water	8021B	
400-120550-2	TRIP BLANK	Total/NA	Water	8021B	
LCS 400-303827/1002	Lab Control Sample	Total/NA	Water	8021B	
MB 400-303827/3	Method Blank	Total/NA	Water	8021B	

Analysis Batch: 304034

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-120437-A-5 MS	Matrix Spike	Total/NA	Water	8021B	
400-120437-A-5 MSD	Matrix Spike Duplicate	Total/NA	Water	8021B	
400-120550-1	MW-1	Total/NA	Water	8021B	
LCS 400-304034/1001	Lab Control Sample	Total/NA	Water	8021B	
MB 400-304034/2	Method Blank	Total/NA	Water	8021B	

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 400-303827/3
Matrix: Water
Analysis Batch: 303827

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

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0		ug/L			04/28/16 12:18	1
Ethylbenzene	<1.0		1.0		ug/L			04/28/16 12:18	1
Toluene	<5.0		5.0		ug/L			04/28/16 12:18	1
Xylenes, Total	<5.0		5.0		ug/L			04/28/16 12:18	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*104*		*78 - 124*		*04/28/16 12:18*	*1*

Lab Sample ID: LCS 400-303827/1002
Matrix: Water
Analysis Batch: 303827

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	49.3		ug/L		99	85 - 115		
Toluene			50.0	49.2		ug/L		98	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: 400-120432-A-6 MS
Matrix: Water
Analysis Batch: 303827

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	5.8		50.0	52.7		ug/L		94	44 - 150		
Ethylbenzene	<1.0		50.0	47.4		ug/L		94	70 - 142		
Toluene	9.5		50.0	56.6		ug/L		94	69 - 136		
Xylenes, Total	8.5		150	150		ug/L		95	68 - 142		

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

Lab Sample ID: 400-120432-A-6 MSD
Matrix: Water
Analysis Batch: 303827

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	5.8		50.0	49.2		ug/L		87	44 - 150	7	16
Ethylbenzene	<1.0		50.0	44.7		ug/L		88	70 - 142	6	16
Toluene	9.5		50.0	53.3		ug/L		87	69 - 136	6	16
Xylenes, Total	8.5		150	144		ug/L		90	68 - 142	5	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 400-304034/2
Matrix: Water
Analysis Batch: 304034

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			04/29/16 11:06	1
Ethylbenzene	<1.0		1.0		ug/L			04/29/16 11:06	1
Toluene	<5.0		5.0		ug/L			04/29/16 11:06	1
Xylenes, Total	<5.0		5.0		ug/L			04/29/16 11:06	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*104*		*78 - 124*		*04/29/16 11:06*	*1*

Lab Sample ID: LCS 400-304034/1001
Matrix: Water
Analysis Batch: 304034

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	47.3		ug/L		95	85 - 115		
Ethylbenzene			50.0	46.2		ug/L		92	85 - 115		
Toluene			50.0	47.0		ug/L		94	85 - 115		
Xylenes, Total			150	141		ug/L		94	85 - 115		

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

Lab Sample ID: 400-120437-A-5 MS
Matrix: Water
Analysis Batch: 304034

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	44.5		ug/L		89	44 - 150		
Ethylbenzene	<1.0		50.0	43.7		ug/L		87	70 - 142		
Toluene	<5.0		50.0	44.4		ug/L		89	69 - 136		
Xylenes, Total	<5.0		150	134		ug/L		89	68 - 142		

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

Lab Sample ID: 400-120437-A-5 MSD
Matrix: Water
Analysis Batch: 304034

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	45.5		ug/L		91	44 - 150	2	16
Ethylbenzene	<1.0		50.0	45.6		ug/L		91	70 - 142	4	16
Toluene	<5.0		50.0	45.4		ug/L		91	69 - 136	2	16
Xylenes, Total	<5.0		150	137		ug/L		91	68 - 142	2	15

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

Lab Chronicle

Client: MWH Americas Inc
Project/Site: Lat L 40

TestAmerica Job ID: 400-120550-1

Client Sample ID: MW-1

Lab Sample ID: 400-120550-1

Date Collected: 04/19/16 13:00

Matrix: Water

Date Received: 04/20/16 09:06

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		5	5 mL	5 mL	304034	04/29/16 17:18	MKA	TAL PEN
	Instrument ID: ETHYL									

Client Sample ID: TRIP BLANK

Lab Sample ID: 400-120550-2

Date Collected: 04/19/16 00:00

Matrix: Water

Date Received: 04/20/16 09:06

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	303827	04/29/16 08:08	MKA	TAL PEN
	Instrument ID: ETHYL									

Laboratory References:

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

Certification Summary

Client: MWH Americas Inc
Project/Site: Lat L 40

TestAmerica Job ID: 400-120550-1

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: Lat L 40

TestAmerica Job ID: 400-120550-1

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

Protocol References:

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

Laboratory References:

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

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

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Clint Oberbroeckling	Lab PM: Edwards, Marty P	Carrier Tracking No(s):	COC No: 400-54333-21709.1
Client Contact: Ms. Sarah Gardner	Phone: 515 251 1005	E-Mail: marty.edwards@testamericainc.com		Page: Page 1 of 1
Company: MWH Americas Inc		Analysis Requested		Job #: 1050 8834

Address: 1560 Broadway Suite 1800	Due Date Requested: Per ArF	Preservation Codes:
City: Denver	TAT Requested (days): Per ArF # ERG-MWH-3305-CWO-01	A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)
State, Zip: CO, 80202		
Phone: 303-291-2239(Tel)	PO #: Purchase Order Requested	
Email: sarah.gardner@mwhglobal.com	WO #:	
Project Name: Lat L 40	Project #: 40005479	Other:
Site: Lat. L 40	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)	8021B - BTEX 8021	Special Instructions/Note:
			Preservation Code:		X	
MW-1	4/19/16	1300	G	Water	X	3
TRIP Blank				Water		

400-120550 COC

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

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

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	4/19/16	1700 MWH		4/20/16 0904	TA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 0.0°C IR-2

Login Sample Receipt Checklist

Client: MWH Americas Inc

Job Number: 400-120550-1

Login Number: 120550

List Number: 1

Creator: Benforado, Jessica L

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.0°C IR-2
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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

TestAmerica Job ID: 400-128857-1
Client Project/Site: Lat L 40

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

Attn: Ms. Sarah Gardner

Madonna Myers

Authorized for release by:
10/28/2016 9:45:16 AM
Madonna Myers, Project Manager II
(615)796-1870
madonna.myers@testamericainc.com

Designee for

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

Table of Contents

Definitions/Glossary

Client: MWH Americas Inc
Project/Site: Lat L 40

TestAmerica Job ID: 400-128857-1

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)

Case Narrative

Client: MWH Americas Inc
Project/Site: Lat L 40

TestAmerica Job ID: 400-128857-1

Job ID: 400-128857-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-128857-1

Comments
No additional comments.

Receipt
The samples were received on 10/18/2016 9:11 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.1° C.

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

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

Detection Summary

Client: MWH Americas Inc
Project/Site: Lat L 40

TestAmerica Job ID: 400-128857-1

Client Sample ID: MW-1 — Lab Sample ID: 400-128857-1

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene	180		10		ug/L	10		8021B	Total/NA
Ethylbenzene	410		10		ug/L	10		8021B	Total/NA
Xylenes, Total	2500		50		ug/L	10		8021B	Total/NA

Client Sample ID: MW-2 — Lab Sample ID: 400-128857-2

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene	180		2.0		ug/L	2		8021B	Total/NA
Ethylbenzene	17		2.0		ug/L	2		8021B	Total/NA
Toluene	430		10		ug/L	2		8021B	Total/NA
Xylenes, Total	150		10		ug/L	2		8021B	Total/NA

Client Sample ID: MW-3 — Lab Sample ID: 400-128857-3

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene	3.4		1.0		ug/L	1		8021B	Total/NA

Client Sample ID: MW-4 — Lab Sample ID: 400-128857-4

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene	8.7		1.0		ug/L	1		8021B	Total/NA
Toluene	15		5.0		ug/L	1		8021B	Total/NA
Xylenes, Total	6.1		5.0		ug/L	1		8021B	Total/NA

Client Sample ID: MW-5 — Lab Sample ID: 400-128857-5

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene	750		20		ug/L	20		8021B	Total/NA
Ethylbenzene	190		20		ug/L	20		8021B	Total/NA
Toluene	3000		100		ug/L	20		8021B	Total/NA
Xylenes, Total	1600		100		ug/L	20		8021B	Total/NA

Client Sample ID: TB — Lab Sample ID: 400-128857-6

No Detections.

This Detection Summary does not include radiochemical test results.

Sample Summary

Client: MWH Americas Inc
Project/Site: Lat L 40

TestAmerica Job ID: 400-128857-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-128857-1	MW-1	Water	10/16/16 08:16	10/18/16 09:11
400-128857-2	MW-2	Water	10/16/16 08:21	10/18/16 09:11
400-128857-3	MW-3	Water	10/16/16 08:25	10/18/16 09:11
400-128857-4	MW-4	Water	10/16/16 08:30	10/18/16 09:11
400-128857-5	MW-5	Water	10/16/16 08:37	10/18/16 09:11
400-128857-6	TB	Water	10/16/16 00:00	10/18/16 09:11

Client: MWH Americas Inc
Project/Site: Lat L 40

TestAmerica Job ID: 400-128857-1

Client Sample ID: MW-1
Date Collected: 10/16/16 08:16
Date Received: 10/18/16 09:11

Lab Sample ID: 400-128857-1
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**180**		10		ug/L			10/26/16 20:40	10
Ethylbenzene	**410**		10		ug/L			10/26/16 20:40	10
Toluene	<50		50		ug/L			10/26/16 20:40	10
Xylenes, Total	**2500**		50		ug/L			10/26/16 20:40	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*97*		*78 - 124*		*10/26/16 20:40*	*10*

Client: MWH Americas Inc
Project/Site: Lat L 40

TestAmerica Job ID: 400-128857-1

Client Sample ID: MW-2
Date Collected: 10/16/16 08:21
Date Received: 10/18/16 09:11

Lab Sample ID: 400-128857-2
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	180		2.0		ug/L			10/26/16 21:08	2
Ethylbenzene	17		2.0		ug/L			10/26/16 21:08	2
Toluene	430		10		ug/L			10/26/16 21:08	2
Xylenes, Total	150		10		ug/L			10/26/16 21:08	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*103*		*78 - 124*		*10/26/16 21:08*	*2*

Client: MWH Americas Inc
Project/Site: Lat L 40

TestAmerica Job ID: 400-128857-1

Client Sample ID: MW-3
Date Collected: 10/16/16 08:25
Date Received: 10/18/16 09:11

Lab Sample ID: 400-128857-3
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**3.4**		1.0		ug/L			10/26/16 10:50	1
Ethylbenzene	<1.0		1.0		ug/L			10/26/16 10:50	1
Toluene	<5.0		5.0		ug/L			10/26/16 10:50	1
Xylenes, Total	<5.0		5.0		ug/L			10/26/16 10:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*99*		*78 - 124*		*10/26/16 10:50*	*1*

Client: MWH Americas Inc
Project/Site: Lat L 40

TestAmerica Job ID: 400-128857-1

Client Sample ID: MW-4
Date Collected: 10/16/16 08:30
Date Received: 10/18/16 09:11

Lab Sample ID: 400-128857-4
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**8.7**		1.0		ug/L			10/26/16 11:17	1
Ethylbenzene	<1.0		1.0		ug/L			10/26/16 11:17	1
Toluene	**15**		5.0		ug/L			10/26/16 11:17	1
Xylenes, Total	**6.1**		5.0		ug/L			10/26/16 11:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*102*		*78 - 124*		*10/26/16 11:17*	*1*

Client: MWH Americas Inc
Project/Site: Lat L 40

TestAmerica Job ID: 400-128857-1

Client Sample ID: MW-5
Date Collected: 10/16/16 08:37
Date Received: 10/18/16 09:11

Lab Sample ID: 400-128857-5
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	750		20		ug/L			10/26/16 21:35	20
Ethylbenzene	190		20		ug/L			10/26/16 21:35	20
Toluene	3000		100		ug/L			10/26/16 21:35	20
Xylenes, Total	1600		100		ug/L			10/26/16 21:35	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*99*		*78 - 124*		*10/26/16 21:35*	*20*

Client: MWH Americas Inc
Project/Site: Lat L 40

TestAmerica Job ID: 400-128857-1

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

Lab Sample ID: 400-128857-6
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0		ug/L			10/26/16 12:12	1
Ethylbenzene	<1.0		1.0		ug/L			10/26/16 12:12	1
Toluene	<5.0		5.0		ug/L			10/26/16 12:12	1
Xylenes, Total	<5.0		5.0		ug/L			10/26/16 12:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*100*		*78 - 124*		*10/26/16 12:12*	*1*

QC Association Summary

Client: MWH Americas Inc
Project/Site: Lat L 40

TestAmerica Job ID: 400-128857-1

GC VOA

Analysis Batch: 328265

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-128857-3	MW-3	Total/NA	Water	8021B	
400-128857-4	MW-4	Total/NA	Water	8021B	
400-128857-6	TB	Total/NA	Water	8021B	
MB 400-328265/38	Method Blank	Total/NA	Water	8021B	
LCS 400-328265/1037	Lab Control Sample	Total/NA	Water	8021B	
400-128859-A-4 MS	Matrix Spike	Total/NA	Water	8021B	
400-128859-A-4 MSD	Matrix Spike Duplicate	Total/NA	Water	8021B	

Analysis Batch: 328444

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-128857-1	MW-1	Total/NA	Water	8021B	
400-128857-2	MW-2	Total/NA	Water	8021B	
400-128857-5	MW-5	Total/NA	Water	8021B	
MB 400-328444/4	Method Blank	Total/NA	Water	8021B	
LCS 400-328444/1003	Lab Control Sample	Total/NA	Water	8021B	
400-128919-B-2 MS	Matrix Spike	Total/NA	Water	8021B	
400-128919-B-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8021B	

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 400-328265/38
Matrix: Water
Analysis Batch: 328265

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

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0		ug/L			10/26/16 09:00	1
Ethylbenzene	<1.0		1.0		ug/L			10/26/16 09:00	1
Toluene	<5.0		5.0		ug/L			10/26/16 09:00	1
Xylenes, Total	<5.0		5.0		ug/L			10/26/16 09:00	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*99*		*78 - 124*		*10/26/16 09:00*	*1*

Lab Sample ID: LCS 400-328265/1037
Matrix: Water
Analysis Batch: 328265

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	48.3		ug/L		97	85 - 115		
Ethylbenzene			50.0	46.6		ug/L		93	85 - 115		
Toluene			50.0	47.8		ug/L		96	85 - 115		
Xylenes, Total			150	139		ug/L		93	85 - 115		

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

Lab Sample ID: 400-128859-A-4 MS
Matrix: Water
Analysis Batch: 328265

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	4700		5000	10300		ug/L		112	44 - 150		
Ethylbenzene	1000		5000	6450		ug/L		109	70 - 142		
Toluene	6700		5000	12000		ug/L		107	69 - 136		
Xylenes, Total	10000		15000	26200		ug/L		106	68 - 142		

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

Lab Sample ID: 400-128859-A-4 MSD
Matrix: Water
Analysis Batch: 328265

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	4700		5000	10100		ug/L		108	44 - 150	2	16
Ethylbenzene	1000		5000	6240		ug/L		105	70 - 142	3	16
Toluene	6700		5000	11700		ug/L		101	69 - 136	3	16
Xylenes, Total	10000		15000	25200		ug/L		100	68 - 142	4	15

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

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

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

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

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

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

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

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			50.0	48.0		ug/L		96	85 - 115		
Ethylbenzene			50.0	47.2		ug/L		94	85 - 115		
Toluene			50.0	48.0		ug/L		96	85 - 115		
Xylenes, Total			150	141		ug/L		94	85 - 115		

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

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

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene	<1.0		50.0	59.5		ug/L		119	44 - 150		
Ethylbenzene	<1.0		50.0	58.8		ug/L		118	70 - 142		
Toluene	<5.0		50.0	59.6		ug/L		119	69 - 136		
Xylenes, Total	<5.0		150	175		ug/L		117	68 - 142		

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

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

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<1.0		50.0	61.2		ug/L		122	44 - 150	3	16
Ethylbenzene	<1.0		50.0	60.0		ug/L		120	70 - 142	2	16
Toluene	<5.0		50.0	60.7		ug/L		121	69 - 136	2	16
Xylenes, Total	<5.0		150	179		ug/L		119	68 - 142	2	15

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

Lab Chronicle

Client: MWH Americas Inc
Project/Site: Lat L 40

TestAmerica Job ID: 400-128857-1

Client Sample ID: MW-1
Date Collected: 10/16/16 08:16
Date Received: 10/18/16 09:11

Lab Sample ID: 400-128857-1
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		10	5 mL	5 mL	328444	10/26/16 20:40	GRK	TAL PEN
	Instrument ID: CH_RITA									

Client Sample ID: MW-2
Date Collected: 10/16/16 08:21
Date Received: 10/18/16 09:11

Lab Sample ID: 400-128857-2
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		2	5 mL	5 mL	328444	10/26/16 21:08	GRK	TAL PEN
	Instrument ID: CH_RITA									

Client Sample ID: MW-3
Date Collected: 10/16/16 08:25
Date Received: 10/18/16 09:11

Lab Sample ID: 400-128857-3
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	328265	10/26/16 10:50	GRK	TAL PEN
	Instrument ID: CH_RITA									

Client Sample ID: MW-4
Date Collected: 10/16/16 08:30
Date Received: 10/18/16 09:11

Lab Sample ID: 400-128857-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	328265	10/26/16 11:17	GRK	TAL PEN
	Instrument ID: CH_RITA									

Client Sample ID: MW-5
Date Collected: 10/16/16 08:37
Date Received: 10/18/16 09:11

Lab Sample ID: 400-128857-5
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		20	5 mL	5 mL	328444	10/26/16 21:35	GRK	TAL PEN
	Instrument ID: CH_RITA									

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

Lab Sample ID: 400-128857-6
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	328265	10/26/16 12:12	GRK	TAL PEN
	Instrument ID: CH_RITA									

Lab Chronicle

Client: MWH Americas Inc
Project/Site: Lat L 40

TestAmerica Job ID: 400-128857-1

Laboratory References:

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

Certification Summary

Client: MWH Americas Inc
Project/Site: Lat L 40

TestAmerica Job ID: 400-128857-1

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: Lat L 40

TestAmerica Job ID: 400-128857-1

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: 80993

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	ADDRESS	PAGE	OF
EPC GP		1	1

PROJECT NAME	PROJECT NO.	CLIENT PROJECT MANAGER	PROJECT LOC. (STATE)
Lat L 40	105088834	Clint Oberbroeckling	NM

SAMPLED BY	~~CONTRACT / P.O. NO.~~ ARF#	CLIENT PHONE	CLIENT E-MAIL OR FAX
CWO	ERG-MW#-09-23-16-CWO-01	515-210-4299	

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:

REQUES

400-128857 COC

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

NO. OF COOLERS PER SHIPMENT:

LAB USE ONLY - SAMPLE NUMBER

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	PRESERVATIVE: No Preservative	HCL - Hydrochloric Acid	HNO3 - Nitric Acid	H2SO4 - Sulfuric Acid or H3PO4	NAOH - Sodium Hydroxide	CH3OH - Methanol	NAHSO4 - Sodium Bisulfate	NA2S2O3 - Sodium Thiosulfate	Other:	MATRIX: Drinking Water	Aqueous GW, SW, WW	Solid, Semisolid, Sediment	Air	NonAqueous (Oil, Solvent, etc.)	NUMBER OF CONTAINERS SUBMITTED: BTEX 8021B	SPECIAL INSTRUCTIONS/ CONDITIONS OF RECEIPT
10/16/16	816	MW-1		X									X				2	
	821	MW-2		X									X				2	
	825	MW-3		X									X				2	
	830	MW-4		X									X				2	
	837	MW-5		X									X				2	
↓	—	TB		X									X				2	

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
EMPTY CONTAINERS				10/19/16	0800			
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME
EMPTY CONTAINERS							10/19/16	0911

LABORATORY USE ONLY

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

TAL-8251 (1207)

681-Atlanta

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10/28/2016

Login Sample Receipt Checklist

Client: MWH Americas Inc

Job Number: 400-128857-1

Login Number: 128857
List Number: 1
Creator: Chambers, Cheryle A

List Source: TestAmerica Pensacola

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