2015 ANNUAL GROUNDWATER REPORT

Canada Mesa #2
NMOCD Case#: 3RP-155-0
Meter Code: 87640
T24N, R6W, Sec 24, Unit I

SITE DETAILS

Site Location: Latitude: 36.296081 N, Longitude: -107.414109 W
Land Type: Federal
Operator: Merrion Oil & Gas

SITE BACKGROUND

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

Environmental Remediation activities at the Canada Mesa #2 (Site) are managed pursuant to the procedures set forth in the document entitled, "Remediation Plan for Groundwater Encountered during Pit Closure Activities" (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's (EPCGP's) program methods. Currently, the Site is operated by Marion Oil & Gas Company and is not active.

Canada Mesa #2 is located on Federal land. Various site investigations have occurred since 1994. Monitoring wells were installed in 1995 (MW-1) and 2000 (MW-2 and MW-3). There are three existing monitoring wells at the Site: MW-1, MW-2 and MW-3. Free product recovery has been periodically conducted at the Site. Free product was observed in monitoring well MW-1 in 2015.

SUMMARY OF 2015 ACTIVITIES

On May 28 and November 21, 2015, water levels were gauged at MW-1, MW-2, and MW-3; and 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 (ORP). 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. When free product was present, static water level elevations were corrected for measurable thicknesses of free-product (specific gravity of 0.75).

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 has historically been to the southwest at the Site, though groundwater elevations indicate a flow direction to the southeast (see Figures 2 and 4).
- Free product was observed in MW-1 in 2015. No samples were collected.
- Groundwater samples collected in 2015 from MW-3 exceeded the New Mexico Water Quality Control Commission (NMWQCC) standard (10 µg/L) for benzene in groundwater. Monitoring well MW-2 was below the NMWQCC standard or not detected.
- All site monitoring wells that were sampled in 2015 were either below the NMWQCC standard for toluene in groundwater or not detected.
- All site monitoring wells that were sampled in 2015 were either below the NMWQCC standard for ethylbenzene in groundwater or not detected.
- All site monitoring wells that were sampled in 2015 were either below the NMWQCC standard for total xylenes in groundwater or not detected.

PLANNED FUTURE ACTIVITIES

Future installation of additional monitoring wells is planned for the Site; however, EPCGP will abandon MW-2 and MW-3 for reclamation activities occurring at the Site. New wells will be installed after reclamation activities are complete. The wells will be used to further assess the extent of dissolved-phase hydrocarbons and to confirm and/or further 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.

TABLE

TABLE 1 - GROUNDWATER ANALYTICAL RESULTS

Canada Mesa #2					
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	5520	8880	469	3920
MW-1	02/05/97	3450	5200	214	1770
MW-1	05/07/97	4650	8440	317	2580
MW-1	01/09/00	NS	NS	NS	NS
MW-1	01/26/00	NS	NS	NS	NS
MW-1	02/15/00	NS	NS	NS	NS
MW-1	10/06/00	NS	NS	NS	NS
MW-1	11/14/00	NS	NS	NS	NS
MW-1	01/03/01	NS	NS	NS	NS
MW-1	01/15/01	NS	NS	NS	NS
MW-1	01/22/01	NS	NS	NS	NS
MW-1	01/30/01	NS	NS	NS	NS
MW-1	02/13/01	NS	NS	NS	NS
MW-1	02/20/01	NS	NS	NS	NS
MW-1	02/28/01	NS	NS	NS	NS
MW-1	06/04/01	NS	NS	NS	NS
MW-1	07/03/01	NS	NS	NS	NS
MW-1	08/06/01	NS	NS	NS	NS
MW-1	08/20/01	NS	NS	NS	NS
MW-1	08/31/01	NS	NS	NS	NS
MW-1	09/14/01	NS	NS	NS	NS
MW-1	09/26/01	NS	NS	NS	NS
MW-1	10/02/01	NS	NS	NS	NS
MW-1	10/10/01	NS	NS	NS	NS
MW-1	12/05/01	NS	NS	NS	NS
MW-1	12/14/01	NS	NS	NS	NS
MW-1	12/21/01	NS	NS	NS	NS
MW-1	12/28/01	NS	NS	NS	NS
MW-1	01/02/02	NS	NS	NS	NS
MW-1	01/07/02	NS	NS	NS	NS
MW-1	01/23/02	NS	NS	NS	NS
MW-1	01/30/02	NS	NS	NS	NS
MW-1	02/07/02	NS	NS	NS	NS
MW-1	02/14/02	NS	NS	NS	NS
MW-1	02/20/02	NS	NS	NS	NS
MW-1	02/26/02	NS	NS	NS	NS
MW-1	03/07/02	NS	NS	NS	NS
MW-1	03/12/02	NS	NS	NS	NS
MW-1	03/28/02	NS	NS	NS	NS
MW-1	04/03/02	NS	NS	NS	NS
MW-1	04/25/02	NS	NS	NS	NS
MW-1	05/21/02	NS	NS	NS	NS
MW-1	06/10/02	NS	NS	NS	NS
MW-1	09/23/02	NS	NS	NS	NS
MW-1	03/25/03	NS	NS	NS	NS
MW-1	06/22/03	NS	NS	NS	NS

TABLE 1 - GROUNDWATER ANALYTICAL RESULTS

Canada Mesa #2					
Location	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
NMWQCC Standards:		10	750	750	620
MW-1	09/15/03	NS	NS	NS	NS
MW-1	12/15/03	NS	NS	NS	NS
MW-1	03/17/04	NS	NS	NS	NS
MW-1	03/22/04	NS	NS	NS	NS
MW-1	06/03/04	NS	NS	NS	NS
MW-1	06/04/04	NS	NS	NS	NS
MW-1	09/13/04	NS	NS	NS	NS
MW-1	09/14/04	NS	NS	NS	NS
MW-1	12/15/04	NS	NS	NS	NS
MW-1	03/22/05	NS	NS	NS	NS
MW-1	06/24/05	NS	NS	NS	NS
MW-1	09/14/05	NS	NS	NS	NS
MW-1	12/14/05	NS	NS	NS	NS
MW-1	03/28/06	NS	NS	NS	NS
MW-1	06/07/06	NS	NS	NS	NS
MW-1	09/29/06	NS	NS	NS	NS
MW-1	12/26/06	NS	NS	NS	NS
MW-1	03/26/07	NS	NS	NS	NS
MW-1	06/13/07	NS	NS	NS	NS
MW-1	09/28/07	NS	NS	NS	NS
MW-1	12/18/07	NS	NS	NS	NS
MW-1	03/05/08	NS	NS	NS	NS
MW-1	06/16/08	NS	NS	NS	NS
MW-1	09/10/08	NS	NS	NS	NS
MW-1	12/10/08	NS	NS	NS	NS
MW-1	03/02/09	NS	NS	NS	NS
MW-1	06/10/09	NS	NS	NS	NS
MW-1	08/25/09	NS	NS	NS	NS
MW-1	11/03/09	1970	6020	359	6110
MW-1	02/16/10	NS	NS	NS	NS
MW-1	06/02/10	NS	NS	NS	NS
MW-1	09/27/10	NS	NS	NS	NS
MW-1	11/08/10	571	9070	1370	27200
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	1340	9510	1260	20800
MW-1	02/22/12	NS	NS	NS	NS
MW-1	05/15/12	NS	NS	NS	NS
MW-1	06/05/13	720	2200	92	4000
MW-1	09/10/13	570	1700	63	2900
MW-1	12/10/13	190	740	40	1000
MW-1	04/04/14	NS	NS	NS	NS
MW-1	10/22/14	NS	NS	NS	NS
MW-1	05/28/15	NS	NS	NS	NS
MW-1	11/21/15	NS	NS	NS	NS

TABLE 1 - GROUNDWATER ANALYTICAL RESULTS

Canada Mesa #2					
Location	**Date**	**Benzene (µg/L)**	**Toluene (µg/L)**	**Ethylbenzene (µg/L)**	**Total Xylenes (µg/L)**
NMWQCC Standards:		10	750	750	620
MW-2	11/16/00	3200	330	1200	1100
MW-2	06/04/01	NS	NS	NS	NS
MW-2	07/03/01	NS	NS	NS	NS
MW-2	08/06/01	NS	NS	NS	NS
MW-2	08/31/01	NS	NS	NS	NS
MW-2	09/14/01	NS	NS	NS	NS
MW-2	03/19/02	22	<5	150	14
MW-2	12/24/02	12.1	2.1	129	16.4
MW-2	03/25/03	NS	NS	NS	NS
MW-2	06/22/03	NS	NS	NS	NS
MW-2	09/15/03	NS	NS	NS	NS
MW-2	12/15/03	10	11.7	55.3	29.7
MW-2	03/22/04	NS	NS	NS	NS
MW-2	06/04/04	NS	NS	NS	NS
MW-2	09/14/04	NS	NS	NS	NS
MW-2	12/15/04	6.3	3.8	8	5.9
MW-2	03/22/05	NS	NS	NS	NS
MW-2	06/24/05	NS	NS	NS	NS
MW-2	09/14/05	NS	NS	NS	NS
MW-2	12/14/05	NS	NS	NS	NS
MW-2	12/15/05	12.1	30.9	5.6	61.9
MW-2	03/28/06	NS	NS	NS	NS
MW-2	06/07/06	NS	NS	NS	NS
MW-2	09/29/06	NS	NS	NS	NS
MW-2	12/26/06	5.3	5	1.8	7.1
MW-2	03/26/07	NS	NS	NS	NS
MW-2	06/13/07	NS	NS	NS	NS
MW-2	09/28/07	NS	NS	NS	NS
MW-2	12/18/07	<2	<2	<2	<6
MW-2	03/05/08	NS	NS	NS	NS
MW-2	06/16/08	NS	NS	NS	NS
MW-2	09/10/08	NS	NS	NS	NS
MW-2	12/10/08	1.2	2.7	1.7	4.9
MW-2	03/02/09	NS	NS	NS	NS
MW-2	06/10/09	NS	NS	NS	NS
MW-2	08/25/09	NS	NS	NS	NS
MW-2	11/03/09	0.68 J	<1	<1	1.5 J
MW-2	02/16/10	NS	NS	NS	NS
MW-2	06/02/10	NS	NS	NS	NS
MW-2	09/27/10	NS	NS	NS	NS
MW-2	11/08/10	<2	<2	<2	<6
MW-2	02/01/11	NS	NS	NS	NS
MW-2	09/23/11	NS	NS	NS	NS
MW-2	11/10/11	1.1	<1	<1	1.4 J
MW-2	02/22/12	NS	NS	NS	NS
MW-2	05/15/12	NS	NS	NS	NS
MW-2	06/05/13	<0.140	<0.30	<0.20	<0.23
MW-2	09/10/13	0.22	<0.30	<0.020	<0.23
MW-2	12/10/13	0.24 J	<0.38	<0.20	<0.65
MW-2	04/04/14	0.46 J	<0.38	<0.20	<0.65
MW-2	10/22/14	<0.38	<0.70	<0.50	<1.6
MW-2	05/28/15	0.57 J	<5.0	<1.0	<5.0
MW-2	11/21/15	<1.0	<1.0	<1.0	<3.0

TABLE 1 - GROUNDWATER ANALYTICAL RESULTS

Canada Mesa #2					
Location	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
NMWQCC Standards:		10	750	750	620
MW-3	11/16/00	880	1300	420	3700
MW-3	06/04/01	NS	NS	NS	NS
MW-3	07/03/01	NS	NS	NS	NS
MW-3	08/06/01	NS	NS	NS	NS
MW-3	08/31/01	NS	NS	NS	NS
MW-3	09/14/01	NS	NS	NS	NS
MW-3	03/19/02	1100	29	360	3700
MW-3	06/10/02	NS	NS	NS	NS
MW-3	09/23/02	NS	NS	NS	NS
MW-3	12/24/02	1430	95	483	2359
MW-3	03/25/03	NS	NS	NS	NS
MW-3	06/22/03	NS	NS	NS	NS
MW-3	09/15/03	NS	NS	NS	NS
MW-3	12/15/03	503 J	79.7 J	148 J	891 J
MW-3	03/22/04	NS	NS	NS	NS
MW-3	06/04/04	NS	NS	NS	NS
MW-3	09/14/04	NS	NS	NS	NS
MW-3	12/15/04	410	54.9	88.7	420
MW-3	03/22/05	NS	NS	NS	NS
MW-3	06/24/05	NS	NS	NS	NS
MW-3	09/14/05	NS	NS	NS	NS
MW-3	12/15/05	482	32.7	74.1	399
MW-3	03/28/06	NS	NS	NS	NS
MW-3	06/07/06	NS	NS	NS	NS
MW-3	09/29/06	NS	NS	NS	NS
MW-3	12/26/06	679	78.9	106	565
MW-3	03/26/07	NS	NS	NS	NS
MW-3	06/13/07	NS	NS	NS	NS
MW-3	09/28/07	NS	NS	NS	NS
MW-3	12/18/07	412	39.4	31.5	207
MW-3	03/05/08	NS	NS	NS	NS
MW-3	06/16/08	NS	NS	NS	NS
MW-3	09/10/08	NS	NS	NS	NS
MW-3	12/10/08	653	63.2	55.5	253
MW-3	03/02/09	NS	NS	NS	NS
MW-3	06/10/09	NS	NS	NS	NS
MW-3	08/25/09	NS	NS	NS	NS
MW-3	11/03/09	715	220	80	570
MW-3	02/16/10	NS	NS	NS	NS
MW-3	06/02/10	NS	NS	NS	NS
MW-3	09/27/10	NS	NS	NS	NS
MW-3	11/08/10	426	15	22.1	85.1
MW-3	02/01/11	NS	NS	NS	NS
MW-3	09/23/11	NS	NS	NS	NS
MW-3	11/10/11	167	5.3	16.5	54.3
MW-3	02/22/12	NS	NS	NS	NS
MW-3	05/15/12	NS	NS	NS	NS
MW-3	06/05/13	340	1.3	31	47
MW-3	09/10/13	340	0.9	12	4.2 J
MW-3	12/10/13	220	13	6.3	2.6 J
MW-3	04/04/14	320	5.4 J	<0.80	<2.6
MW-3	10/22/14	240	<0.70	0.52 J	<1.6
MW-3	05/28/15	390	<25	<5.0	26
MW-3	11/21/15	380	1.5	1.3	8.8

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

TABLE 2- GROUNDWATER ELEVATION RESULTS

Canada Mesa #2						
Location	Date	TOC	Depth to Water (ft.)	Depth to LNAPL (ft.)	LNAPL Thickness (ft.)	GW Elevation (ft.)
MW-1	11/04/96	6503.37	34.42	33.67	0.75	6469.51
MW-1	02/05/97	6503.37	34.35	33.64	0.71	6469.55
MW-1	05/07/97	6503.37	34.24	33.61	0.63	6469.60
MW-1	01/09/00	6503.37	33.93	33.79	0.14	6469.54
MW-1	01/26/00	6503.37	35.22	35.03	0.19	6468.29
MW-1	02/15/00	6503.37	35.11	34.93	0.18	6468.39
MW-1	10/06/00	6503.37	34.11	33.82	0.29	6469.47
MW-1	11/14/00	6503.37	33.98	33.81	0.17	6469.51
MW-1	01/03/01	6503.37	33.96	33.83	0.13	6469.50
MW-1	01/15/01	6503.37	33.93	33.78	0.15	6469.55
MW-1	01/22/01	6503.37	33.81	NR		6469.56
MW-1	01/30/01	6503.37	33.83	33.82	0.01	6469.54
MW-1	02/13/01	6503.37	33.80	NR		6469.57
MW-1	02/20/01	6503.37	33.81	NR		6469.56
MW-1	02/28/01	6503.37	33.81	NR		6469.56
MW-1	06/04/01	6503.37	34.13	33.81	0.32	6469.48
MW-1	07/03/01	6503.37	34.09	33.96	0.13	6469.37
MW-1	08/06/01	6503.37	34.08	34.07	0.01	6469.29
MW-1	08/20/01	6503.37	34.10	34.09	0.01	6469.27
MW-1	08/31/01	6503.37	34.17	NR		6469.20
MW-1	09/14/01	6503.37	34.14	34.13	0.01	6469.23
MW-1	09/26/01	6503.37	34.15	34.14	0.01	6469.22
MW-1	10/02/01	6503.37	34.17	34.15	0.02	6469.21
MW-1	10/10/01	6503.37	34.18	34.16	0.02	6469.20
MW-1	12/05/01	6503.37	34.26	34.25	0.01	6469.11
MW-1	12/14/01	6503.37	34.27	NR		6469.10
MW-1	12/21/01	6503.37	34.24	NR		6469.13
MW-1	12/28/01	6503.37	34.22	NR		6469.15
MW-1	01/02/02	6503.37	34.23	NR		6469.14
MW-1	01/07/02	6503.37	34.25	34.23	0.02	6469.13
MW-1	01/23/02	6503.37	34.42	34.37	0.05	6468.98
MW-1	01/30/02	6503.37	34.51	34.50	0.01	6468.86
MW-1	02/07/02	6503.37	34.50	34.49	0.01	6468.87
MW-1	02/14/02	6503.37	34.42	34.41	0.01	6468.95
MW-1	02/20/02	6503.37	35.00	34.99	0.01	6468.37
MW-1	02/26/02	6503.37	34.25	NR		6469.12
MW-1	03/07/02	6503.37	34.25	34.24	0.01	6469.12
MW-1	03/12/02	6503.37	34.25	34.24	0.01	6469.12
MW-1	03/28/02	6503.37	34.27	NR		6469.10
MW-1	04/03/02	6503.37	34.26	NR		6469.11
MW-1	04/25/02	6503.37	34.45	NR		6468.92
MW-1	05/21/02	6503.37	34.30	NR		6469.07
MW-1	06/10/02	6503.37	34.32	NR		6469.05
MW-1	09/23/02	6503.37	34.50	NR		6468.87
MW-1	03/25/03	6503.37	34.50	ND		6468.87
MW-1	06/22/03	6503.37	34.55	34.48	0.07	6468.87

TABLE 2- GROUNDWATER ELEVATION RESULTS

Canada Mesa #2						
Location	Date	TOC	Depth to Water (ft.)	Depth to LNAPL (ft.)	LNAPL Thickness (ft.)	GW Elevation (ft.)
MW-1	09/15/03	6503.37	34.97	34.65	0.32	6468.64
MW-1	12/15/03	6503.37	34.98	34.41	0.57	6468.81
MW-1	03/17/04	6503.37	34.80	34.24	0.56	6468.99
MW-1	03/22/04	6503.37	34.49	34.29	0.20	6469.03
MW-1	06/03/04	6503.37	34.44	34.30	0.14	6469.03
MW-1	06/04/04	6503.37	34.30	34.20	0.10	6469.14
MW-1	09/13/04	6503.37	35.30	34.64	0.66	6468.56
MW-1	09/14/04	6503.37	34.95	34.65	0.30	6468.64
MW-1	12/15/04	6503.37	35.32	34.74	0.58	6468.48
MW-1	03/22/05	6503.37	35.01	34.36	0.65	6468.84
MW-1	06/24/05	6503.37	34.97	34.39	0.58	6468.83
MW-1	09/14/05	6503.37	35.65	34.60	1.05	6468.50
MW-1	12/14/05	6503.37	35.05	34.74	0.31	6468.55
MW-1	03/28/06	6503.37	35.14	34.59	0.55	6468.64
MW-1	06/07/06	6503.37	35.11	34.52	0.59	6468.70
MW-1	09/29/06	6503.37	35.14	34.85	0.29	6468.44
MW-1	12/26/06	6503.37	34.85	34.44	0.41	6468.82
MW-1	03/26/07	6503.37	34.60	34.35	0.25	6468.95
MW-1	06/13/07	6503.37	35.39	34.20	1.19	6468.87
MW-1	09/28/07	6503.37	35.12	34.86	0.26	6468.44
MW-1	12/18/07	6503.37	34.34	34.18	0.16	6469.15
MW-1	03/05/08	6503.37	34.17	34.15	0.02	6469.21
MW-1	06/16/08	6503.37	34.17	ND		6469.20
MW-1	09/10/08	6503.37	34.35	ND		6469.02
MW-1	12/10/08	6503.37	34.30	ND		6469.07
MW-1	03/02/09	6503.37	34.22	ND		6469.15
MW-1	06/10/09	6503.37	35.14	ND		6468.23
MW-1	08/25/09	6503.37	34.50	ND		6468.87
MW-1	11/03/09	6503.37	34.57	ND		6468.80
MW-1	02/16/10	6503.37	34.57	34.54	0.03	6468.82
MW-1	06/02/10	6503.37	34.58	34.34	0.24	6468.97
MW-1	09/27/10	6503.37	35.26	34.71	0.55	6468.52
MW-1	11/08/10	6503.37	34.98	34.73	0.25	6468.57
MW-1	02/01/11	6503.37	34.97	34.63	0.34	6468.65
MW-1	05/02/11	6503.37	0.00	35.52		
MW-1	09/23/11	6503.37	35.40	34.93	0.47	6468.32
MW-1	11/10/11	6503.37	35.21	34.95	0.26	6468.35
MW-1	02/22/12	6503.37	34.98	ND		6468.39
MW-1	05/15/12	6503.37	35.04	ND		6468.33
MW-1	06/05/13	6503.37	39.13	ND		6464.24
MW-1	09/10/13	6503.37	36.50	ND		6466.87
MW-1	12/10/13	6503.37	35.45	35.35	0.10	6467.99
MW-1	04/04/14	6503.37	35.78	35.00	0.78	6468.17
MW-1	10/22/14	6503.37	36.25	35.37	0.88	6467.78
MW-1	05/28/15	6503.37	35.42	34.80	0.62	6468.41
MW-1	11/21/15	6503.37	35.55	35.01	0.54	6468.22

TABLE 2- GROUNDWATER ELEVATION RESULTS

Canada Mesa #2						
Location	Date	TOC	Depth to Water (ft.)	Depth to LNAPL (ft.)	LNAPL Thickness (ft.)	GW Elevation (ft.)
MW-2	11/16/00	6504.34	34.90	NR		6469.44
MW-2	06/04/01	6504.34	34.97	NR		6469.37
MW-2	07/03/01	6504.34	35.07	NR		6469.27
MW-2	08/06/01	6504.34	35.14	NR		6469.20
MW-2	08/31/01	6504.34	35.19	NR		6469.15
MW-2	09/14/01	6504.34	35.21	NR		6469.13
MW-2	03/19/02	6504.34	35.36	NR		6468.98
MW-2	12/24/02	6504.34	35.52	NR		6468.82
MW-2	03/25/03	6504.34	35.54	ND		6468.80
MW-2	06/22/03	6504.34	35.60	ND		6468.74
MW-2	09/15/03	6504.34	35.60	ND		6468.74
MW-2	12/15/03	6504.34	35.63	ND		6468.71
MW-2	03/22/04	6504.34	35.41	ND		6468.93
MW-2	06/04/04	6504.34	35.31	ND		6469.03
MW-2	09/14/04	6504.34	35.80	ND		6468.54
MW-2	12/15/04	6504.34	35.79	ND		6468.55
MW-2	03/22/05	6504.34	35.63	ND		6468.71
MW-2	06/24/05	6504.34	35.60	ND		6468.74
MW-2	09/14/05	6504.34	35.92	ND		6468.42
MW-2	12/14/05	6504.34	35.85	ND		6468.49
MW-2	12/15/05	6504.34	35.85	ND		6468.49
MW-2	03/28/06	6504.34	35.73	ND		6468.61
MW-2	06/07/06	6504.34	35.73	ND		6468.61
MW-2	09/29/06	6504.34	35.91	ND		6468.43
MW-2	12/26/06	6504.34	35.63	ND		6468.71
MW-2	03/26/07	6504.34	35.41	ND		6468.93
MW-2	06/13/07	6504.34	35.32	ND		6469.02
MW-2	09/28/07	6504.34	35.93	ND		6468.41
MW-2	12/18/07	6504.34	35.32	ND		6469.02
MW-2	03/05/08	6504.34	35.22	ND		6469.12
MW-2	06/16/08	6504.34	35.15	ND		6469.19
MW-2	09/10/08	6504.34	35.45	ND		6468.89
MW-2	12/10/08	6504.34	35.37	ND		6468.97
MW-2	03/02/09	6504.34	35.27	ND		6469.07
MW-2	06/10/09	6504.34	35.23	ND		6469.11
MW-2	08/25/09	6504.34	35.58	ND		6468.76
MW-2	11/03/09	6504.34	35.65	ND		6468.69
MW-2	02/16/10	6504.34	35.65	ND		6468.69
MW-2	06/02/10	6504.34	35.48	ND		6468.86
MW-2	09/27/10	6504.34	35.85	ND		6468.49
MW-2	11/08/10	6504.34	35.85	ND		6468.49
MW-2	02/01/11	6504.34	35.75	ND		6468.59
MW-2	09/23/11	6504.34	36.07	ND		6468.27
MW-2	11/10/11	6504.34	36.08	ND		6468.26
MW-2	02/22/12	6504.34	36.97	ND		6467.37
MW-2	05/15/12	6504.34	36.10	ND		6468.24
MW-2	06/05/13	6504.34	36.18	ND		6468.16
MW-2	09/10/13	6504.34	36.58	ND		6467.76
MW-2	12/10/13	6504.34	36.44	ND		6467.90
MW-2	04/04/14	6504.34	35.25	ND		6469.09
MW-2	10/22/14	6504.34	36.65	ND		6467.69
MW-2	05/28/15	6504.34	36.02	ND		6468.32
MW-2	11/21/15	6504.34	36.20	ND		6468.14

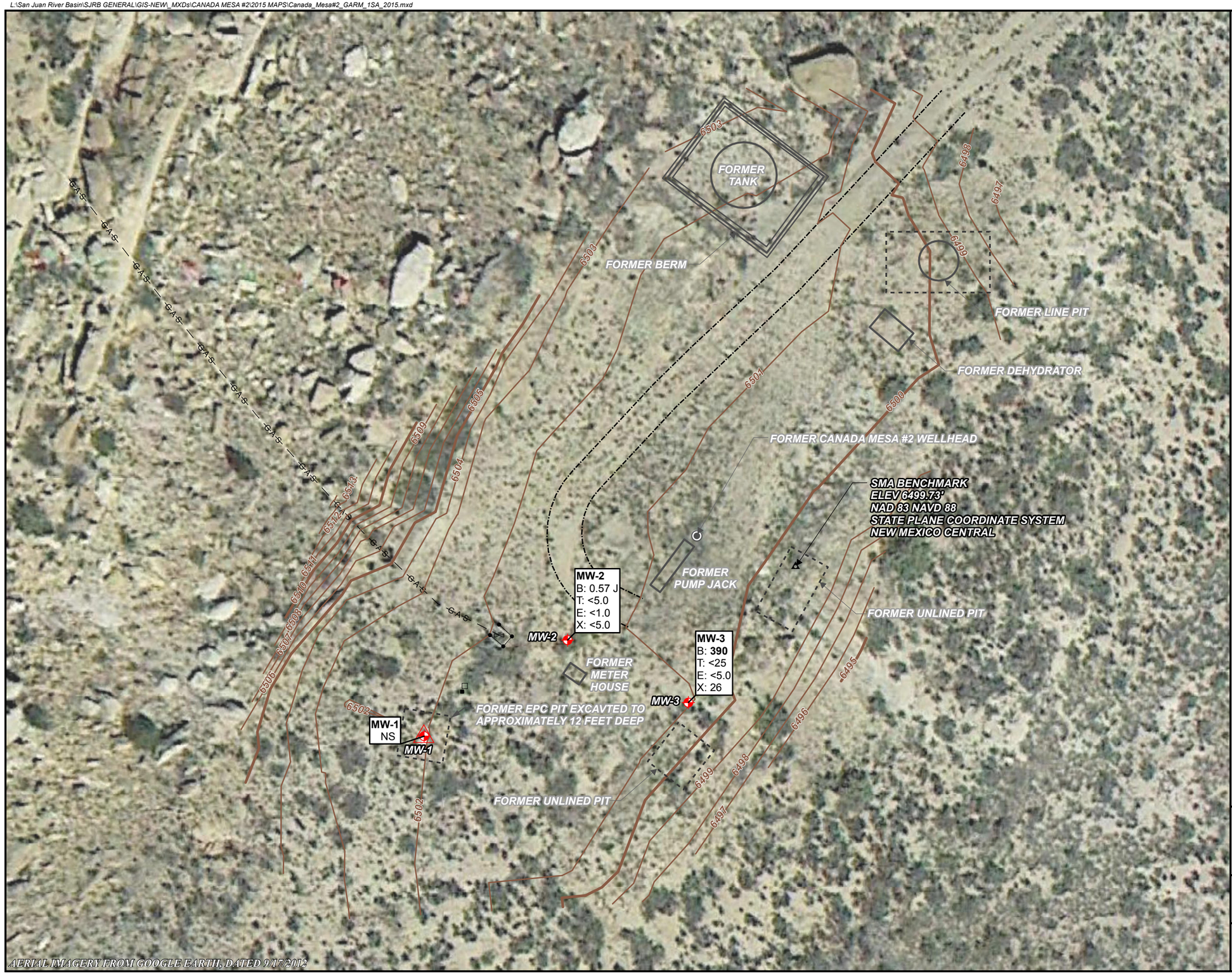
TABLE 2- GROUNDWATER ELEVATION RESULTS

Canada Mesa #2						
Location	Date	TOC	Depth to Water (ft.)	Depth to LNAPL (ft.)	LNAPL Thickness (ft.)	GW Elevation (ft.)
MW-3	11/16/00	6503.67	34.46	NR		6469.21
MW-3	06/04/01	6503.67	34.64	NR		6469.03
MW-3	07/03/01	6503.67	34.66	NR		6469.01
MW-3	08/06/01	6503.67	34.74	NR		6468.93
MW-3	08/31/01	6503.67	34.79	NR		6468.88
MW-3	09/14/01	6503.67	34.81	NR		6468.86
MW-3	03/19/02	6503.67	34.92	NR		6468.75
MW-3	06/10/02	6503.67	34.98	NR		6468.69
MW-3	09/23/02	6503.67	35.11	NR		6468.56
MW-3	12/24/02	6503.67	35.15	NR		6468.52
MW-3	03/25/03	6503.67	35.12	ND		6468.55
MW-3	06/22/03	6503.67	35.17	ND		6468.50
MW-3	09/15/03	6503.67	35.41	ND		6468.26
MW-3	12/15/03	6503.67	35.17	ND		6468.50
MW-3	03/22/04	6503.67	34.95	ND		6468.72
MW-3	06/04/04	6503.67	34.88	ND		6468.79
MW-3	09/14/04	6503.67	35.39	ND		6468.28
MW-3	12/15/04	6503.67	35.17	ND		6468.50
MW-3	03/22/05	6503.67	35.17	ND		6468.50
MW-3	06/24/05	6503.67	35.21	ND		6468.46
MW-3	09/14/05	6503.67	35.51	ND		6468.16
MW-3	12/15/05	6503.67	35.40	ND		6468.27
MW-3	03/28/06	6503.67	35.27	ND		6468.40
MW-3	06/07/06	6503.67	35.32	ND		6468.35
MW-3	09/29/06	6503.67	35.47	ND		6468.20
MW-3	12/26/06	6503.67	35.16	ND		6468.51
MW-3	03/26/07	6503.67	34.96	ND		6468.71
MW-3	06/13/07	6503.67	34.88	ND		6468.79
MW-3	09/28/07	6503.67	35.51	ND		6468.16
MW-3	12/18/07	6503.67	34.88	ND		6468.79
MW-3	03/05/08	6503.67	34.79	ND		6468.88
MW-3	06/16/08	6503.67	34.75	ND		6468.92
MW-3	09/10/08	6503.67	35.13	ND		6468.54
MW-3	12/10/08	6503.67	34.95	ND		6468.72
MW-3	03/02/09	6503.67	34.83	ND		6468.84
MW-3	06/10/09	6503.67	34.83	ND		6468.84
MW-3	08/25/09	6503.67	35.18	ND		6468.49
MW-3	11/03/09	6503.67	35.23	ND		6468.44
MW-3	02/16/10	6503.67	35.23	ND		6468.44
MW-3	06/02/10	6503.67	35.05	ND		6468.62
MW-3	09/27/10	6503.67	35.43	ND		6468.24
MW-3	11/08/10	6503.67	35.43	ND		6468.24
MW-3	02/01/11	6503.67	35.31	ND		6468.36
MW-3	09/23/11	6503.67	35.70	ND		6467.97
MW-3	11/10/11	6503.67	35.66	ND		6468.01
MW-3	02/22/12	6503.67	35.60	ND		6468.07
MW-3	05/15/12	6503.67	35.67	ND		6468.00
MW-3	06/05/13	6503.67	35.79	ND		6467.88
MW-3	09/10/13	6503.67	36.20	ND		6467.47
MW-3	12/10/13	6503.67	36.00	ND		6467.67
MW-3	04/04/14	6503.67	35.81	ND		6467.86
MW-3	10/22/14	6503.67	36.20	ND		6467.47
MW-3	05/28/15	6503.67	35.55	ND		6468.12
MW-3	11/21/15	6503.67	35.74	ND		6467.93

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

FIGURES

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\CANADA MESA #2\2015 MAPS\Canada_Mesa#2_GARM_1SA_2015.mxd



AERIAL IMAGERY FROM GOOGLE EARTH, DATED 9/17/2012

LEGEND:

- 6503 — APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- GAS — NATURAL GAS LINE
- FORMER WELLHEAD
- MONITORING WELL
- MONITORING WELL WITH MEASUREABLE FREE PRODUCT
- 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
J = RESULT IS LESS THAN THE RL, BUT GREATER THAN OR EQUAL TO THE MDL AND THE CONCENTRATION IS AN APPROXIMATE VALUE.
MDL = METHOD DETECTION LIMIT
RL = REPORTING LIMIT OR REQUESTED LIMIT (RADIOCHEMISTRY)

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	2/8/2016	CCL	CCL	SRV

TITLE:

GROUNDWATER ANALYTICAL RESULTS SAMPLED MAY 28, 2015

PROJECT:

CANADA MESA #2
SAN JUAN RIVER BASIN
RIO ARRIBA COUNTY, NEW MEXICO

MWH

Figure No.: 1

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\CANADA MESA #2\2015 MAPS\Canada_Mesa#2_GECM_1SA_2015.mxd

FORMER TANK
FORMER BERM
FORMER LINE PIT
FORMER DEHYDRATOR
FORMER CANADA MESA #2 WELLHEAD
SMA BENCHMARK
ELEV 6499.73'
NAD 83 NAVD 88
STATE PLANE COORDINATE SYSTEM
NEW MEXICO CENTRAL
FORMER PUMP JACK
FORMER UNLINED PIT
FORMER METER HOUSE
FORMER EPC PIT EXCAVTED TO APPROXIMATELY 12 FEET DEEP
FORMER UNLINED PIT
MW-1 6468.41
MW-2 6468.32
MW-3 6468.12
6468.14
6468.35
6468.3
6468.25
6468.2
6468.15
6503
6499
6497
6501
6500
6509
6505
6504
6513
6512
6511
6510
6508
6507
6506
6502
6495
6496
6498
GAS

AERIAL IMAGERY FROM GOOGLE EARTH, DATED 9/17/2012

LEGEND:

- 6503 — APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- GAS — NATURAL GAS LINE
- FORMER WELLHEAD
- MONITORING WELL
- MONITORING WELL WITH MEASUREABLE FREE PRODUCT
- SMA BENCHMARK

NOTES:

6468.12 GROUNDWATER ELEVATION (CORRECTED FOR PRODUCT THICKNESS WHEN PRESENT) FEET ABOVE MEAN SEA LEVEL

6468.15 CORRECTED WATER LEVEL ELEVATION CONTOUR DASHED WHERE INFERRED (FEET ABOVE MEAN SEA LEVEL, 0.05 FOOT CONTOUR INTERVAL)

DIRECTION OF GROUNDWATER FLOW

N

SCALE IN FEET
0 30 60

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
A	2/8/2016	CCL	CCL	SRV

TITLE:

GROUNDWATER ELEVATION MAP
MAY 28, 2015

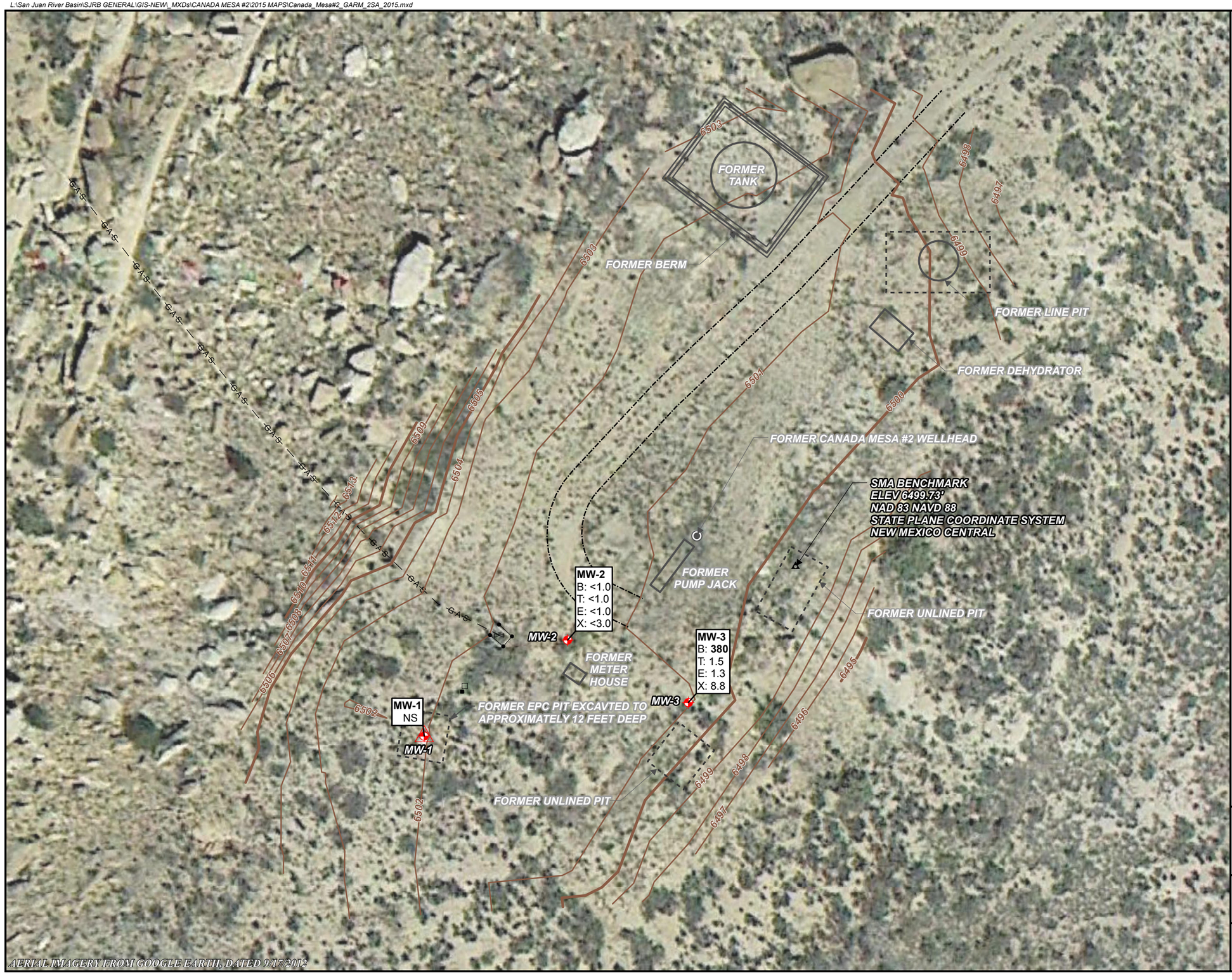
PROJECT:

CANADA MESA #2
SAN JUAN RIVER BASIN
RIO ARRIBA COUNTY, NEW MEXICO

MWH

Figure No.: 2

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\CANADA MESA #2\2015 MAPS\Canada_Mesa#2_GARM_2SA_2015.mxd



AERIAL IMAGERY FROM GOOGLE EARTH, DATED 9/17/2012

LEGEND:

- 6503 — APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- GAS — NATURAL GAS LINE
- FORMER WELLHEAD
- MONITORING WELL
- MONITORING WELL WITH MEASUREABLE FREE PRODUCT
- 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
J = RESULT IS LESS THAN THE RL, BUT GREATER THAN OR EQUAL TO THE MDL AND THE CONCENTRATION IS AN APPROXIMATE VALUE.
MDL = METHOD DETECTION LIMIT
RL = REPORTING LIMIT OR REQUESTED LIMIT (RADIOCHEMISTRY)

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	2/8/2016	CCL	CCL	SRV

TITLE:

GROUNDWATER ANALYTICAL RESULTS
NOVEMBER 21, 2015

PROJECT:

CANADA MESA #2
SAN JUAN RIVER BASIN
RIO ARRIBA COUNTY, NEW MEXICO

MWH

Figure No.: 3

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\CANADA MESA #2\2015 MAPS\Canada_Mesa#2_GECM_2SA_2015.mxd

LEGEND:

- 6503 — APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- G A S — NATURAL GAS LINE
- FORMER WELLHEAD
- MONITORING WELL
- MONITORING WELL WITH MEASUREABLE FREE PRODUCT
- SMA BENCHMARK

NOTES:

6467.93 GROUNDWATER ELEVATION (CORRECTED FOR PRODUCT THICKNESS WHEN PRESENT) FEET ABOVE MEAN SEA LEVEL

6468.15 CORRECTED WATER LEVEL ELEVATION CONTOUR DASHED WHERE INFERRED (FEET ABOVE MEAN SEA LEVEL, 0.05 FOOT CONTOUR INTERVAL)

DIRECTION OF GROUNDWATER FLOW

FORMER TANK
FORMER BERM
FORMER LINE PIT
FORMER DEHYDRATOR
FORMER CANADA MESA #2 WELLHEAD
SMA BENCHMARK
ELEV 6499.73'
NAD 83 NAVD 88
STATE PLANE COORDINATE SYSTEM
NEW MEXICO CENTRAL
FORMER PUMP JACK
FORMER UNLINED PIT
FORMER METER HOUSE
FORMER EPC PIT EXCAVTED TO APPROXIMATELY 12 FEET DEEP
FORMER UNLINED PIT

MW-1 6468.22
MW-2 6468.14
MW-3 6467.93

AERIAL IMAGERY FROM GOOGLE EARTH, DATED 9/17/2012

N

SCALE IN FEET
0 30 60

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
	2/8/2016	CCL	CCL	SRV

TITLE:

GROUNDWATER ELEVATION MAP
NOVEMBER 21, 2015

PROJECT:

CANADA MESA #2
SAN JUAN RIVER BASIN
RIO ARRIBA COUNTY, NEW MEXICO

MWH

Figure No.: 4

APPENDIX A

JUNE 15, 2015 GROUNDWATER SAMPLING ANALYTICAL REPORT
DECEMBER 14, 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: 400-106338-1
Client Project/Site: NM- GW Pits, Canada Mesa #2

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

Attn: Ms. Sarah Gardner

Authorized for release by:
6/15/2015 5:44:46 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, Canada Mesa #2

TestAmerica Job ID: 400-106338-1

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)

Case Narrative

Client: MWH Americas Inc
Project/Site: NM- GW Pits, Canada Mesa #2

TestAmerica Job ID: 400-106338-1

Job ID: 400-106338-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-106338-1

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 0.5º 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, Canada Mesa #2

TestAmerica Job ID: 400-106338-1

Client Sample ID: CANADA MESA #2 MW-2 — Lab Sample ID: 400-106338-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.57	J	1.0	0.56	ug/L	1		8021B	Total/NA

Client Sample ID: CANADA MESA #2 MW-3 — Lab Sample ID: 400-106338-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	390		5.0	2.8	ug/L	5		8021B	Total/NA
Xylenes, Total	26		25	8.5	ug/L	5		8021B	Total/NA

Client Sample ID: CANADA MESA #2 TRIP BLANK — Lab Sample ID: 400-106338-3

No Detections.

This Detection Summary does not include radiochemical test results.

Sample Summary

Client: MWH Americas Inc
Project/Site: NM- GW Pits, Canada Mesa #2

TestAmerica Job ID: 400-106338-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-106338-1	CANADA MESA #2 MW-2	Water	05/28/15 12:50	05/30/15 09:13
400-106338-2	CANADA MESA #2 MW-3	Water	05/28/15 12:55	05/30/15 09:13
400-106338-3	CANADA MESA #2 TRIP BLANK	Water	05/28/15 12:35	05/30/15 09:13

Client: MWH Americas Inc
Project/Site: NM- GW Pits, Canada Mesa #2

TestAmerica Job ID: 400-106338-1

Client Sample ID: CANADA MESA #2 MW-2
Date Collected: 05/28/15 12:50
Date Received: 05/30/15 09:13

Lab Sample ID: 400-106338-1
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.57**	**J**	1.0	0.56	ug/L			06/05/15 03:32	1
Ethylbenzene	<1.0		1.0	0.64	ug/L			06/05/15 03:32	1
Toluene	<5.0		5.0	0.98	ug/L			06/05/15 03:32	1
Xylenes, Total	<5.0		5.0	1.7	ug/L			06/05/15 03:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*100*		*78 - 124*		*06/05/15 03:32*	*1*

Client Sample ID: CANADA MESA #2 MW-3

Lab Sample ID: 400-106338-2

Date Collected: 05/28/15 12:55

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	**390**		5.0	2.8	ug/L			06/04/15 22:16	5
Ethylbenzene	<5.0		5.0	3.2	ug/L			06/04/15 22:16	5
Toluene	<25		25	4.9	ug/L			06/04/15 22:16	5
Xylenes, Total	**26**		25	8.5	ug/L			06/04/15 22:16	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*91*		*78 - 124*		*06/04/15 22:16*	*5*

Client: MWH Americas Inc
Project/Site: NM- GW Pits, Canada Mesa #2

TestAmerica Job ID: 400-106338-1

Client Sample ID: CANADA MESA #2 TRIP BLANK
Date Collected: 05/28/15 12:35
Date Received: 05/30/15 09:13

Lab Sample ID: 400-106338-3
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			06/05/15 04:03	1
Ethylbenzene	<1.0		1.0	0.64	ug/L			06/05/15 04:03	1
Toluene	<5.0		5.0	0.98	ug/L			06/05/15 04:03	1
Xylenes, Total	<5.0		5.0	1.7	ug/L			06/05/15 04:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*96*		*78 - 124*		*06/05/15 04:03*	*1*

QC Association Summary

Client: MWH Americas Inc
Project/Site: NM- GW Pits, Canada Mesa #2

TestAmerica Job ID: 400-106338-1

GC VOA

Analysis Batch: 259823

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-106338-1	CANADA MESA #2 MW-2	Total/NA	Water	8021B	
400-106338-2	CANADA MESA #2 MW-3	Total/NA	Water	8021B	
400-106338-3	CANADA MESA #2 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	

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*

Lab Chronicle

Client: MWH Americas Inc
Project/Site: NM- GW Pits, Canada Mesa #2

TestAmerica Job ID: 400-106338-1

Client Sample ID: CANADA MESA #2 MW-2

Lab Sample ID: 400-106338-1
Date Collected: 05/28/15 12:50
Matrix: Water
Date Received: 05/30/15 09:13

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 03:32	MKA	TAL PEN
	Instrument ID: CH_PAULA									

Client Sample ID: CANADA MESA #2 MW-3

Lab Sample ID: 400-106338-2
Date Collected: 05/28/15 12:55
Matrix: Water
Date Received: 05/30/15 09:13

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	259823	06/04/15 22:16	MKA	TAL PEN
	Instrument ID: CH_PAULA									

Client Sample ID: CANADA MESA #2 TRIP BLANK

Lab Sample ID: 400-106338-3
Date Collected: 05/28/15 12:35
Matrix: Water
Date Received: 05/30/15 09:13

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 04:03	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, Canada Mesa #2

TestAmerica Job ID: 400-106338-1

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, Canada Mesa #2

TestAmerica Job ID: 400-106338-1

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

400-106338

SERIAL NUMBER: 80200

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 Canada Mesa #2	40005479	Steve Versa	NM

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

CLIENT PHONE	CLIENT E-MAIL OR FAX
303 291-2239	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

8021B - BTEX

400-106338 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
5/28/15	1250	Canada Mesa #2	MW-2		X									X				2
5/28/15	1255	Canada Mesa #2	MW-3		X									X				2
5/28/15	1235	Canada Mesa #2	TRIP BLANK		X									X				2

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
EMPTY CONTAINERS				5/27/15	1630			
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:
	5/30/15	0913	△ YES △ NO		IR6 0.5°C

TAL-8251 (1207)

Login Sample Receipt Checklist

Client: MWH Americas Inc

Job Number: 400-106338-1

Login Number: 106338
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	0.5°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 <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: 400-114304-1
Client Project/Site: Canada Mesa #2

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

Attn: Ms. Sarah Gardner

Authorized for release by:
12/14/2015 7:17:01 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: Canada Mesa #2

TestAmerica Job ID: 400-114304-1

Qualifiers

GC VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits

Glossary

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

Job ID: 400-114304-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-114304-1

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 0.4º C, 0.8º C, 0.9º C, 0.9º C and 1.1º C.

GC VOA
Method 8021B: The following sample was collected in properly preserved vials for analysis of volatile organic compounds (VOCs). However, the pH was outside the required criteria when verified by the laboratory, and corrective action was not possible: MW-2 (400-114304-1).

Method 8021B: Surrogate recovery was high for the following samples, and were reanalyzed and confirmed in a subsequent run: MW-3 (400-114304-2). The confirmation samples, however, had pH = 7, despite being sent out as preserved vials. Being that the original runs were pH <2, the repeats were treated as unpreserved, with a holding time that had expired. Therefore, the sample with high surrogate have been qualified and reported:

Method 8021B: Surrogate recovery for the following samples in analytical batch 490-303336 was outside the upper control limit: MW-2 (400-114304-1). 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: Canada Mesa #2

TestAmerica Job ID: 400-114304-1

Client Sample ID: MW-2 — Lab Sample ID: 400-114304-1

No Detections.

Client Sample ID: MW-3 — Lab Sample ID: 400-114304-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Ethylbenzene	1.3		1.0		ug/L	1		8021B	Total/NA
Toluene	1.5		1.0		ug/L	1		8021B	Total/NA
Xylenes, Total	8.8		3.0		ug/L	1		8021B	Total/NA
Benzene	380		1.0		ug/L	1		8021B	Total/NA

Client Sample ID: TRIP BLANK — Lab Sample ID: 400-114304-3

No Detections.

This Detection Summary does not include radiochemical test results.

Sample Summary

Client: MWH Americas Inc
Project/Site: Canada Mesa #2

TestAmerica Job ID: 400-114304-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-114304-1	MW-2	Water	11/21/15 11:55	11/24/15 08:47
400-114304-2	MW-3	Water	11/21/15 11:50	11/24/15 08:47
400-114304-3	TRIP BLANK	Water	11/21/15 12:00	11/24/15 08:47

Client: MWH Americas Inc
Project/Site: Canada Mesa #2

TestAmerica Job ID: 400-114304-1

Client Sample ID: MW-2
Date Collected: 11/21/15 11:55
Date Received: 11/24/15 08:47

Lab Sample ID: 400-114304-1
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	<1.0		1.0		ug/L			12/03/15 08:04	1
Toluene	<1.0		1.0		ug/L			12/03/15 08:04	1
Xylenes, Total	<3.0		3.0		ug/L			12/03/15 08:04	1
Benzene	<1.0		1.0		ug/L			12/03/15 08:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*356*	*X*	*50 - 150*		*12/03/15 08:04*	*1*

Client: MWH Americas Inc
Project/Site: Canada Mesa #2

TestAmerica Job ID: 400-114304-1

Client Sample ID: MW-3
Date Collected: 11/21/15 11:50
Date Received: 11/24/15 08:47

Lab Sample ID: 400-114304-2
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	1.3		1.0		ug/L			12/03/15 01:57	1
Toluene	1.5		1.0		ug/L			12/03/15 01:57	1
Xylenes, Total	8.8		3.0		ug/L			12/03/15 01:57	1
Benzene	380		1.0		ug/L			12/03/15 01:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*194*	*X*	*50 - 150*		*12/03/15 01:57*	*1*

Client: MWH Americas Inc
Project/Site: Canada Mesa #2

TestAmerica Job ID: 400-114304-1

Client Sample ID: TRIP BLANK
Date Collected: 11/21/15 12:00
Date Received: 11/24/15 08:47

Lab Sample ID: 400-114304-3
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	<1.0		1.0		ug/L			12/02/15 17:45	1
Toluene	<1.0		1.0		ug/L			12/02/15 17:45	1
Xylenes, Total	<3.0		3.0		ug/L			12/02/15 17:45	1
Benzene	<1.0		1.0		ug/L			12/02/15 17:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*82*		*50 - 150*		*12/02/15 17:45*	*1*

QC Association Summary

Client: MWH Americas Inc
Project/Site: Canada Mesa #2

TestAmerica Job ID: 400-114304-1

GC VOA

Analysis Batch: 303336

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-114304-1	MW-2	Total/NA	Water	8021B	
400-114304-2	MW-3	Total/NA	Water	8021B	
400-114304-3	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	

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	MDL	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 Chronicle

Client: MWH Americas Inc
Project/Site: Canada Mesa #2

TestAmerica Job ID: 400-114304-1

Client Sample ID: MW-2

Lab Sample ID: 400-114304-1
Matrix: Water
Date Collected: 11/21/15 11:55
Date Received: 11/24/15 08:47

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 08:04	AMC	TAL NSH
	Instrument ID: HP15									

Client Sample ID: MW-3

Lab Sample ID: 400-114304-2
Matrix: Water
Date Collected: 11/21/15 11:50
Date Received: 11/24/15 08:47

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 01:57	AMC	TAL NSH
	Instrument ID: HP15									

Client Sample ID: TRIP BLANK

Lab Sample ID: 400-114304-3
Matrix: Water
Date Collected: 11/21/15 12:00
Date Received: 11/24/15 08:47

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 17:45	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: Canada Mesa #2

TestAmerica Job ID: 400-114304-1

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.

Certification Summary

Client: MWH Americas Inc
Project/Site: Canada Mesa #2

TestAmerica Job ID: 400-114304-1

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: Canada Mesa #2

TestAmerica Job ID: 400-114304-1

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

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: 400-50143-21695.1
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:			Preservation Codes:
City: Denver	TAT Requested (days): Standard			A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)
State, Zip: CO, 80202	PO #: Purchase Order Requested			
Phone: 303-291-2239(Tel)	WO #:			Other:
Email: sarah.gardner@mwhglobal.com	Project #: 40005479			
Project Name: Canada Mesa #2	SSOW#:			
Site: Canada Mesa #2				

400-114304 COC

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8021B - BTEX 8021	Total Number of containers	Special Instructions/Note:
Preservation Code:					X	X	A		
				Water			X X X		SLG
MW-2	11/21/2015	1155	G	Water	N	N	2	2	
MW-3	11/21/2015	1150	G	Water	N	N	2	2	
TRIP BLANK	11/21/2015	1200	G	Water	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
[signature]	11/23/2015 800	MWH			
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
			[signature]		
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
				11/24/15 0847	

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

Cooler Temperature(s) °C and Other Remarks: IR-6 1.1/0.9/0.8/0.4/0.5

Login Sample Receipt Checklist

Client: MWH Americas Inc

Job Number: 400-114304-1

Login Number: 114304
List Number: 1
Creator: Menoher, Rachel C

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	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 <6mm (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: 400-114304-1

Login Number: 114304
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 </= 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 <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	