2015 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. Two site investigations were conducted in 1995 and 2000. A monitoring well was installed in 1995 (MW-1) and additional monitoring wells were attempted to be installed in 2000. Boring advancements were refused at 25 to 37 feet below ground surface. Free product recovery has been periodically conducted at the Site. Currently, groundwater sampling is conducted on a semi-annual basis. Free product was not observed in 2015.

SUMMARY OF 2015 ACTIVITIES

On June 1 and November 23, 2015, water levels were gauged at MW-1. Groundwater samples were also collected using a HydraSleeve™ (HydraSleeve) no-purge passive groundwater sampling devices. The HydraSleeves were set during the previous sampling event approximately 0.5 foot above termination depth of the monitoring wells using a suspension tether and stainless steel weights to collect a sample from the screened interval. Groundwater samples were placed into laboratory-supplied sample containers, packed on ice, and shipped under standard chain-of-custody protocols to TestAmerica Laboratories, Inc. in Pensacola, Florida where they were analyzed for benzene, toluene, ethylbenzene, and total xylenes (BTEX). Additional field parameters are collected from the excess sample water recovered by the HydraSleeve. Excess sample water is poured into a YSI multi-parameter instrument sample cup and analyzed. Field parameters include dissolved oxygen, temperature, conductivity, pH, and oxidation reduction potential. Field parameters are not collected if free product is present. The unused sample water is combined in a waste container and taken to Basin Disposal, Inc. for disposal.

2015 ANNUAL GROUNDWATER REPORT

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

SUMMARY TABLES

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

SITE MAPS

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

ANALYTICAL LAB REPORTS

The groundwater analytical lab reports are included as Appendix A.

GROUNDWATER RESULTS

- The groundwater flow direction cannot be determined since monitoring well MW-1 is the only monitoring well on site (see Figures 2 and 4).

- Concentrations of benzene and total xylenes in groundwater collected from MW-1 exceeded the New Mexico Water Quality Control Commission (NMWQCC) standards (10 micrograms per liter [µg/L] and 620 µg/L, respectively) in 2015. Toluene and ethylbenzene were below their respective NMWQCC standards.

PLANNED FUTURE ACTIVITIES

Following the completion of a site access agreement with the National Forest Service, the installation of additional monitoring wells is planned at the Site to further assess the extent of dissolved-phase hydrocarbons and to define the groundwater gradient at the Site. Groundwater monitoring events will be conducted on a semi-annual basis. The 2016 Annual Report will be submitted in early 2017.

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TABLES

TABLE 1 – GROUNDWATER ANALYTICAL RESULTS

TABLE 2 – GROUNDWATER ELEVATION RESULTS

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

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	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
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

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
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

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

FIGURES

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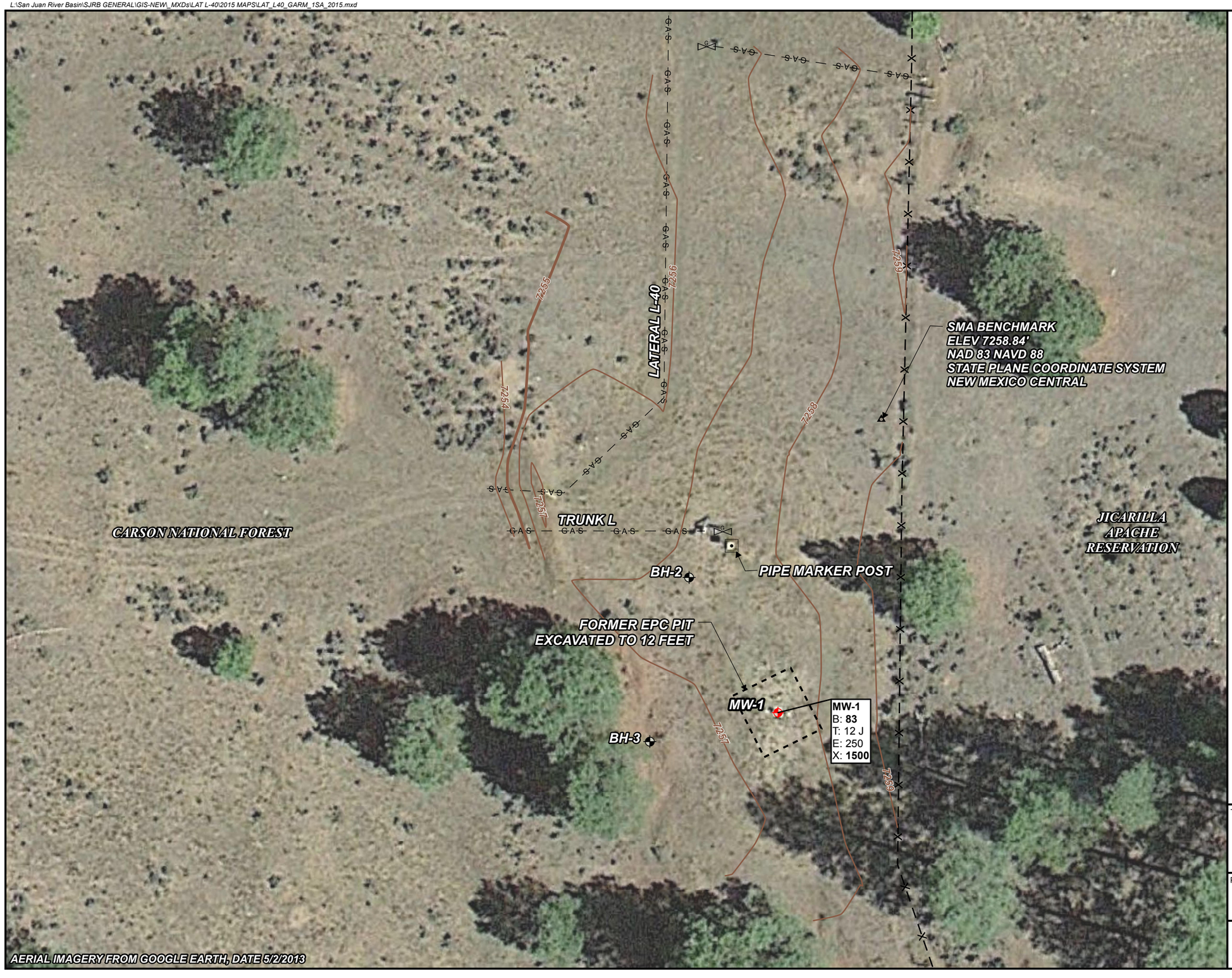

LEGEND:

- 7259 — APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
- GAS — NATURAL GAS LINE
- FENCE
- MONITORING WELL
- BOREHOLE
- 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
J = RESULT IS LESS THAN THE REPORTING LIMIT BUT GREATER THAN OR EQUAL TO THE METHOD DETECTION LIMT AND THE CONCENTRATION IS AN APPROXIMATE VALUE.

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

N

SCALE IN FEET
0 30 60

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
A	2/15/2016	CCL	CCL	SRV

TITLE:

GROUNDWATER ANALYTICAL RESULTS
JUNE 1, 2015

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

MWH

Figure No.: 1

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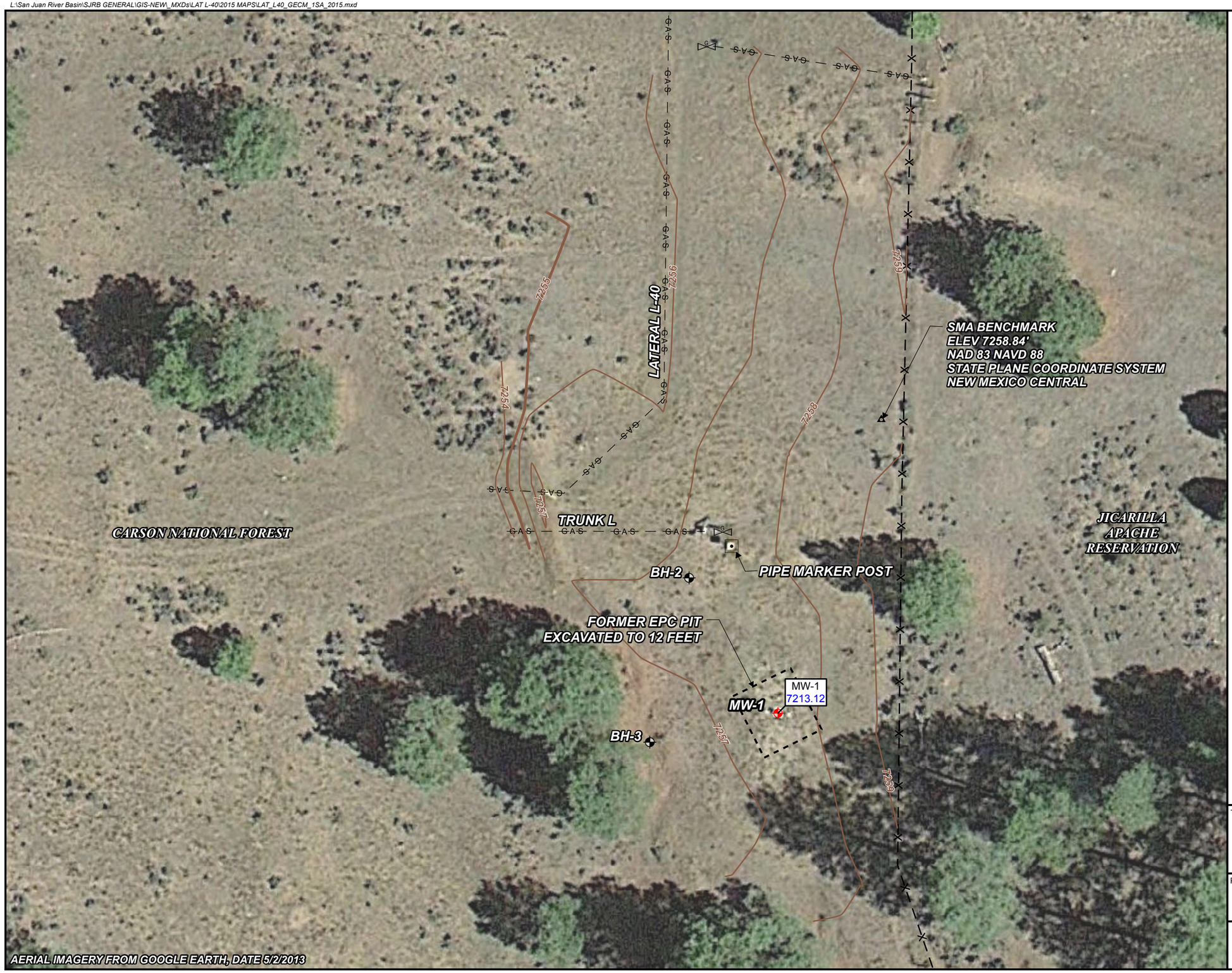

LEGEND:

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

NOTES:

7213.12 GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL).

N

SCALE IN FEET

0 30 60

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
A	2/15/2016	CCL	CCL	SRV

TITLE:

GROUNDWATER ELEVATION MAP
JUNE 1, 2015

PROJECT:

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

MWH

Figure No.: 2

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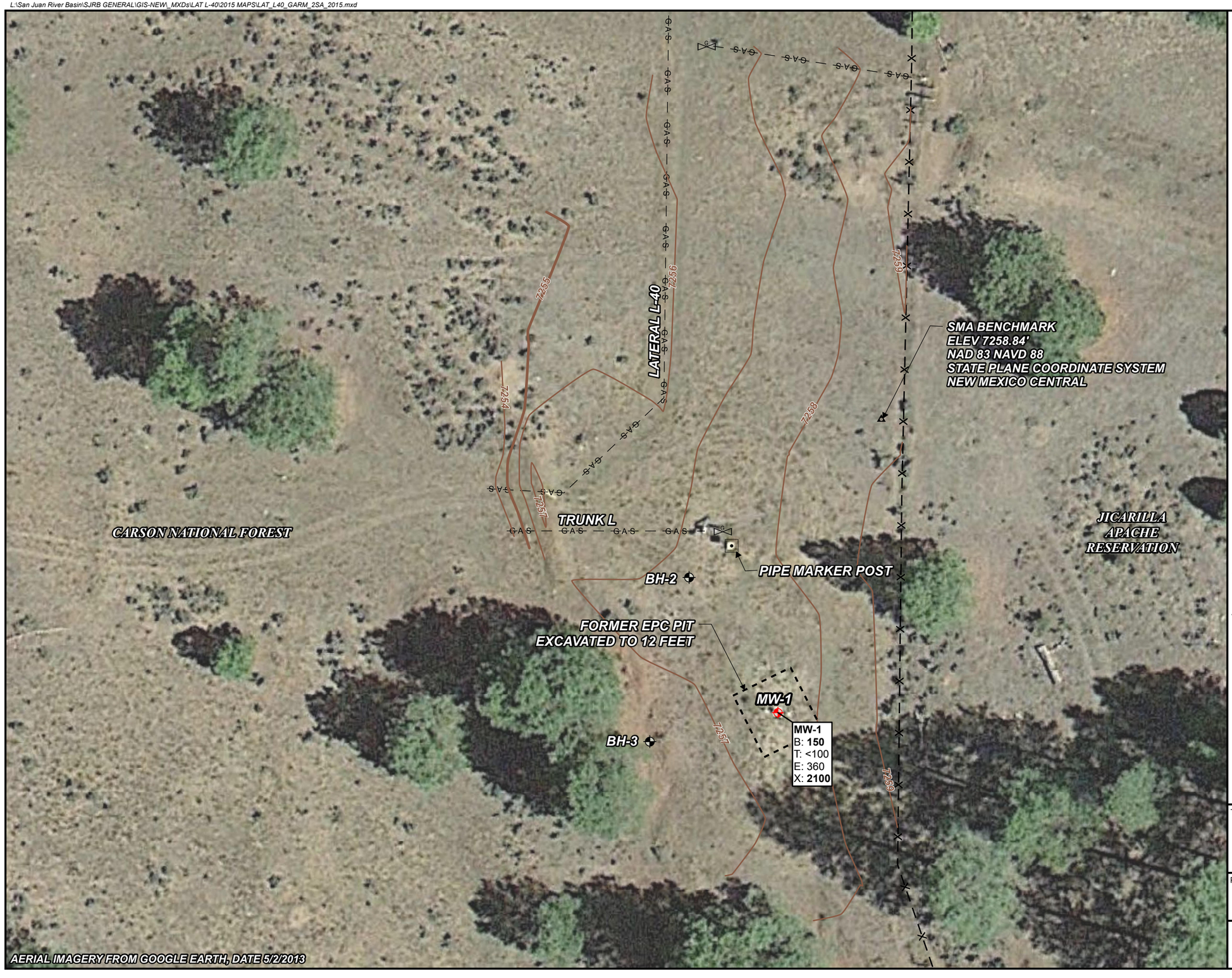

LEGEND:

- 7259 — APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
- GAS — NATURAL GAS LINE
- FENCE
- MONITORING WELL
- BOREHOLE
- 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
	2/15/2016	CCL	CCL	SRV

TITLE:

GROUNDWATER ANALYTICAL RESULTS
NOVEMBER 23, 2015

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

MWH

Figure No.: 3

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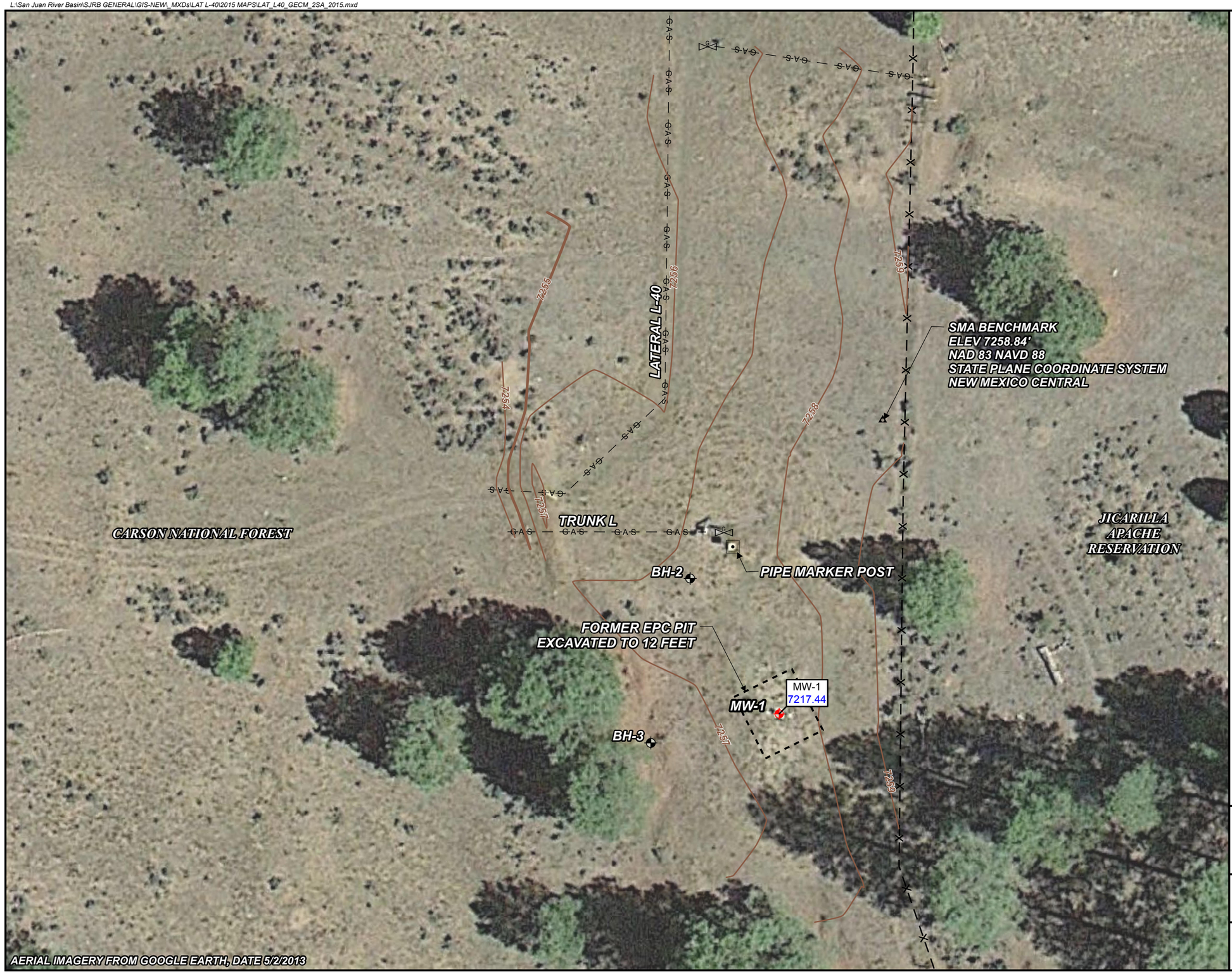

LEGEND:

- 7259 — APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
- GAS — NATURAL GAS LINE
- FENCE
- MONITORING WELL
- BOREHOLE
- 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
	2/15/2016	CCL	CCL	SRV

TITLE:

GROUNDWATER ELEVATION MAP
NOVEMBER 23, 2015

PROJECT:

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

MWH

Figure No.: 4

APPENDIX A

JUNE 1, 2015 GROUNDWATER SAMPLING ANALYTICAL REPORT
NOVEMBER 23, 2015 GROUNDWATER SAMPLING ANALYTICAL REPORT

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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

TestAmerica Job ID: 400-106460-1
Client Project/Site: NM-GW Pits, Lat L-40

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

Attn: Ms. Sarah Gardner

Authorized for release by:
6/16/2015 4:51:43 PM

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

Table of Contents

Definitions/Glossary

Client: MWH Americas Inc
Project/Site: NM-GW Pits, Lat L-40

TestAmerica Job ID: 400-106460-1

Qualifiers

GC VOA

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
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: 400-106460-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-106460-1

Comments
No additional comments.

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

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

Detection Summary

Client: MWH Americas Inc
Project/Site: NM-GW Pits, Lat L-40

TestAmerica Job ID: 400-106460-1

Client Sample ID: LAT L 40 MW-1 — Lab Sample ID: 400-106460-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	83		5.0	2.8	ug/L	5		8021B	Total/NA
Ethylbenzene	250		5.0	3.2	ug/L	5		8021B	Total/NA
Toluene	12	J	25	4.9	ug/L	5		8021B	Total/NA
Xylenes, Total	1500		25	8.5	ug/L	5		8021B	Total/NA

Client Sample ID: LAT L 40 TRIP BLANK — Lab Sample ID: 400-106460-2

No Detections.

This Detection Summary does not include radiochemical test results.

Sample Summary

Client: MWH Americas Inc
Project/Site: NM-GW Pits, Lat L-40

TestAmerica Job ID: 400-106460-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-106460-1	LAT L 40 MW-1	Water	06/01/15 09:45	06/02/15 09:37
400-106460-2	LAT L 40 TRIP BLANK	Water	06/01/15 09:40	06/02/15 09:37

Client Sample Results

Client: MWH Americas Inc
Project/Site: NM-GW Pits, Lat L-40

TestAmerica Job ID: 400-106460-1

Client Sample ID: LAT L 40 MW-1
Date Collected: 06/01/15 09:45
Date Received: 06/02/15 09:37

Lab Sample ID: 400-106460-1
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	83		5.0	2.8	ug/L			06/11/15 15:38	5
Ethylbenzene	250		5.0	3.2	ug/L			06/11/15 15:38	5
Toluene	12	J	25	4.9	ug/L			06/11/15 15:38	5
Xylenes, Total	1500		25	8.5	ug/L			06/11/15 15:38	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*97*		*78 - 124*		*06/11/15 15:38*	*5*

Client: MWH Americas Inc
Project/Site: NM-GW Pits, Lat L-40

TestAmerica Job ID: 400-106460-1

Client Sample ID: LAT L 40 TRIP BLANK
Date Collected: 06/01/15 09:40
Date Received: 06/02/15 09:37

Lab Sample ID: 400-106460-2
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0	0.56	ug/L			06/11/15 03:45	1
Ethylbenzene	<1.0		1.0	0.64	ug/L			06/11/15 03:45	1
Toluene	<5.0		5.0	0.98	ug/L			06/11/15 03:45	1
Xylenes, Total	<5.0		5.0	1.7	ug/L			06/11/15 03:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*98*		*78 - 124*		*06/11/15 03:45*	*1*

QC Association Summary

Client: MWH Americas Inc
Project/Site: NM-GW Pits, Lat L-40

TestAmerica Job ID: 400-106460-1

GC VOA

Analysis Batch: 260589

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-106455-A-3 MS	Matrix Spike	Total/NA	Water	8021B	
400-106455-A-3 MSD	Matrix Spike Duplicate	Total/NA	Water	8021B	
400-106460-2	LAT L 40 TRIP BLANK	Total/NA	Water	8021B	
LCS 400-260589/1003	Lab Control Sample	Total/NA	Water	8021B	
MB 400-260589/26	Method Blank	Total/NA	Water	8021B	

Analysis Batch: 260794

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-106457-B-2 MS	Matrix Spike	Total/NA	Water	8021B	
400-106457-B-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8021B	
400-106460-1	LAT L 40 MW-1	Total/NA	Water	8021B	
LCS 400-260794/1001	Lab Control Sample	Total/NA	Water	8021B	
MB 400-260794/2	Method Blank	Total/NA	Water	8021B	

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 400-260589/26
Matrix: Water
Analysis Batch: 260589

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0	0.56	ug/L			06/10/15 15:55	1
Ethylbenzene	<1.0		1.0	0.64	ug/L			06/10/15 15:55	1
Toluene	<5.0		5.0	0.98	ug/L			06/10/15 15:55	1
Xylenes, Total	<5.0		5.0	1.7	ug/L			06/10/15 15:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*97*		*78 - 124*		*06/10/15 15:55*	*1*

Lab Sample ID: LCS 400-260589/1003
Matrix: Water
Analysis Batch: 260589

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			50.0	51.4		ug/L		103	85 - 115		
Ethylbenzene			50.0	53.5		ug/L		107	85 - 115		
Toluene			50.0	52.1		ug/L		104	85 - 115		
Xylenes, Total			150	160		ug/L		107	85 - 115		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
a,a,a-Trifluorotoluene (pid)	*96*		*78 - 124*

Lab Sample ID: 400-106455-A-3 MS
Matrix: Water
Analysis Batch: 260589

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	46.8		ug/L		94	44 - 150		
Ethylbenzene	<1.0		50.0	48.0		ug/L		96	70 - 142		
Toluene	<5.0		50.0	47.2		ug/L		94	69 - 136		
Xylenes, Total	<5.0		150	144		ug/L		96	68 - 142		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
a,a,a-Trifluorotoluene (pid)	*95*		*78 - 124*

Lab Sample ID: 400-106455-A-3 MSD
Matrix: Water
Analysis Batch: 260589

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	42.8		ug/L		86	44 - 150	9	16
Ethylbenzene	<1.0		50.0	43.8		ug/L		88	70 - 142	9	16
Toluene	<5.0		50.0	43.3		ug/L		87	69 - 136	9	16
Xylenes, Total	<5.0		150	134		ug/L		89	68 - 142	7	15

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
a,a,a-Trifluorotoluene (pid)	*96*		*78 - 124*

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

Lab Sample ID: MB 400-260794/2
Matrix: Water
Analysis Batch: 260794

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0	0.56	ug/L			06/11/15 13:37	1
Ethylbenzene	<1.0		1.0	0.64	ug/L			06/11/15 13:37	1
Toluene	<5.0		5.0	0.98	ug/L			06/11/15 13:37	1
Xylenes, Total	<5.0		5.0	1.7	ug/L			06/11/15 13:37	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*98*		*78 - 124*		*06/11/15 13:37*	*1*

Lab Sample ID: LCS 400-260794/1001
Matrix: Water
Analysis Batch: 260794

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	50.0		ug/L		100	85 - 115		
Ethylbenzene			50.0	51.9		ug/L		104	85 - 115		
Toluene			50.0	50.5		ug/L		101	85 - 115		
Xylenes, Total			150	155		ug/L		103	85 - 115		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
a,a,a-Trifluorotoluene (pid)	*96*		*78 - 124*

Lab Sample ID: 400-106457-B-2 MS
Matrix: Water
Analysis Batch: 260794

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	3.4		50.0	47.5		ug/L		88	44 - 150		
Ethylbenzene	8.9		50.0	53.0		ug/L		88	70 - 142		
Toluene	2.0	J	50.0	46.6		ug/L		89	69 - 136		
Xylenes, Total	<5.0		150	142		ug/L		95	68 - 142		

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

Lab Sample ID: 400-106457-B-2 MSD
Matrix: Water
Analysis Batch: 260794

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	3.4		50.0	51.2		ug/L		96	44 - 150	7	16
Ethylbenzene	8.9		50.0	57.2		ug/L		97	70 - 142	8	16
Toluene	2.0	J	50.0	50.1		ug/L		96	69 - 136	7	16
Xylenes, Total	<5.0		150	152		ug/L		102	68 - 142	7	15

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

Lab Chronicle

Client: MWH Americas Inc
Project/Site: NM-GW Pits, Lat L-40

TestAmerica Job ID: 400-106460-1

Client Sample ID: LAT L 40 MW-1

Lab Sample ID: 400-106460-1

Date Collected: 06/01/15 09:45

Matrix: Water

Date Received: 06/02/15 09:37

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		5	5 mL	5 mL	260794	06/11/15 15:38	MKA	TAL PEN
	Instrument ID: ETHYL									

Client Sample ID: LAT L 40 TRIP BLANK

Lab Sample ID: 400-106460-2

Date Collected: 06/01/15 09:40

Matrix: Water

Date Received: 06/02/15 09:37

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	260589	06/11/15 03:45	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: NM-GW Pits, Lat L-40

TestAmerica Job ID: 400-106460-1

Laboratory: TestAmerica Pensacola

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

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

* Certification renewal pending - certification considered valid.

Method Summary

Client: MWH Americas Inc
Project/Site: NM-GW Pits, Lat L-40

TestAmerica Job ID: 400-106460-1

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

Protocol References:

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

Laboratory References:

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

400-106460

SERIAL NUMBER: 80217

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
MWH	1560 Broadway Suite 1800 Denver co 80202	1	1

PROJECT NAME	PROJECT NO.	CLIENT PROJECT MANAGER	PROJECT LOC. (STATE)
NM-PitGw sites Lat L-40	40005479	Steve Varsa	NM

SAMPLED BY	CONTRACT / P.O. NO.
Sarah Gardner/Chris Lee	

CLIENT PHONE	CLIENT E-MAIL OR FAX
303291-2239	sarah.gardner@mwhglobal.com

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

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

REQUESTED ANALYSIS

BTEX 8021B

400-106460 COC

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

NO. OF COOLERS PER SHIPMENT:

SPECIAL INSTRUCTIONS/ CONDITIONS OF RECEIPT

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
6/1/15	945	Lat L 40	MW-1		X									X				2
6/1/15	940	Lat L 40	TRIP BLANK		X									X				2

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

LABORATORY USE ONLY

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

TAL-8251 (1207)

Login Sample Receipt Checklist

Client: MWH Americas Inc

Job Number: 400-106460-1

Login Number: 106460
List Number: 1
Creator: Crawford, Lauren E

List Source: TestAmerica Pensacola

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

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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

TestAmerica Job ID: 400-114457-1
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:
12/14/2015 7:57:56 PM

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

Table of Contents

Definitions/Glossary

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

TestAmerica Job ID: 400-114457-1

Qualifiers

GC VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits
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.

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: 400-114457-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-114457-1

Comments
No additional comments.

Receipt
The samples were received on 11/28/2015 8:58 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.6º C.

GC VOA
Method 8021B: Surrogate recoveries for the matrix spike/matrix spike duplicate (MS/MSD) for batch 400-285674 were outside control limits Evidence of matrix interference is present; therefore, re-analysis was not performed.

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

Detection Summary

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

TestAmerica Job ID: 400-114457-1

Client Sample ID: TRIP BLANK — Lab Sample ID: 400-114457-1

No Detections.

Client Sample ID: MW-1 — Lab Sample ID: 400-114457-2

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene	150		20		ug/L	20		8021B	Total/NA
Ethylbenzene	360		20		ug/L	20		8021B	Total/NA
Xylenes, Total	2100		100		ug/L	20		8021B	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: 400-114457-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-114457-1	TRIP BLANK	Water	11/24/15 16:10	11/28/15 08:58
400-114457-2	MW-1	Water	11/24/15 16:00	11/28/15 08:58

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

TestAmerica Job ID: 400-114457-1

Client Sample ID: TRIP BLANK
Date Collected: 11/24/15 16:10
Date Received: 11/28/15 08:58

Lab Sample ID: 400-114457-1
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0		ug/L			12/02/15 22:04	1
Ethylbenzene	<1.0		1.0		ug/L			12/02/15 22:04	1
Toluene	<5.0		5.0		ug/L			12/02/15 22:04	1
Xylenes, Total	<5.0		5.0		ug/L			12/02/15 22:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*87*		*78 - 124*		*12/02/15 22:04*	*1*

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

TestAmerica Job ID: 400-114457-1

Client Sample ID: MW-1
Date Collected: 11/24/15 16:00
Date Received: 11/28/15 08:58

Lab Sample ID: 400-114457-2
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**150**		20		ug/L			12/03/15 17:45	20
Ethylbenzene	**360**		20		ug/L			12/03/15 17:45	20
Toluene	<100		100		ug/L			12/03/15 17:45	20
Xylenes, Total	**2100**		100		ug/L			12/03/15 17:45	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*88*		*78 - 124*		*12/03/15 17:45*	*20*

QC Association Summary

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

TestAmerica Job ID: 400-114457-1

GC VOA

Analysis Batch: 285674

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-114400-A-4 MS	Matrix Spike	Total/NA	Water	8021B	
400-114400-A-4 MSD	Matrix Spike Duplicate	Total/NA	Water	8021B	
400-114457-1	TRIP BLANK	Total/NA	Water	8021B	
LCS 400-285674/1002	Lab Control Sample	Total/NA	Water	8021B	
MB 400-285674/4	Method Blank	Total/NA	Water	8021B	

Analysis Batch: 285834

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-114400-A-3 MS	Matrix Spike	Total/NA	Water	8021B	
400-114400-A-3 MSD	Matrix Spike Duplicate	Total/NA	Water	8021B	
400-114457-2	MW-1	Total/NA	Water	8021B	
LCS 400-285834/1002	Lab Control Sample	Total/NA	Water	8021B	
MB 400-285834/4	Method Blank	Total/NA	Water	8021B	

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 400-285674/4
Matrix: Water
Analysis Batch: 285674

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			12/02/15 14:30	1
Ethylbenzene	<1.0		1.0		ug/L			12/02/15 14:30	1
Toluene	<5.0		5.0		ug/L			12/02/15 14:30	1
Xylenes, Total	<5.0		5.0		ug/L			12/02/15 14:30	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*87*		*78 - 124*		*12/02/15 14:30*	*1*

Lab Sample ID: LCS 400-285674/1002
Matrix: Water
Analysis Batch: 285674

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	52.8		ug/L		106	85 - 115		
Ethylbenzene			50.0	53.6		ug/L		107	85 - 115		
Toluene			50.0	50.7		ug/L		101	85 - 115		
Xylenes, Total			150	161		ug/L		107	85 - 115		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
a,a,a-Trifluorotoluene (pid)	*88*		*78 - 124*

Lab Sample ID: 400-114400-A-4 MS
Matrix: Water
Analysis Batch: 285674

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	490		100	587	4	ug/L		97	44 - 150		
Ethylbenzene	3.98		100	105		ug/L		101	70 - 142		
Toluene	5.03		100	101		ug/L		96	69 - 136		
Xylenes, Total	141		300	430		ug/L		96	68 - 142		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
a,a,a-Trifluorotoluene (pid)	*70*	*X*	*78 - 124*

Lab Sample ID: 400-114400-A-4 MSD
Matrix: Water
Analysis Batch: 285674

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	490		100	546	4	ug/L		56	44 - 150	7	16
Ethylbenzene	3.98		100	98.6		ug/L		95	70 - 142	6	16
Toluene	5.03		100	95.9		ug/L		91	69 - 136	5	16
Xylenes, Total	141		300	407		ug/L		89	68 - 142	6	15

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
a,a,a-Trifluorotoluene (pid)	*74*	*X*	*78 - 124*

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

Lab Sample ID: MB 400-285834/4
Matrix: Water
Analysis Batch: 285834

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			12/03/15 13:10	1
Ethylbenzene	<1.0		1.0		ug/L			12/03/15 13:10	1
Toluene	<5.0		5.0		ug/L			12/03/15 13:10	1
Xylenes, Total	<5.0		5.0		ug/L			12/03/15 13:10	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*83*		*78 - 124*		*12/03/15 13:10*	*1*

Lab Sample ID: LCS 400-285834/1002
Matrix: Water
Analysis Batch: 285834

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	55.8		ug/L		112	85 - 115		
Ethylbenzene			50.0	54.0		ug/L		108	85 - 115		
Toluene			50.0	51.5		ug/L		103	85 - 115		
Xylenes, Total			150	163		ug/L		109	85 - 115		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
a,a,a-Trifluorotoluene (pid)	*87*		*78 - 124*

Lab Sample ID: 400-114400-A-3 MS
Matrix: Water
Analysis Batch: 285834

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	55		50.0	107		ug/L		104	44 - 150		
Ethylbenzene	16		50.0	68.4		ug/L		105	70 - 142		
Toluene	62		50.0	110		ug/L		96	69 - 136		
Xylenes, Total	140		150	294		ug/L		101	68 - 142		

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

Lab Sample ID: 400-114400-A-3 MSD
Matrix: Water
Analysis Batch: 285834

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	55		50.0	101		ug/L		94	44 - 150	5	16
Ethylbenzene	16		50.0	68.9		ug/L		106	70 - 142	1	16
Toluene	62		50.0	110		ug/L		97	69 - 136	0	16
Xylenes, Total	140		150	295		ug/L		102	68 - 142	0	15

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

Lab Chronicle

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

TestAmerica Job ID: 400-114457-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 400-114457-1
Matrix: Water
Date Collected: 11/24/15 16:10
Date Received: 11/28/15 08:58

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	285674	12/02/15 22:04	GRK	TAL PEN
	Instrument ID: CH_JOAN									

Client Sample ID: MW-1

Lab Sample ID: 400-114457-2
Matrix: Water
Date Collected: 11/24/15 16:00
Date Received: 11/28/15 08:58

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	285834	12/03/15 17:45	GRK	TAL PEN
	Instrument ID: CH_JOAN									

Laboratory References:

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

Certification Summary

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

TestAmerica Job ID: 400-114457-1

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

* Certification renewal pending - certification considered valid.

Method Summary

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

TestAmerica Job ID: 400-114457-1

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: Sarah Gardner & Chris Lee	Lab PM: Edwards, Marty P	Carrier Tracking No(s):	COC No: 400-50158-21709.1
Client Contact: Ms. Sarah Gardner	Phone: 303 291 2239	E-Mail: marty.edwards@testamericainc.com		Page: Page 1 of 1
Company: MWH Americas Inc		**Analysis Requested**		Job #:
Address: 1560 Broadway Suite 1800	Due Date Requested:			
City: Denver	TAT Requested (days): Standard			
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			
Site: Lat L-40	SSOW#:			

400-114457 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 - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8021B - BTEX 8021			Total Number of containers	Special Instructions/Note:
			Preservation Code:								
~~MW-1~~	~~11/24/2015~~	~~1600~~	~~G~~	~~Water~~			~~X~~	~~X~~	~~X~~		SG
TRIP BLANK	11/24/2015	1610	G	Water	N	N	2			2	
MW-1	11/24/2015	1600	G	W	N	N	2			2	

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For ______ Months

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

Special Instructions/QC Requirements:

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

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Sarah Gardner	11/25/2015 1100	MWH	[signature]	11/25/15 11:30	TA
[signature]	11/27/15 15:10	TA	DCAlvus	11-28-15 0858	TA

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 2.6°C IR-5

Login Sample Receipt Checklist

Client: MWH Americas Inc

Job Number: 400-114457-1

Login Number: 114457
List Number: 1
Creator: Perez, Trina M

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	2.6°C IR-5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	