

2015 ANNUAL GROUNDWATER REPORT

K-27 Line Drip
NMOCD Case#: 3RP-204-0
Meter Code: LD072
T25N, R6W, Sec4, Unit E

SITE DETAILS

Site Location: Latitude: 36.430553 N, Longitude: -107.480164 W
Land Type: Federal
Operator: Enterprise

SITE BACKGROUND

- **Site Assessment:** 7/94
- **Excavation:** 8/94

Environmental Remediation activities at the K-27 Line Drip (Site) are being 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, LLC's (EPCGP's) 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 from 1995 through 2006. Monitoring wells were installed in 1995 (MW-1), 2000 (MW-2 through MW-3), and 2006 (MW-4). 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 May 28 and November 21, 2015, water levels were gauged at MW-1, MW-3, and MW-4. Groundwater samples were collected from each well that did not contain free product using HydraSleeve™ (HydraSleeve) no-purge passive groundwater sampling devices. The HydraSleeves were set during the previous sampling event approximately 0.5 foot above termination depth of the monitoring wells using a suspension tether and stainless steel weights to collect a sample from the screened interval. Groundwater samples were placed into laboratory-supplied sample containers, packed on ice, and shipped under standard chain-of-custody protocols to TestAmerica Laboratories, Inc. in Pensacola, Florida where they were analyzed for benzene, toluene, ethylbenzene, and total xylenes (BTEX). Additional field parameters are collected from the excess sample water recovered by the HydraSleeve. Excess sample water is poured into a YSI multi-parameter instrument sample cup and analyzed. Field parameters include dissolved oxygen, temperature, conductivity, pH, and oxidation reduction potential. Field parameters are not collected if free product is present. The unused sample water is combined in a waste container and taken to Basin Disposal, Inc. for disposal.

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SUMMARY TABLES

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

SITE MAPS

Groundwater analytical maps and groundwater elevation maps from each sampling event are depicted in Figures 1 through 4.

ANALYTICAL LAB REPORTS

The groundwater analytical lab reports are included as Appendix A.

GROUNDWATER RESULTS

- The groundwater flow direction has historically been to the northeast at the Site; however, since only two wells had groundwater measurements, no groundwater contour or flow direction is shown on the Groundwater Elevation figures (see Figures 2 and 4).
- Concentrations of benzene in groundwater collected from MW-1 exceeded the New Mexico Water Quality Control Commission (NMWQCC) standard (10 µg/L) for benzene in groundwater in 2015. Concentrations of benzene in monitoring well MW-4 were not detected.
- Groundwater samples collected from MW-1 and MW-4 were either below the NMWQCC standards for toluene, ethylbenzene, and total xylenes or not detected in 2015.
- BTEX constituents were not sampled at MW-2 and MW-3 due to well damaged, or insufficient groundwater during the 2015 sampling events.

PLANNED FUTURE ACTIVITIES

Additional monitoring wells are planned for future installation at the Site. The wells will be installed to further assess the extent of the dissolved-phase hydrocarbons and to confirm and/or further define the groundwater gradient at the Site. Monitoring wells will be installed around the known extent of dissolved-phase hydrocarbons in order to better delineate impacts from the former pit. Monitoring well MW-2 will be plugged and abandoned. Plugging activities will be completed in accordance with NMED, Ground Water Quality Bureau, Monitoring Well Construction and Abandonment Guidelines, dated March 2011. Groundwater monitoring events will be conducted on a semi-annual basis.

TABLE

TABLE 1 – GROUNDWATER ANALYTICAL RESULTS

TABLE 2 – GROUNDWATER ELEVATION RESULTS

TABLE 1 - GROUNDWATER ANALYTICAL RESULTS

K-27 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	11/04/96	996	2170	204	1520
MW-1	02/05/97	207	613	168	1010
MW-1	05/07/97	41.8	114	97.8	500
MW-1	08/08/97	1690	2980	298	1930
MW-1	11/07/97	533	1210	267	1720
MW-1	02/26/98	NS	NS	NS	NS
MW-1	02/24/99	NS	NS	NS	NS
MW-1	08/19/99	179	379	79.1	777
MW-1	11/10/99	39	95	56	390
MW-1	09/05/00	NS	NS	NS	NS
MW-1	10/06/00	NS	NS	NS	NS
MW-1	07/03/01	NS	NS	NS	NS
MW-1	09/04/01	NS	NS	NS	NS
MW-1	09/24/01	NS	NS	NS	NS
MW-1	04/01/02	NS	NS	NS	NS
MW-1	07/15/02	NS	NS	NS	NS
MW-1	10/08/02	NS	NS	NS	NS
MW-1	01/27/03	NS	NS	NS	NS
MW-1	04/26/03	NS	NS	NS	NS
MW-1	07/17/03	NS	NS	NS	NS
MW-1	10/13/03	NS	NS	NS	NS
MW-1	01/19/04	NS	NS	NS	NS
MW-1	04/20/04	NS	NS	NS	NS
MW-1	07/27/04	NS	NS	NS	NS
MW-1	10/20/04	NS	NS	NS	NS
MW-1	01/25/05	NS	NS	NS	NS
MW-1	04/14/05	NS	NS	NS	NS
MW-1	07/19/05	NS	NS	NS	NS
MW-1	10/12/05	NS	NS	NS	NS
MW-1	10/21/05	NS	NS	NS	NS

TABLE 1 - GROUNDWATER ANALYTICAL RESULTS

MW-1	01/23/06	NS	NS	NS	NS
MW-1	04/28/06	NS	NS	NS	NS
MW-1	07/26/06	NS	NS	NS	NS
MW-1	11/07/06	NS	NS	NS	NS
MW-1	01/17/07	NS	NS	NS	NS
MW-1	04/24/07	NS	NS	NS	NS
MW-1	07/31/07	NS	NS	NS	NS
MW-1	10/25/07	NS	NS	NS	NS
MW-1	01/25/08	NS	NS	NS	NS
MW-1	04/18/08	NS	NS	NS	NS
MW-1	07/23/08	NS	NS	NS	NS
MW-1	10/08/08	7.3	3.9	20.2	68.7
MW-1	10/13/08	NS	NS	NS	NS
MW-1	01/16/09	NS	NS	NS	NS
MW-1	04/06/09	NS	NS	NS	NS
MW-1	08/25/09	NS	NS	NS	NS
MW-1	11/03/09	355	69.3	45.8	259
MW-1	02/16/10	NS	NS	NS	NS
MW-1	05/24/10	NS	NS	NS	NS
MW-1	09/27/10	NS	NS	NS	NS
MW-1	11/08/10	138	29.4	43.9	183
MW-1	02/01/11	NS	NS	NS	NS
MW-1	05/02/11	NS	NS	NS	NS
MW-1	09/23/11	NS	NS	NS	NS
MW-1	11/10/11	71.8	57.5	5	62.2
MW-1	02/22/12	NS	NS	NS	NS
MW-1	05/15/12	NS	NS	NS	NS
MW-1	06/05/13	350	61	15	220
MW-1	09/10/13	150	32	7	83
MW-1	12/11/13	150	100	13	120
MW-1	04/04/14	220	51	20	150
MW-1	10/22/14	140	53	5.2	73
MW-1	05/28/15	110	75	13	97
MW-1	11/21/15	65	17	2.1	28

TABLE 1 - GROUNDWATER ANALYTICAL RESULTS

MW-2	08/31/00	5500	14000	670	5800
MW-2	09/05/00	NS	NS	NS	NS
MW-2	10/06/00	NS	NS	NS	NS
MW-2	07/03/01	NS	NS	NS	NS
MW-2	09/04/01	NS	NS	NS	NS
MW-2	09/24/01	NS	NS	NS	NS
MW-2	01/02/02	NS	NS	NS	NS
MW-2	04/01/02	NS	NS	NS	NS
MW-2	07/15/02	NS	NS	NS	NS
MW-2	10/08/02	NS	NS	NS	NS
MW-2	01/27/03	NS	NS	NS	NS
MW-2	04/26/03	NS	NS	NS	NS
MW-2	07/17/03	NS	NS	NS	NS
MW-2	10/13/03	NS	NS	NS	NS
MW-2	01/19/04	NS	NS	NS	NS
MW-2	04/20/04	NS	NS	NS	NS
MW-2	07/27/04	NS	NS	NS	NS
MW-2	10/20/04	NS	NS	NS	NS
MW-2	01/25/05	NS	NS	NS	NS
MW-2	04/14/05	NS	NS	NS	NS
MW-2	07/19/05	NS	NS	NS	NS
MW-2	10/21/05	NS	NS	NS	NS
MW-2	01/23/06	NS	NS	NS	NS
MW-2	04/28/06	NS	NS	NS	NS
MW-2	07/26/06	NS	NS	NS	NS
MW-2	11/07/06	NS	NS	NS	NS
MW-2	01/17/07	NS	NS	NS	NS
MW-2	04/24/07	NS	NS	NS	NS
MW-2	07/31/07	NS	NS	NS	NS
MW-2	10/25/07	NS	NS	NS	NS
MW-2	01/25/08	NS	NS	NS	NS
MW-2	04/18/08	NS	NS	NS	NS
MW-2	07/23/08	NS	NS	NS	NS
MW-2	10/13/08	NS	NS	NS	NS
MW-2	01/16/09	NS	NS	NS	NS
MW-2	04/06/09	NS	NS	NS	NS
MW-2	08/25/09	NS	NS	NS	NS
MW-2	11/03/09	223	1070	532	2590
MW-2	02/16/10	NS	NS	NS	NS
MW-2	05/24/10	NS	NS	NS	NS
MW-2	09/27/10	NS	NS	NS	NS
MW-2	11/08/10	152	547	471	2190
MW-2	02/01/11	NS	NS	NS	NS
MW-2	05/02/11	NS	NS	NS	NS
MW-2	09/23/11	NS	NS	NS	NS
MW-2	11/10/11	31.9	101	156	446
MW-2	02/22/12	NS	NS	NS	NS
MW-2	05/15/12	NS	NS	NS	NS
MW-2	06/05/13	NS	NS	NS	NS
MW-2	09/10/13	NS	NS	NS	NS
MW-2	12/11/13	NS	NS	NS	NS
MW-2	04/04/14	NS	NS	NS	NS

TABLE 1 - GROUNDWATER ANALYTICAL RESULTS

MW-3	09/05/00	<0.5	<0.5	<0.5	<0.5
MW-3	07/03/01	<0.5	<0.5	<0.5	<0.5
MW-3	09/04/01	NS	NS	NS	NS
MW-3	09/24/01	NS	NS	NS	NS
MW-3	04/01/02	NS	NS	NS	NS
MW-3	07/15/02	NS	NS	NS	NS
MW-3	10/08/02	NS	NS	NS	NS
MW-3	07/17/03	NS	NS	NS	NS
MW-3	10/13/03	NS	NS	NS	NS
MW-3	01/19/04	NS	NS	NS	NS
MW-3	04/20/04	NS	NS	NS	NS
MW-3	07/27/04	NS	NS	NS	NS
MW-3	10/20/04	NS	NS	NS	NS
MW-3	01/25/05	NS	NS	NS	NS
MW-3	04/14/05	NS	NS	NS	NS
MW-3	07/19/05	NS	NS	NS	NS
MW-3	10/21/05	<1	<1	<1	<2
MW-3	01/23/06	NS	NS	NS	NS
MW-3	04/28/06	NS	NS	NS	NS
MW-3	07/26/06	NS	NS	NS	NS
MW-3	11/07/06	1.1	1.6	0.42 J	2.3
MW-3	01/17/07	NS	NS	NS	NS
MW-3	04/24/07	NS	NS	NS	NS
MW-3	07/31/07	NS	NS	NS	NS
MW-3	10/25/07	<1	<1	<1	<2
MW-3	01/25/08	NS	NS	NS	NS
MW-3	04/18/08	NS	NS	NS	NS
MW-3	07/23/08	NS	NS	NS	NS
MW-3	10/08/08	<2	<2	<2	<6
MW-3	10/13/08	NS	NS	NS	NS
MW-3	01/16/09	NS	NS	NS	NS
MW-3	04/06/09	NS	NS	NS	NS
MW-3	08/25/09	NS	NS	NS	NS
MW-3	11/03/09	<1	<1	<1	<2
MW-3	02/16/10	NS	NS	NS	NS
MW-3	05/24/10	NS	NS	NS	NS
MW-3	09/27/10	NS	NS	NS	NS
MW-3	11/08/10	<2	<2	<2	<6
MW-3	02/01/11	NS	NS	NS	NS
MW-3	05/02/11	NS	NS	NS	NS
MW-3	09/23/11	NS	NS	NS	NS
MW-3	11/10/11	<1	<1	<1	<3
MW-3	02/22/12	NS	NS	NS	NS
MW-3	05/15/12	NS	NS	NS	NS
MW-3	06/05/13	<0.14	<0.30	<0.20	<0.23
MW-3	09/10/13	NS	NS	NS	NS
MW-3	12/11/13	NS	NS	NS	NS
MW-3	04/04/14	NS	NS	NS	NS
MW-3	10/22/14	NS	NS	NS	NS
MW-3	05/28/15	NS	NS	NS	NS
MW-3	11/21/15	NS	NS	NS	NS

TABLE 1 - GROUNDWATER ANALYTICAL RESULTS

MW-4	11/08/06	<1	<1	<1	<2
MW-4	01/17/07	NS	NS	NS	NS
MW-4	04/24/07	NS	NS	NS	NS
MW-4	07/31/07	NS	NS	NS	NS
MW-4	10/25/07	<1	<1	<1	<2
MW-4	01/25/08	NS	NS	NS	NS
MW-4	04/18/08	NS	NS	NS	NS
MW-4	07/23/08	NS	NS	NS	NS
MW-4	10/08/08	<2	<2	<2	<6
MW-4	10/13/08	NS	NS	NS	NS
MW-4	01/16/09	NS	NS	NS	NS
MW-4	04/06/09	NS	NS	NS	NS
MW-4	08/25/09	NS	NS	NS	NS
MW-4	11/03/09	<1	<1	<1	<2
MW-4	02/16/10	NS	NS	NS	NS
MW-4	05/24/10	NS	NS	NS	NS
MW-4	09/27/10	NS	NS	NS	NS
MW-4	11/08/10	<2	<2	<2	<6
MW-4	02/01/11	NS	NS	NS	NS
MW-4	05/02/11	NS	NS	NS	NS
MW-4	09/23/11	NS	NS	NS	NS
MW-4	11/10/11	<1	<1	<1	<3
MW-4	02/22/12	NS	NS	NS	NS
MW-4	05/15/12	NS	NS	NS	NS
MW-4	06/05/13	<0.14	<0.30	<0.20	<0.23
MW-4	09/10/13	<0.14	<0.30	<0.20	<0.23
MW-4	12/11/13	<0.20	<0.38	<0.20	<0.65
MW-4	04/14/14	<0.20	<0.38	<0.20	<0.65
MW-4	10/22/14	<0.38	<0.70	<0.50	<1.6
MW-4	05/28/15	<1.0	<5.0	<1.0	<5.0
MW-4	11/21/15	<1.0	<1.0	<1.0	<3.0

Notes:

"µg/L" = micrograms per liter

Results highlighted yellow exceed their respective New Mexico Water Quality Control Commission (NMWQCC) standards.

"J" = Result is less than the reporting limit but greater than or equal to the method detection limit and the result is an approximate value.

"<" = analyte was not detected at the indicated reporting limit (some historic data were reported at the detection limit).

"NS" = Monitoring well not sampled

TABLE 2 - GROUNDWATER ELEVATION RESULTS

K-27 Line Drip						
Location	Date	TOC	Depth to Water (ft.)	Depth to LNAPL (ft.)	LNAPL Thickness (ft.)	GW Elevation (ft.)
MW-1	11/04/96	6261.93	37.44	NR		6224.49
MW-1	02/05/97	6261.93	36.89	NR		6225.04
MW-1	05/07/97	6261.93	36.73	NR		6225.20
MW-1	08/08/97	6261.93	37.61	NR		6224.32
MW-1	11/07/97	6261.93	37.33	37.21	0.12	6224.69
MW-1	02/26/98	6261.93	36.89	36.71	0.18	6225.18
MW-1	02/24/99	6261.93	36.39	36.27	0.12	6225.63
MW-1	08/19/99	6261.93	36.48	NR		6225.45
MW-1	11/10/99	6261.93	36.17	36.10	0.07	6225.81
MW-1	09/05/00	6261.93	37.22	NR		6224.71
MW-1	10/06/00	6261.93	37.42	NR		6224.51
MW-1	07/03/01	6261.93	36.64	36.49	0.15	6225.40
MW-1	09/04/01	6261.93	37.43	37.39	0.04	6224.53
MW-1	09/24/01	6261.93	37.45	37.40	0.05	6224.52
MW-1	04/01/02	6261.93	37.01	NR		6224.92
MW-1	07/15/02	6261.93	38.02	37.85	0.17	6224.04
MW-1	10/08/02	6261.93	38.01	38.00	0.01	6223.93
MW-1	01/27/03	6261.93	37.42	ND		6224.51
MW-1	04/26/03	6261.93	37.15	ND		6224.78
MW-1	07/17/03	6261.93	38.36	38.18	0.18	6223.71
MW-1	10/13/03	6261.93	38.29	ND		6223.64
MW-1	01/19/04	6261.93	37.69	37.68	0.01	6224.25
MW-1	04/20/04	6261.93	37.29	ND		6224.64
MW-1	07/27/04	6261.93	38.45	38.28	0.17	6223.61
MW-1	10/20/04	6261.93	38.71	38.68	0.03	6223.24
MW-1	01/25/05	6261.93	38.18	38.16	0.02	6223.77
MW-1	04/14/05	6261.93	37.84	37.75	0.09	6224.16
MW-1	07/19/05	6261.93	38.84	ND		6223.09
MW-1	10/12/05	6261.93	38.46	ND		6223.47
MW-1	10/21/05	6261.93	38.46	ND		6223.47
MW-1	01/23/06	6261.93	37.89	ND		6224.04
MW-1	04/28/06	6261.93	37.57	ND		6224.36

TABLE 2 - GROUNDWATER ELEVATION RESULTS

K-27 Line Drip						
Location	Date	TOC	Depth to Water (ft.)	Depth to LNAPL (ft.)	LNAPL Thickness (ft.)	GW Elevation (ft.)
MW-1	07/26/06	6261.93	38.61	ND		6223.32
MW-1	11/07/06	6261.93	36.37	36.31	0.06	6225.61
MW-1	01/17/07	6261.93	35.91	ND		6226.02
MW-1	04/24/07	6261.93	35.53	ND		6226.40
MW-1	07/31/07	6261.93	36.57	ND		6225.36
MW-1	10/25/07	6261.93	36.04	ND		6225.89
MW-1	01/25/08	6261.93	35.90	ND		6226.03
MW-1	04/18/08	6261.93	35.47	ND		6226.46
MW-1	07/23/08	6261.93	36.43	ND		6225.50
MW-1	10/08/08	6261.93	36.95	ND		6224.98
MW-1	10/13/08	6261.93	36.93	ND		6225.00
MW-1	01/16/09	6261.93	36.77	ND		6225.16
MW-1	04/06/09	6261.93	36.30	ND		6225.63
MW-1	08/25/09	6261.93	37.53	ND		6224.40
MW-1	11/03/09	6261.93	37.58	ND		6224.35
MW-1	02/16/10	6261.93	37.32	ND		6224.61
MW-1	05/24/10	6261.93	36.97	ND		6224.96
MW-1	09/27/10	6261.93	37.98	ND		6223.95
MW-1	11/08/10	6261.93	37.70	ND		6224.23
MW-1	02/01/11	6261.93	37.35	ND		6224.58
MW-1	05/02/11	6261.93	37.26	ND		6224.67
MW-1	09/23/11	6261.93	38.45	ND		6223.48
MW-1	11/10/11	6261.93	38.30	ND		6223.63
MW-1	02/22/12	6261.93	37.82	ND		6224.11
MW-1	05/15/12	6261.93	37.81	ND		6224.12
MW-1	06/05/13	6261.93	38.16	ND		6223.77
MW-1	09/10/13	6261.93	38.85	ND		6223.08
MW-1	12/11/13	6261.93	38.05	ND		6223.88
MW-1	04/04/14	6261.93	37.54	ND		6224.39
MW-1	10/22/14	6261.93	38.36	ND		6223.57
MW-1	05/28/15	6261.93	37.30	ND		6224.63
MW-1	11/21/15	6261.93	37.72	ND		6224.21

TABLE 2 - GROUNDWATER ELEVATION RESULTS

K-27 Line Drip						
Location	Date	TOC	Depth to Water (ft.)	Depth to LNAPL (ft.)	LNAPL Thickness (ft.)	GW Elevation (ft.)
MW-2	08/31/00	6261.39	35.81	NR		6225.58
MW-2	09/05/00	6261.39	37.28	36.11		6224.99
MW-2	10/06/00	6261.39	37.31	36.04		6225.03
MW-2	07/03/01	6261.39	37.37	36.12		6224.96
MW-2	09/04/01	6261.39	36.52	36.25		6225.07
MW-2	09/24/01	6261.39	36.46	36.27		6225.07
MW-2	01/02/02	6261.39	36.97	35.87		6225.24
MW-2	04/01/02	6261.39	36.61	35.67		6225.48
MW-2	07/15/02	6261.39	38.00	NR		6223.39
MW-2	10/08/02	6261.39	37.01	36.94		6224.43
MW-2	01/27/03	6261.39	36.47	36.31		6225.04
MW-2	04/26/03	6261.39	36.88	35.85		6225.28
MW-2	07/17/03	6261.39	38.20	36.75		6224.28
MW-2	10/13/03	6261.39	37.64	37.07		6224.18
MW-2	01/19/04	6261.39	36.72	36.51		6224.83
MW-2	04/20/04	6261.39	36.93	35.91		6225.22
MW-2	07/27/04	6261.39	38.30	36.88		6224.15
MW-2	10/20/04	6261.39	38.23	37.37		6223.80
MW-2	01/25/05	6261.39	42.87	36.77		6223.09
MW-2	04/14/05	6261.39	36.55	36.55		6224.84
MW-2	07/19/05	6261.39	38.16	37.55		6223.69
MW-2	10/21/05	6261.39	38.31	37.06		6224.02
MW-2	01/23/06	6261.39	37.31	36.69		6224.54
MW-2	04/28/06	6261.39	37.01	36.33		6224.89
MW-2	07/26/06	6261.39	38.37	37.42		6223.73
MW-2	11/07/06	6261.39	35.28	35.21		6226.16

TABLE 2 - GROUNDWATER ELEVATION RESULTS

K-27 Line Drip						
Location	Date	TOC	Depth to Water (ft.)	Depth to LNAPL (ft.)	LNAPL Thickness (ft.)	GW Elevation (ft.)
MW-2	01/17/07	6261.39	35.35	ND		6226.04
MW-2	04/24/07	6261.39	35.08	ND		6226.31
MW-2	07/31/07	6261.39	36.03	36.01		6225.37
MW-2	10/25/07	6261.39	35.53	ND		6225.86
MW-2	01/25/08	6261.39	35.37	35.34		6226.04
MW-2	04/18/08	6261.39	34.90	ND		6226.49
MW-2	07/23/08	6261.39	35.95	ND		6225.44
MW-2	10/13/08	6261.39	36.39	ND		6225.00
MW-2	01/16/09	6261.39	36.39	36.14		6225.19
MW-2	04/06/09	6261.39	35.98	35.94		6225.44
MW-2	08/25/09	6261.39	37.03	36.97		6224.40
MW-2	11/03/09	6261.39	37.00	36.96		6224.42
MW-2	02/16/10	6261.39	36.96	ND		6224.43
MW-2	05/24/10	6261.39	36.55	36.48		6224.89
MW-2	09/27/10	6261.39	37.58	37.57		6223.82
MW-2	11/08/10	6261.39	37.72	ND		6223.67
MW-2	02/01/11	6261.39	36.92	ND		6224.47
MW-2	05/02/11	6261.39	36.71	ND		6224.68
MW-2	09/23/11	6261.39	38.01	ND		6223.38
MW-2	11/10/11	6261.39	37.70	37.69		6223.70
MW-2	02/22/12	6261.39	37.54	37.39		6223.96
MW-2	05/15/12	6261.39	37.48	37.37		6223.99
MW-2	06/05/13	6261.39	NA	ND		NA
MW-2	09/10/13	6261.39	NA	ND		NA
MW-2	12/11/13	6261.39	NA	ND		NA
MW-2	04/04/14	6261.39	NA	ND		NA

TABLE 2 - GROUNDWATER ELEVATION RESULTS

K-27 Line Drip						
Location	Date	TOC	Depth to Water (ft.)	Depth to LNAPL (ft.)	LNAPL Thickness (ft.)	GW Elevation (ft.)
MW-3	09/05/00	6261.71	37.40	NR		6224.31
MW-3	07/03/01	6261.71	37.69	NR		6224.02
MW-3	09/04/01	6261.71	37.50	NR		6224.21
MW-3	09/24/01	6261.71	37.51	NR		6224.20
MW-3	04/01/02	6261.71	37.08	NR		6224.63
MW-3	07/15/02	6261.71	37.13	NR		6224.58
MW-3	10/08/02	6261.71	38.09	NR		6223.63
MW-3	07/17/03	6261.71	38.28	ND		6223.43
MW-3	10/13/03	6261.71	38.34	ND		6223.37
MW-3	01/19/04	6261.71	37.69	ND		6224.02
MW-3	04/20/04	6261.71	37.26	ND		6224.45
MW-3	07/27/04	6261.71	38.36	ND		6223.35
MW-3	10/20/04	6261.71	38.72	ND		6222.99
MW-3	01/25/05	6261.71	38.13	ND		6223.58
MW-3	04/14/05	6261.71	37.74	ND		6223.97
MW-3	07/19/05	6261.71	38.74	ND		6222.97
MW-3	10/21/05	6261.71	38.48	ND		6223.23
MW-3	01/23/06	6261.71	37.89	ND		6223.82
MW-3	04/28/06	6261.71	37.61	ND		6224.10
MW-3	07/26/06	6261.71	38.34	ND		6223.37
MW-3	11/07/06	6261.71	36.50	ND		6225.21
MW-3	01/17/07	6261.71	35.98	ND		6225.73
MW-3	04/24/07	6261.71	35.64	ND		6226.07
MW-3	07/31/07	6261.71	36.59	ND		6225.12
MW-3	10/25/07	6261.71	36.20	ND		6225.51
MW-3	01/25/08	6261.71	36.00	ND		6225.71

TABLE 2 - GROUNDWATER ELEVATION RESULTS

K-27 Line Drip						
Location	Date	TOC	Depth to Water (ft.)	Depth to LNAPL (ft.)	LNAPL Thickness (ft.)	GW Elevation (ft.)
MW-3	04/18/08	6261.71	35.56	ND		6226.15
MW-3	07/23/08	6261.71	36.60	ND		6225.11
MW-3	10/08/08	6261.71	37.09	ND		6224.62
MW-3	10/13/08	6261.71	37.09	ND		6224.62
MW-3	01/16/09	6261.71	36.83	ND		6224.88
MW-3	04/06/09	6261.71	36.43	ND		6225.28
MW-3	08/25/09	6261.71	37.62	ND		6224.09
MW-3	11/03/09	6261.71	37.67	ND		6224.04
MW-3	02/16/10	6261.71	37.16	ND		6224.55
MW-3	05/24/10	6261.71	37.02	ND		6224.69
MW-3	09/27/10	6261.71	38.07	ND		6223.64
MW-3	11/08/10	6261.71	37.82	ND		6223.89
MW-3	02/01/11	6261.71	37.39	ND		6224.32
MW-3	05/02/11	6261.71	37.28	ND		6224.43
MW-3	09/23/11	6261.71	38.15	ND		6223.56
MW-3	11/10/11	6261.71	38.13	ND		6223.58
MW-3	02/22/12	6261.71	37.85	ND		6223.86
MW-3	05/15/12	6261.71	37.87	ND		6223.84
MW-3	06/05/13	6261.71	38.26	ND		6223.45
MW-3	09/10/13	6261.71	38.95	ND		6222.76
MW-3	12/11/13	6261.71	DRY	ND		DRY
MW-3	04/04/14	6261.71	DRY	ND		DRY
MW-3	10/22/14	6261.71	DRY	ND		DRY
MW-3	05/28/15	6261.71	DRY	ND		DRY
MW-3	11/21/15	6261.71	DRY	ND		DRY

TABLE 2 - GROUNDWATER ELEVATION RESULTS

K-27 Line Drip						
Location	Date	TOC	Depth to Water (ft.)	Depth to LNAPL (ft.)	LNAPL Thickness (ft.)	GW Elevation (ft.)
MW-4	11/08/06	6258.51	32.95	ND		6225.56
MW-4	01/17/07	6258.51	32.63	ND		6225.88
MW-4	04/24/07	6258.51	32.30	ND		6226.21
MW-4	07/31/07	6258.51	33.33	ND		6225.18
MW-4	10/25/07	6258.51	32.90	ND		6225.61
MW-4	01/25/08	6258.51	32.64	ND		6225.87
MW-4	04/18/08	6258.51	32.20	ND		6226.31
MW-4	07/23/08	6258.51	33.30	ND		6225.21
MW-4	10/08/08	6258.51	33.79	ND		6224.72
MW-4	10/13/08	6258.51	33.80	ND		6224.71
MW-4	01/16/09	6258.51	33.53	ND		6224.98
MW-4	04/06/09	6258.51	33.18	ND		6225.33
MW-4	08/25/09	6258.51	34.35	ND		6224.16
MW-4	11/03/09	6258.51	34.35	ND		6224.16
MW-4	02/16/10	6258.51	34.05	ND		6224.46
MW-4	05/24/10	6258.51	33.65	ND		6224.86
MW-4	09/27/10	6258.51	34.81	ND		6223.70
MW-4	11/08/10	6258.51	34.55	ND		6223.96
MW-4	02/01/11	6258.51	34.12	ND		6224.39
MW-4	05/02/11	6258.51	33.93	ND		6224.58
MW-4	09/23/11	6258.51	35.22	ND		6223.29
MW-4	11/10/11	6258.51	35.02	ND		6223.49
MW-4	02/22/12	6258.51	34.66	ND		6223.85
MW-4	05/15/12	6258.51	34.61	ND		6223.90
MW-4	06/05/13	6258.51	34.96	ND		6223.55
MW-4	09/10/13	6258.51	35.61	ND		6222.90
MW-4	12/11/13	6258.51	34.73	ND		6223.78
MW-4	04/14/14	6258.51	34.21	ND		6224.30
MW-4	10/22/14	6258.51	35.10	ND		6223.41
MW-4	05/28/15	6258.51	34.08	ND		6224.43
MW-4	11/21/15	6258.51	34.33	ND		6224.18

Notes:

"ft" = feet

"TOC" = Top of casing

"LNAPL" = Light non-aqueous phase liquid

"ND" = LNAPL not detected

"NR" = LNAPL not recorded

FIGURES

- FIGURE 1: MAY 28, 2015 GROUNDWATER ANALYTICAL RESULTS MAP
- FIGURE 2: MAY 28, 2015 GROUNDWATER ELEVATION MAP
- FIGURE 3: NOVEMBER 21, 2015 GROUNDWATER ANALYTICAL RESULTS MAP
- FIGURE 4: NOVEMBER 21, 2015 GROUNDWATER ELEVATION MAP



LEGEND:

- 6257** APPROXIMATE GROUND SURFACE
CONTOUR AND ELEVATION, FEET
- X— FENCE
- GAS— NATURAL GAS LINE
- BOLLARD
- DAMAGED MONITORING WELL
- MONITORING WELL
- ▲ SMA BENCHMARK

EXPLANATION OF ANALYTES AND APPLICABLE STANDARDS:

RESULTS IN **BOLDFACE** TYPE INDICATE CONCENTRATION IN EXCESS OF THE STANDARD FOR THAT ANALYTE.

NS = NOT SAMPLED

μg/L = MICROGRAMS PER LITER

<1 = BELOW METHOD DETECTION LIMIT

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



SCALE IN FEET



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

TITLE:

GROUNDWATER ANALYTICAL RESULTS
MAY 28, 2015

PROJECT:

K27 LD072
SAN JUAN RIVER BASIN
RIO ARriba COUNTY, NEW MEXICO



Figure No.:

1

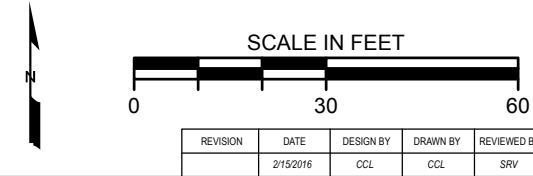


LEGEND:

- 6257 APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
- X- FENCE
- GAS- NATURAL GAS LINE
- BOLLARD
- DAMAGED MONITORING WELL
- MONITORING WELL
- △ SMA BENCHMARK

NOTES:

6224.43 GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL).



TITLE: **GROUNDWATER ELEVATION MAP
MAY 28, 2015**

PROJECT: **K27 LD072
SAN JUAN RIVER BASIN
RIO ARriba COUNTY, NEW MEXICO**



Figure No.: **2**



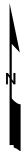
AERIAL IMAGERY FROM GOOGLE EARTH, DATED 8/2/2013.

LEGEND:

- 6257 APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
- X- FENCE
- GAS- NATURAL GAS LINE
- BOLLARD
- DAMAGED MONITORING WELL
- ♦ MONITORING WELL
- △ SMA BENCHMARK

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

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



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

TITLE:
GROUNDWATER ANALYTICAL RESULTS
NOVEMBER 21, 2015

PROJECT: **K27 LD072**
SAN JUAN RIVER BASIN
RIO ARRIBA COUNTY, NEW MEXICO



Figure No.:

3



AERIAL IMAGERY FROM GOOGLE EARTH, DATED 8/2/2013.

LEGEND:

- APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
- FENCE
- NATURAL GAS LINE
- BOLLARD
- DAMAGED MONITORING WELL
- MONITORING WELL
- SMA BENCHMARK

NOTES:

6224.18 GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL).

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
NOVEMBER 21, 2015**

PROJECT: **K27 LD072
SAN JUAN RIVER BASIN
RIO ARriba COUNTY, NEW MEXICO**



Figure No.: **4**

APPENDICES

APPENDIX A – MAY 28, 2015 GROUNDWATER SAMPLING ANALYTICAL REPORT

NOVEMBER 21, 2015 GROUNDWATER SAMPLING ANALYTICAL REPORT

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pensacola

3355 McLemore Drive

Pensacola, FL 32514

Tel: (850)474-1001

TestAmerica Job ID: 400-106336-1

Client Project/Site: NM- GW Pits, K-27 LD072

For:

MWH Americas Inc

1560 Broadway

Suite 1800

Denver, Colorado 80202

Attn: Ms. Sarah Gardner



Authorized for release by:

6/15/2015 5:42:53 PM

Marty Edwards, Manager of Project Management

(850)474-1001

marty.edwards@testamericainc.com

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www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: MWH Americas Inc
Project/Site: NM- GW Pits, K-27 LD072

TestAmerica Job ID: 400-106336-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	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: NM- GW Pits, K-27 LD072

TestAmerica Job ID: 400-106336-1

Job ID: 400-106336-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-106336-1

Comments

No additional comments.

Receipt

The samples were received on 5/30/2015 9:13 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.5° 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, K-27 LD072

TestAmerica Job ID: 400-106336-1

Client Sample ID: K-27 LD072 MW-1

Lab Sample ID: 400-106336-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	110		1.0	0.56	ug/L	1		8021B	Total/NA
Ethylbenzene	13		1.0	0.64	ug/L	1		8021B	Total/NA
Toluene	75		5.0	0.98	ug/L	1		8021B	Total/NA
Xylenes, Total	97		5.0	1.7	ug/L	1		8021B	Total/NA

Client Sample ID: K-27 LD072 MW-4

Lab Sample ID: 400-106336-2

No Detections.

Client Sample ID: K-27 LD072 TRIP BLANK

Lab Sample ID: 400-106336-3

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Sample Summary

Client: MWH Americas Inc
Project/Site: NM- GW Pits, K-27 LD072

TestAmerica Job ID: 400-106336-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-106336-1	K-27 LD072 MW-1	Water	05/28/15 16:10	05/30/15 09:13
400-106336-2	K-27 LD072 MW-4	Water	05/28/15 16:00	05/30/15 09:13
400-106336-3	K-27 LD072 TRIP BLANK	Water	05/28/15 15:50	05/30/15 09:13

Client Sample Results

Client: MWH Americas Inc
Project/Site: NM- GW Pits, K-27 LD072

TestAmerica Job ID: 400-106336-1

Client Sample ID: K-27 LD072 MW-1

Lab Sample ID: 400-106336-1

Date Collected: 05/28/15 16:10

Matrix: Water

Date Received: 05/30/15 09:13

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	110		1.0	0.56	ug/L			06/05/15 14:47	1
Ethylbenzene	13		1.0	0.64	ug/L			06/05/15 14:47	1
Toluene	75		5.0	0.98	ug/L			06/05/15 14:47	1
Xylenes, Total	97		5.0	1.7	ug/L			06/05/15 14:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (pid)	86		78 - 124					06/05/15 14:47	1

Client Sample Results

Client: MWH Americas Inc
Project/Site: NM- GW Pits, K-27 LD072

TestAmerica Job ID: 400-106336-1

Client Sample ID: K-27 LD072 MW-4

Lab Sample ID: 400-106336-2

Date Collected: 05/28/15 16:00

Matrix: Water

Date Received: 05/30/15 09:13

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			06/05/15 03:00	1
Ethylbenzene	<1.0		1.0	0.64	ug/L			06/05/15 03:00	1
Toluene	<5.0		5.0	0.98	ug/L			06/05/15 03:00	1
Xylenes, Total	<5.0		5.0	1.7	ug/L			06/05/15 03:00	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (pid)	98		78 - 124					06/05/15 03:00	1

Client Sample Results

Client: MWH Americas Inc
Project/Site: NM- GW Pits, K-27 LD072

TestAmerica Job ID: 400-106336-1

Client Sample ID: K-27 LD072 TRIP BLANK

Lab Sample ID: 400-106336-3

Date Collected: 05/28/15 15:50

Matrix: Water

Date Received: 05/30/15 09:13

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			06/05/15 01:57	1
Ethylbenzene	<1.0		1.0	0.64	ug/L			06/05/15 01:57	1
Toluene	<5.0		5.0	0.98	ug/L			06/05/15 01:57	1
Xylenes, Total	<5.0		5.0	1.7	ug/L			06/05/15 01:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (pid)	98		78 - 124					06/05/15 01:57	1

QC Association Summary

Client: MWH Americas Inc
Project/Site: NM- GW Pits, K-27 LD072

TestAmerica Job ID: 400-106336-1

GC VOA

Analysis Batch: 259823

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-106336-2	K-27 LD072 MW-4	Total/NA	Water	8021B	
400-106336-3	K-27 LD072 TRIP BLANK	Total/NA	Water	8021B	
400-106340-A-1 MS	Matrix Spike	Total/NA	Water	8021B	
400-106340-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8021B	
LCS 400-259823/1002	Lab Control Sample	Total/NA	Water	8021B	
MB 400-259823/4	Method Blank	Total/NA	Water	8021B	

Analysis Batch: 259941

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-106335-A-7 MS	Matrix Spike	Total/NA	Water	8021B	
400-106335-A-7 MSD	Matrix Spike Duplicate	Total/NA	Water	8021B	
400-106336-1	K-27 LD072 MW-1	Total/NA	Water	8021B	
LCS 400-259941/1035	Lab Control Sample	Total/NA	Water	8021B	
MB 400-259941/36	Method Blank	Total/NA	Water	8021B	

QC Sample Results

Client: MWH Americas Inc
Project/Site: NM- GW Pits, K-27 LD072

TestAmerica Job ID: 400-106336-1

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 400-259823/4

Matrix: Water

Analysis Batch: 259823

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			06/04/15 14:21	1
Ethylbenzene	<1.0		1.0	0.64	ug/L			06/04/15 14:21	1
Toluene	<5.0		5.0	0.98	ug/L			06/04/15 14:21	1
Xylenes, Total	<5.0		5.0	1.7	ug/L			06/04/15 14:21	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (pid)	100		78 - 124		06/04/15 14:21	1

Lab Sample ID: LCS 400-259823/1002

Matrix: Water

Analysis Batch: 259823

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	51.3		ug/L		103	85 - 115
Ethylbenzene	50.0	51.4		ug/L		103	85 - 115
Toluene	50.0	51.1		ug/L		102	85 - 115
Xylenes, Total	150	151		ug/L		100	85 - 115

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

Lab Sample ID: 400-106340-A-1 MS

Matrix: Water

Analysis Batch: 259823

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	0.000		50.0	57.5		ug/L		115	44 - 150
Ethylbenzene	0.0498		50.0	58.4		ug/L		117	70 - 142
Toluene	0.185		50.0	57.4		ug/L		115	69 - 136
Xylenes, Total	0.503		150	173		ug/L		115	68 - 142

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

Lab Sample ID: 400-106340-A-1 MSD

Matrix: Water

Analysis Batch: 259823

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	0.000		50.0	58.2		ug/L		116	44 - 150	1	16
Ethylbenzene	0.0498		50.0	59.3		ug/L		119	70 - 142	1	16
Toluene	0.185		50.0	58.3		ug/L		117	69 - 136	2	16
Xylenes, Total	0.503		150	175		ug/L		117	68 - 142	2	15

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

TestAmerica Pensacola

QC Sample Results

Client: MWH Americas Inc
Project/Site: NM- GW Pits, K-27 LD072

TestAmerica Job ID: 400-106336-1

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

Lab Sample ID: MB 400-259941/36

Matrix: Water

Analysis Batch: 259941

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0	0.56	ug/L			06/05/15 07:13	1
Ethylbenzene	<1.0		1.0	0.64	ug/L			06/05/15 07:13	1
Toluene	<5.0		5.0	0.98	ug/L			06/05/15 07:13	1
Xylenes, Total	<5.0		5.0	1.7	ug/L			06/05/15 07:13	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (pid)	99		78 - 124		06/05/15 07:13	1

Lab Sample ID: LCS 400-259941/1035

Matrix: Water

Analysis Batch: 259941

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	50.1		ug/L		100	85 - 115
Ethylbenzene	50.0	51.1		ug/L		102	85 - 115
Toluene	50.0	50.7		ug/L		101	85 - 115
Xylenes, Total	150	150		ug/L		100	85 - 115

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

Lab Sample ID: 400-106335-A-7 MS

Matrix: Water

Analysis Batch: 259941

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	58.9		ug/L		118	44 - 150
Ethylbenzene	<1.0		50.0	60.2		ug/L		120	70 - 142
Toluene	<5.0		50.0	59.1		ug/L		118	69 - 136
Xylenes, Total	<5.0		150	180		ug/L		120	68 - 142

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

Lab Sample ID: 400-106335-A-7 MSD

Matrix: Water

Analysis Batch: 259941

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	55.6		ug/L		111	44 - 150	6	16
Ethylbenzene	<1.0		50.0	55.7		ug/L		111	70 - 142	8	16
Toluene	<5.0		50.0	55.3		ug/L		111	69 - 136	7	16
Xylenes, Total	<5.0		150	164		ug/L		110	68 - 142	9	15

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

TestAmerica Pensacola

Lab Chronicle

Client: MWH Americas Inc
Project/Site: NM- GW Pits, K-27 LD072

TestAmerica Job ID: 400-106336-1

Client Sample ID: K-27 LD072 MW-1

Date Collected: 05/28/15 16:10

Date Received: 05/30/15 09:13

Lab Sample ID: 400-106336-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	259941	06/05/15 14:47	MKA	TAL PEN
Instrument ID: CH_PAULA										

Client Sample ID: K-27 LD072 MW-4

Date Collected: 05/28/15 16:00

Date Received: 05/30/15 09:13

Lab Sample ID: 400-106336-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	259823	06/05/15 03:00	MKA	TAL PEN
Instrument ID: CH_PAULA										

Client Sample ID: K-27 LD072 TRIP BLANK

Date Collected: 05/28/15 15:50

Date Received: 05/30/15 09:13

Lab Sample ID: 400-106336-3

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	259823	06/05/15 01:57	MKA	TAL PEN
Instrument ID: CH_PAULA										

Laboratory References:

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

Certification Summary

Client: MWH Americas Inc
Project/Site: NM- GW Pits, K-27 LD072

TestAmerica Job ID: 400-106336-1

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.

TestAmerica Pensacola

Method Summary

Client: MWH Americas Inc
Project/Site: NM- GW Pits, K-27 LD072

TestAmerica Job ID: 400-106336-1

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

Login Sample Receipt Checklist

Client: MWH Americas Inc

Job Number: 400-106336-1

Login Number: 106336

List Source: TestAmerica Pensacola

List Number: 1

Creator: Crawford, Lauren E

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ 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	0.5°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 $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

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

TestAmerica Job ID: 400-114310-1

Client Project/Site: Pit GW - K -27

For:

MWH Americas Inc
1560 Broadway
Suite 1800
Denver, Colorado 80202

Attn: Ms. Sarah Gardner



Authorized for release by:
12/14/2015 7:33:43 PM

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

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: MWH Americas Inc
Project/Site: Pit GW - K -27

TestAmerica Job ID: 400-114310-1

Qualifiers

GC VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	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: Pit GW - K -27

TestAmerica Job ID: 400-114310-1

Job ID: 400-114310-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-114310-1

Comments

No additional comments.

Receipt

The samples were received on 11/24/2015 8:47 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 5 coolers at receipt time were 0.4° C, 0.8° C, 0.9° C, 0.9° C and 1.1° C.

GC VOA

Method 8021B: Surrogate recovery for the following sample in analytical batch 490-303336 was outside the upper control limit: MW-4 (400-114310-2). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

Method 8021B: This continuing calibration verification associated with Batch 490-303336 recovered high for surrogate. The target analytes were within range, however, so this CCV has been qualified and reported:

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: Pit GW - K -27

TestAmerica Job ID: 400-114310-1

Client Sample ID: MW-1

Lab Sample ID: 400-114310-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Ethylbenzene	2.1		1.0	ug/L	1		8021B	Total/NA
Toluene	17		1.0	ug/L	1		8021B	Total/NA
Xylenes, Total	28		3.0	ug/L	1		8021B	Total/NA
Benzene	65		1.0	ug/L	1		8021B	Total/NA

Client Sample ID: MW-4

Lab Sample ID: 400-114310-2

No Detections.

Client Sample ID: TRIP BLANK

Lab Sample ID: 400-114310-3

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Sample Summary

Client: MWH Americas Inc
Project/Site: Pit GW - K -27

TestAmerica Job ID: 400-114310-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-114310-1	MW-1	Water	11/21/15 13:40	11/24/15 08:47
400-114310-2	MW-4	Water	11/21/15 13:30	11/24/15 08:47
400-114310-3	TRIP BLANK	Water	11/21/15 13:25	11/24/15 08:47

Client Sample Results

Client: MWH Americas Inc
Project/Site: Pit GW - K -27

TestAmerica Job ID: 400-114310-1

Client Sample ID: MW-1

Date Collected: 11/21/15 13:40

Date Received: 11/24/15 08:47

Lab Sample ID: 400-114310-1

Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	2.1		1.0	ug/L			12/03/15 20:09	1
Toluene	17		1.0	ug/L			12/03/15 20:09	1
Xylenes, Total	28		3.0	ug/L			12/03/15 20:09	1
Benzene	65		1.0	ug/L			12/03/15 20:09	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	100		50 - 150				12/03/15 20:09	1

Client Sample Results

Client: MWH Americas Inc
Project/Site: Pit GW - K -27

TestAmerica Job ID: 400-114310-1

Client Sample ID: MW-4
Date Collected: 11/21/15 13:30
Date Received: 11/24/15 08:47

Lab Sample ID: 400-114310-2
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	<1.0		1.0	ug/L			12/03/15 04:40	1
Toluene	<1.0		1.0	ug/L			12/03/15 04:40	1
Xylenes, Total	<3.0		3.0	ug/L			12/03/15 04:40	1
Benzene	<1.0		1.0	ug/L			12/03/15 04:40	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	281	X	50 - 150				12/03/15 04:40	1

Client Sample Results

Client: MWH Americas Inc
Project/Site: Pit GW - K -27

TestAmerica Job ID: 400-114310-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 400-114310-3

Date Collected: 11/21/15 13:25

Matrix: Water

Date Received: 11/24/15 08:47

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	<1.0		1.0	ug/L			12/02/15 19:49	1
Toluene	<1.0		1.0	ug/L			12/02/15 19:49	1
Xylenes, Total	<3.0		3.0	ug/L			12/02/15 19:49	1
Benzene	<1.0		1.0	ug/L			12/02/15 19:49	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	87		50 - 150				12/02/15 19:49	1

QC Association Summary

Client: MWH Americas Inc
Project/Site: Pit GW - K -27

TestAmerica Job ID: 400-114310-1

GC VOA

Analysis Batch: 303336

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-114310-2	MW-4	Total/NA	Water	8021B	
400-114310-3	TRIP BLANK	Total/NA	Water	8021B	
LCS 490-303336/4	Lab Control Sample	Total/NA	Water	8021B	
LCSD 490-303336/16	Lab Control Sample Dup	Total/NA	Water	8021B	
MB 490-303336/5	Method Blank	Total/NA	Water	8021B	

Analysis Batch: 303770

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-114310-1	MW-1	Total/NA	Water	8021B	
LCS 490-303770/2	Lab Control Sample	Total/NA	Water	8021B	
LCSD 490-303770/14	Lab Control Sample Dup	Total/NA	Water	8021B	
MB 490-303770/3	Method Blank	Total/NA	Water	8021B	

QC Sample Results

Client: MWH Americas Inc
Project/Site: Pit GW - K -27

TestAmerica Job ID: 400-114310-1

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 490-303336/5

Matrix: Water

Analysis Batch: 303336

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	<1.0		1.0	ug/L			12/02/15 14:13	1
Toluene	<1.0		1.0	ug/L			12/02/15 14:13	1
Xylenes, Total	<3.0		3.0	ug/L			12/02/15 14:13	1
Benzene	<1.0		1.0	ug/L			12/02/15 14:13	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	92		50 - 150		12/02/15 14:13	1

Lab Sample ID: LCS 490-303336/4

Matrix: Water

Analysis Batch: 303336

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylbenzene	100	104		ug/L		104	70 - 130
Toluene	100	104		ug/L		104	66 - 127
Xylenes, Total	300	309		ug/L		103	69 - 123
Benzene	100	107		ug/L		107	69 - 129

Surrogate	LCS %Recovery	LCS Qualifier	Limits
a,a,a-Trifluorotoluene	69		50 - 150

Lab Sample ID: LCSD 490-303336/16

Matrix: Water

Analysis Batch: 303336

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylbenzene	100	107		ug/L		107	70 - 130	3	35
Toluene	100	107		ug/L		107	66 - 127	3	34
Xylenes, Total	300	319		ug/L		106	69 - 123	3	37
Benzene	100	111		ug/L		111	69 - 129	3	33

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
a,a,a-Trifluorotoluene	115		50 - 150

Lab Sample ID: MB 490-303770/3

Matrix: Water

Analysis Batch: 303770

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	<1.0		1.0	ug/L			12/03/15 18:06	1
Toluene	<1.0		1.0	ug/L			12/03/15 18:06	1
Xylenes, Total	<3.0		3.0	ug/L			12/03/15 18:06	1
Benzene	<1.0		1.0	ug/L			12/03/15 18:06	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene	100		50 - 150		12/03/15 18:06	1

TestAmerica Pensacola

QC Sample Results

Client: MWH Americas Inc
Project/Site: Pit GW - K -27

TestAmerica Job ID: 400-114310-1

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

Lab Sample ID: LCS 490-303770/2

Matrix: Water

Analysis Batch: 303770

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylbenzene	100	108		ug/L		108	70 - 130
Toluene	100	110		ug/L		110	66 - 127
Xylenes, Total	300	323		ug/L		108	69 - 123
Benzene	100	113		ug/L		113	69 - 129

Surrogate	LCS %Recovery	LCS Qualifier	Limits
a,a,a-Trifluorotoluene	105		50 - 150

Lab Sample ID: LCSD 490-303770/14

Matrix: Water

Analysis Batch: 303770

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylbenzene	100	102		ug/L		102	70 - 130	5	35
Toluene	100	103		ug/L		103	66 - 127	6	34
Xylenes, Total	300	308		ug/L		103	69 - 123	5	37
Benzene	100	107		ug/L		107	69 - 129	6	33

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
a,a,a-Trifluorotoluene	100		50 - 150

Lab Chronicle

Client: MWH Americas Inc
Project/Site: Pit GW - K -27

TestAmerica Job ID: 400-114310-1

Client Sample ID: MW-1

Date Collected: 11/21/15 13:40

Date Received: 11/24/15 08:47

Lab Sample ID: 400-114310-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	303770	12/03/15 20:09	AMC	TAL NSH
Instrument ID: HP15										

Client Sample ID: MW-4

Date Collected: 11/21/15 13:30

Date Received: 11/24/15 08:47

Lab Sample ID: 400-114310-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	303336	12/03/15 04:40	AMC	TAL NSH
Instrument ID: HP15										

Client Sample ID: TRIP BLANK

Date Collected: 11/21/15 13:25

Date Received: 11/24/15 08:47

Lab Sample ID: 400-114310-3

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	303336	12/02/15 19:49	AMC	TAL NSH
Instrument ID: HP15										

Laboratory References:

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

Certification Summary

Client: MWH Americas Inc
Project/Site: Pit GW - K -27

TestAmerica Job ID: 400-114310-1

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

Laboratory: TestAmerica Nashville

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

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

* Certification renewal pending - certification considered valid.

TestAmerica Pensacola

Certification Summary

Client: MWH Americas Inc
Project/Site: Pit GW - K -27

TestAmerica Job ID: 400-114310-1

Laboratory: TestAmerica Nashville (Continued)

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

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

Method Summary

Client: MWH Americas Inc
Project/Site: Pit GW - K -27

TestAmerica Job ID: 400-114310-1

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

Protocol References:

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

Laboratory References:

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

Chain of Custody Record

Client Information Client Contact: <u>Sarah Gardner/Chris Lee</u> Client: <u>303 291-2239</u> Company: <u>MWH Americas Inc</u>		Lab Pmt: <u>Edwards, Marty P</u> E-Mail: <u>marty.edwards@testamericainc.com</u>		Carrier: <u>400-114310 COC</u>	
Address: <u>11153 Aurora Avenue</u> City: <u>Des Moines</u> State, Zip: <u>IA, 50322-7904</u> Phone: <u>303-291-2239(Tel)</u> Email: <u>clint.w.oberbroeckling@mwhglobal.com</u> Project Name: <u>SIG K-27</u> Pmt GW: <u>Lab</u> Site: <u>K-27</u>		Due Date Requested: TAT Requested (days): <u>Standard</u> PO #: <u>303-291-2239(Tel)</u> Purchase Order Requested WO #: <u>40005479</u> Project #: <u>40005479</u> SSOW#: <u>K-27</u>		Analysis Request: <u>400-114310 COC</u>	
Sample Identification Sample ID: <u>MW-1</u> Sample Type: <u>G</u> Sample Date: <u>11/21/2015</u> Sample Time: <u>1340</u> Matrix: <u>W</u> Sample ID: <u>MW-4</u> Sample Type: <u>G</u> Sample Date: <u>11/21/2015</u> Sample Time: <u>1330</u> Matrix: <u>W</u> Sample ID: <u>TRIP BLANK</u> Sample Type: <u>G</u> Sample Date: <u>11/21/2015</u> Sample Time: <u>1325</u> Matrix: <u>W</u>		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Anchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:		Special Instructions/Note: 8021B - BTEX 0021	
Possible Hazard Identification ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological					
Deliverable Requested: I, II, III, IV, Other (specify)					
Empty Kit Relinquished by:					
Relinquished by: <u>Sarah Gardner</u> Date: <u>11/23/2015</u> Time: <u>800</u> Company: <u>MWH</u>					
Relinquished by: <u>RC</u> Date: <u>11/24/15</u> Time: <u>0847</u> Company: <u>RC</u>					
Custody Seals Intact: <u>Yes</u> ☐ No ☐					
Custody Seal No.: <u>11/24/15 0847</u>					
Cooler Temperature and Other Remarks: <u>RC 11/24/15 0847</u>					

Login Sample Receipt Checklist

Client: MWH Americas Inc

Job Number: 400-114310-1

Login Number: 114310

List Source: TestAmerica Pensacola

List Number: 1

Creator: Menoher, Rachel C

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.1/0.9/0.8/0.4/0.9°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.	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 $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: MWH Americas Inc

Job Number: 400-114310-1

Login Number: 114310

List Number: 2

Creator: Ford, Easton

List Source: TestAmerica Nashville

List Creation: 11/25/15 04:49 PM

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