3R - 155

2013 AGWMR

04 / 03 / 2014

MWH

BUILDING A BETTER WORLD

March 4, 2014

Mr. Glenn von Gonten
New Mexico Oil Conservation Division (NMOCD)
1220 South St., Francis Drive
Santa Fe, NM 87505

RE: 2013 Annual Report Submittals
San Juan River Basin Program - Pit Sites

Dear Mr. von Gonten

On behalf of El Paso CGP Company (EPCGPC), MWH is submitting the enclosed 2013 Annual Reports for 18 of its remaining San Juan River Basin pit groundwater remediation sites. The reports present the 2013 sampling data and planned activities for 2014 at these sites.

If you have any questions concerning the enclosed reports, please contact either Joe Wiley (representing EPCGPC) at 713-420-3475 or me at 515-253-0830.

Sincerely,

David C. Wombacher
Principal Engineer

/mja:dcw:hls
Enclosures
cc: Bill Freeman – NNEPA, Shiprock, NM (Navajo Nation Lands, See Table 1)
Mark Kelly – BLM, Farmington, NM (Federal Lands, See Table 1)
Brandon Powell – NMOCD, Aztec, NM (all 18 reports)
Joe Wiley – EPCGP Company (all 18 reports, electronic)

P:\Word Processing\EL PASO\NEW MEXICO\SAN JUAN RIVER BASIN PROGRAM\PIT SITES\LTR-03-14-2013 ANNUAL REPORT SUBMITTALS\Ltr-03-14-von Gonten-2013 Annual Report Submittals.docx

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TABLE 1

REPORT LISTING AND LAND TYPE
SAN JUAN RIVER BASIN PROGRAM – PIT SITES

METER or LINE ID	NMOCD CASE NO.	SITE NAME	Land Type
87640	3RP-155-0	Canada Mesa #2	Federal
89961	3RP-170-0	Fields A#7A	Federal
73220	3RP-068-0	Fogelson 4-1 Com. #14	Federal
95608	3RP-407-0	Gallegos Canyon Unit #124E	Navajo
03906	3RP-179-0	GCU Com A #142E	State/Fee
89894	3RP-186-0	Hammond #41A	Federal
94715	3RP-196-0	James F. Bell #1E	Federal
70194	3RP-201-0	Johnston Fed #4	State/Fee
89232	3RP-202-0	Johnston Fed #6A	Federal
LD072	3RP-204-0	K27 LD072	Federal
LD087	3RP-205-0	K-31 Line Drip	State/Fee
72556	3RP-207-0	Knight #1	State/Fee
LD174	3RP-212-0	Lateral L 40	Federal
LD151	3RP-213-0	Lateral 0-21 Line Drip	Federal
94810	3RP-223-0	Miles Fed 1A	Federal
89620	3RP-235-0	Sandoval GC A #1A	Federal
70445	3RP-074-0	Standard Oil Com #1	State/Fee
71669	3RP-239-0	State Gas Com N #1	State/Fee

2013 ANNUAL GROUNDWATER REPORT

Canada Mesa #2
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

This site is being 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 has been observed and recovered from MW-1 periodically. Free product was observed at MW-1 during one site visit in 2013.

SUMMARY OF 2013 ACTIVITIES

In July 2013, a site survey was completed to re-develop a base site map and to confirm the accuracy of existing monitoring well elevations and locations.

On June 5, September 9, and December 10, 2013, water levels and free product thickness, if present, were gauged at MW-1, MW-2, and MW-3 and groundwater samples were collected from each well using a HydraSleeve™ (HydraSleeve); a disposable, no-purge passive groundwater sampling device. 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 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 Test America Laboratories in Corpus Christi, Texas where they were analyzed for benzene, toluene, ethylbenzene, and total xylenes (BTEX). A selective free product recovery sock kit was removed from monitoring well MW-1 during the June 2013 monitoring event. Additional field parameters were collected including dissolved oxygen, temperature, conductivity, pH, and ORP using a YSI multi-parameter instrument, if free product was not present. The de minimis water remaining in HydraSleeves was combined in a waste container and transferred to an off-site 55-gallon drum for later disposal by Safety-Kleen.

2013 ANNUAL GROUNDWATER REPORT

Canada Mesa #2
Meter Code: 87640
T24N, R6W, Sec 24, Unit I

SUMMARY TABLES

Historic analytical and water level data are summarized in Table 1. 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, 3, and 5) and groundwater elevation contour maps (Figures 2, 4, and 6) summarize the results of the 2013 groundwater sampling and gauging events.

ANALYTICAL LAB REPORTS

Th groundwater analytical lab reports are included as Appendix A.

RESULTS

- The groundwater flow direction was observed to be generally to the southwest at the Site, though groundwater elevations indicate a flow direction to the east-southeast during the fourth quarter of 2013 (see Figures 2, 4, and 6).

- Approximately 0.10 foo of free product was detected in MW-1 during the December 2013 sampling event. Concentrations of benzene and total xylenes in groundwater collected from MW-1 remained above the New Mexico Water Quality Control Commission (NMWQCC) standards for all three events. Toluene was detected above standard during the June and September sampling events. Ethylbenzene was below NMWQCC's standards in MW-1 for all three sampling events.

- For MW-2, benzene was reported as non-detect, significantly below the standard (0.22 ug/L), or below the laboratory quantification limit (J-flagged) in 2013. Tolulene, ethylbenzene, and xylenes constituents were not detected at MW-2 during 2013.

- The benzene concentration in groundwater samples collected from MW-3 remained above the NMWQCC standard for all three sampling events. Toluene, ethylbenzene and total xylenes concentrations were reported at least an order of magnitude below their respective NMWQCC standards for all three sampling events.

PLANNED FUTURE ACTIVITIES

The installation of additional monitoring wells is planned, to further assess the extent of the dissolved phase hydrocarbons and to confirm and/or further define the groundwater gradient at the Site. MW-1, MW-2, and MW-3, and the newly installed monitoring wells will be sampled on a semi-annual basis following the completion of a Site access agreement with the current Site operator.

TABLE

TABLE 1 – GROUNDWATER ANALYTICAL AND WATER LEVEL RESULTS

TABLE 1 - GROUNDWATER ANALYTICAL RESULTS

Canada Mesa #2								
Location	**Date**	**Benzene (µg/L)**	**Toluene (µg/L)**	**Ethylbenzene (µg/L)**	**Total Xylenes (µg/L)**	**Depth to Water (ft.)**	**Depth to LNAPL (ft.)**	**LNAPL Thickness (ft.)**
NMWQCC Standards:		10	750	750	620	NA	NA	NA
MW-1	11/04/96	5520	8880	469	3920	34.42	33.67	0.75
MW-1	02/05/97	3450	5200	214	1770	34.35	33.64	0.71
MW-1	05/07/97	4650	8440	317	2580	34.24	33.61	0.63
MW-1	01/09/00					33.93	33.79	0.14
MW-1	01/26/00					35.22	35.03	0.19
MW-1	02/15/00					35.11	34.93	0.18
MW-1	10/06/00					34.11	33.82	0.29
MW-1	11/14/00					33.98	33.81	0.17
MW-1	01/03/01					33.96	33.83	0.13
MW-1	01/15/01					33.93	33.78	0.15
MW-1	01/22/01					33.81	-	-
MW-1	01/30/01					33.83	33.82	0.01
MW-1	02/13/01					33.80	-	-
MW-1	02/20/01					33.81	-	-
MW-1	02/28/01					33.81	-	-
MW-1	06/04/01					34.13	33.81	0.32
MW-1	07/03/01					34.09	33.96	0.13
MW-1	08/06/01					34.08	34.07	0.01
MW-1	08/20/01					34.10	34.09	0.01
MW-1	08/31/01					34.17	-	-
MW-1	09/14/01					34.14	34.13	0.01
MW-1	09/26/01					34.15	34.14	0.01
MW-1	10/02/01					34.17	34.15	0.02
MW-1	10/10/01					34.18	34.16	0.02
MW-1	12/05/01					34.26	34.25	0.01
MW-1	12/14/01					34.27	-	-
MW-1	12/21/01					34.24	-	-
MW-1	12/28/01					34.22	-	-
MW-1	01/02/02					34.23	-	-
MW-1	01/07/02					34.25	34.23	0.02
MW-1	01/23/02					34.42	34.37	0.05
MW-1	01/30/02					34.51	34.50	0.01
MW-1	02/07/02					34.50	34.49	0.01
MW-1	02/14/02					34.42	34.41	0.01
MW-1	02/20/02					35.00	34.99	0.01
MW-1	02/26/02					34.25	-	-
MW-1	03/07/02					34.25	34.24	0.01
MW-1	03/12/02					34.25	34.24	0.01
MW-1	03/28/02					34.27	-	-
MW-1	04/03/02					34.26	-	-
MW-1	04/25/02					34.45	-	-
MW-1	05/21/02					34.30	-	-
MW-1	06/10/02					34.32	-	-
MW-1	09/23/02					34.50	-	-
MW-1	03/25/03					34.50	-	-
MW-1	06/22/03					34.55	34.48	0.07
MW-1	09/15/03					34.97	34.65	0.32
MW-1	12/15/03					34.98	34.41	0.57
MW-1	03/17/04					34.80	34.24	0.56
MW-1	03/22/04					34.49	34.29	0.20
MW-1	06/03/04					34.44	34.30	0.14
MW-1	06/04/04					34.30	34.20	0.10
MW-1	09/13/04					35.30	34.64	0.66
MW-1	09/14/04					34.95	34.65	0.30
MW-1	12/15/04					35.32	34.74	0.58
MW-1	03/22/05					35.01	34.36	0.65
MW-1	06/24/05					34.97	34.39	0.58

TABLE 1 - GROUNDWATER ANALYTICAL RESULTS

Canada Mesa #2								
Location	**Date**	**Benzene (µg/L)**	**Toluene (µg/L)**	**Ethylbenzene (µg/L)**	**Total Xylenes (µg/L)**	**Depth to Water (ft.)**	**Depth to LNAPL (ft.)**	**LNAPL Thickness (ft.)**
NMWQCC Standards:		10	750	750	620	NA	NA	NA
MW-1	09/14/05					35.65	34.60	1.05
MW-1	12/14/05					35.05	34.74	0.31
MW-1	03/28/06					35.14	34.59	0.55
MW-1	06/07/06					35.11	34.52	0.59
MW-1	09/29/06					35.14	34.85	0.29
MW-1	12/26/06					34.85	34.44	0.41
MW-1	03/26/07					34.60	34.35	0.25
MW-1	06/13/07					35.39	34.20	1.19
MW-1	09/28/07					35.12	34.86	0.26
MW-1	12/18/07					34.34	34.18	0.16
MW-1	03/05/08					34.17	34.15	0.02
MW-1	06/16/08					34.17	-	-
MW-1	09/10/08					34.35	-	-
MW-1	12/10/08					34.30	-	-
MW-1	03/02/09					34.22	-	-
MW-1	06/10/09					35.14	-	-
MW-1	08/25/09					34.50	-	-
MW-1	11/03/09	1970	6020	359	6110	34.57	-	-
MW-1	02/16/10					34.57	34.54	0.03
MW-1	06/02/10					34.58	34.34	0.24
MW-1	09/27/10					35.26	34.71	0.55
MW-1	11/08/10	571	9070	1370	27200	34.98	34.73	0.25
MW-1	02/01/11					34.97	34.63	0.34
MW-1	05/02/11					-	35.52	-
MW-1	09/23/11					35.40	34.93	0.47
MW-1	11/10/11	1340	9510	1260	20800	35.21	34.95	0.26
MW-1	02/22/12					34.98	-	-
MW-1	05/15/12					35.04	-	-
MW-1	06/05/13	720	2200	92	4000	39.13	-	-
MW-1	09/10/13	570	1700	63	2900	36.50	-	-
MW-1	12/10/13	190	740	40	1000	35.45	35.35	0.10

TABLE 1 - GROUNDWATER ANALYTICAL RESULTS

Canada Mesa #2								
Location	**Date**	**Benzene (µg/L)**	**Toluene (µg/L)**	**Ethylbenzene (µg/L)**	**Total Xylenes (µg/L)**	**Depth to Water (ft.)**	**Depth to LNAPL (ft.)**	**LNAPL Thickness (ft.)**
NMWQCC Standards:		10	750	750	620	NA	NA	NA
MW-2	11/16/00	3200	330	1200	1100	34.90	-	-
MW-2	06/04/01					34.97	-	-
MW-2	07/03/01					35.07	-	-
MW-2	08/06/01					35.14	-	-
MW-2	08/31/01					35.19	-	-
MW-2	09/14/01					35.21	-	-
MW-2	03/19/02	22	<5	150	14	35.36	-	-
MW-2	12/24/02	12.1	2.1	129	16.4	35.52	-	-
MW-2	03/25/03					35.54	-	-
MW-2	06/22/03					35.60	-	-
MW-2	09/15/03					35.60	-	-
MW-2	12/15/03	10	11.7	55.3	29.7	35.63	-	-
MW-2	03/22/04					35.41	-	-
MW-2	06/04/04					35.31	-	-
MW-2	09/14/04					35.80	-	-
MW-2	12/15/04	6.3	3.8	8	5.9	35.79	-	-
MW-2	03/22/05					35.63	-	-
MW-2	06/24/05					35.60	-	-
MW-2	09/14/05					35.92	-	-
MW-2	12/14/05					35.85	-	-
MW-2	12/15/05	12.1	30.9	5.6	61.9	35.85	-	-
MW-2	03/28/06					35.73	-	-
MW-2	06/07/06					35.73	-	-
MW-2	09/29/06					35.91	-	-
MW-2	12/26/06	5.3	5	1.8	7.1	35.63	-	-
MW-2	03/26/07					35.41	-	-
MW-2	06/13/07					35.32	-	-
MW-2	09/28/07					35.93	-	-
MW-2	12/18/07	<2	<2	<2	<6	35.32	-	-
MW-2	03/05/08					35.22	-	-
MW-2	06/16/08					35.15	-	-
MW-2	09/10/08					35.45	-	-
MW-2	12/10/08	1.2	2.7	1.7	4.9	35.37	-	-
MW-2	03/02/09					35.27	-	-
MW-2	06/10/09					35.23	-	-
MW-2	08/25/09					35.58	-	-
MW-2	11/03/09	0.68 J	<1	<1	1.5 J	35.65	-	-
MW-2	02/16/10					35.65	-	-
MW-2	06/02/10					35.48	-	-
MW-2	09/27/10					35.85	-	-
MW-2	11/08/10	<2	<2	<2	<6	35.85	-	-
MW-2	02/01/11					35.75	-	-
MW-2	09/23/11					36.07	-	-
MW-2	11/10/11	1.1	<1	<1	1.4 J	36.08	-	-
MW-2	02/22/12					36.97	-	-
MW-2	05/15/12					36.10	-	-
MW-2	06/05/13	<0.140	<0.30	<0.20	<0.23	36.18	-	-
MW-2	09/10/13	0.22	<0.30	<0.020	<0.23	36.58	-	-
MW-2	12/10/13	0.24 J	<0.38	<0.20	<0.65	36.44	-	-

TABLE 1 - GROUNDWATER ANALYTICAL RESULTS

Canada Mesa #2								
Location	**Date**	**Benzene (µg/L)**	**Toluene (µg/L)**	**Ethylbenzene (µg/L)**	**Total Xylenes (µg/L)**	**Depth to Water (ft.)**	**Depth to LNAPL (ft.)**	**LNAPL Thickness (ft.)**
NMWQCC Standards:		10	750	750	620	NA	NA	NA
MW-3	11/16/00	880	1300	420	3700	34.46	-	-
MW-3	06/04/01					34.64	-	-
MW-3	07/03/01					34.66	-	-
MW-3	08/06/01					34.74	-	-
MW-3	08/31/01					34.79	-	-
MW-3	09/14/01					34.81	-	-
MW-3	03/19/02	1100	29	360	3700	34.92	-	-
MW-3	06/10/02					34.98	-	-
MW-3	09/23/02					35.11	-	-
MW-3	12/24/02	1430	95	483	2359	35.15	-	-
MW-3	03/25/03					35.12	-	-
MW-3	06/22/03					35.17	-	-
MW-3	09/15/03					35.41	-	-
MW-3	12/15/03	503 J	79.7 J	148 J	891 J	35.17	-	-
MW-3	03/22/04					34.95	-	-
MW-3	06/04/04					34.88	-	-
MW-3	09/14/04					35.39	-	-
MW-3	12/15/04	410	54.9	88.7	420	35.17	-	-
MW-3	03/22/05					35.17	-	-
MW-3	06/24/05					35.21	-	-
MW-3	09/14/05					35.51	-	-
MW-3	12/15/05	482	32.7	74.1	399	35.40	-	-
MW-3	03/28/06					35.27	-	-
MW-3	06/07/06					35.32	-	-
MW-3	09/29/06					35.47	-	-
MW-3	12/26/06	679	78.9	106	565	35.16	-	-
MW-3	03/26/07					34.96	-	-
MW-3	06/13/07					34.88	-	-
MW-3	09/28/07					35.51	-	-
MW-3	12/18/07	412	39.4	31.5	207	34.88	-	-
MW-3	03/05/08					34.79	-	-
MW-3	06/16/08					34.75	-	-
MW-3	09/10/08					35.13	-	-
MW-3	12/10/08	653	63.2	55.5	253	34.95	-	-
MW-3	03/02/09					34.83	-	-
MW-3	06/10/09					34.83	-	-
MW-3	08/25/09					35.18	-	-
MW-3	11/03/09	715	220	80	570	35.23	-	-
MW-3	02/16/10					35.23	-	-
MW-3	06/02/10					35.05	-	-
MW-3	09/27/10					35.43	-	-
MW-3	11/08/10	426	15	22.1	85.1	35.43	-	-
MW-3	02/01/11					35.31	-	-
MW-3	09/23/11					35.70	-	-
MW-3	11/10/11	167	5.3	16.5	54.3	35.66	-	-
MW-3	02/22/12					35.60	-	-
MW-3	05/15/12					35.67	-	-
MW-3	06/05/13	340	1.3	31.0	47.0	35.79	-	-
MW-3	09/10/13	340	0.9	12.0	4.2 J	36.20	-	-
MW-3	12/10/13	220	13	6.3	2.6 J	36.00	-	-

Notes:
Results highlighted yellow exceed their respective New Mexico Water Quality Control Comission 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).

FIGURES

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\CANADA MESA #2\2013 MAPS\Canada_Mesa#2_GARM_2Q_2013.mxd

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

LEGEND:

- 6503 — APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
- 6288.95 — CORRECTED GROUNDWATER ELEVATION CONTOUR
- ACCESS ROAD
- GAS — NATURAL GAS LINE
- 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
<0.30 = BELOW METHOD DETECTION LIMIT

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

N

SCALE IN FEET
0 30 60

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
A	10/25/2013	CCL	CCL	DAW

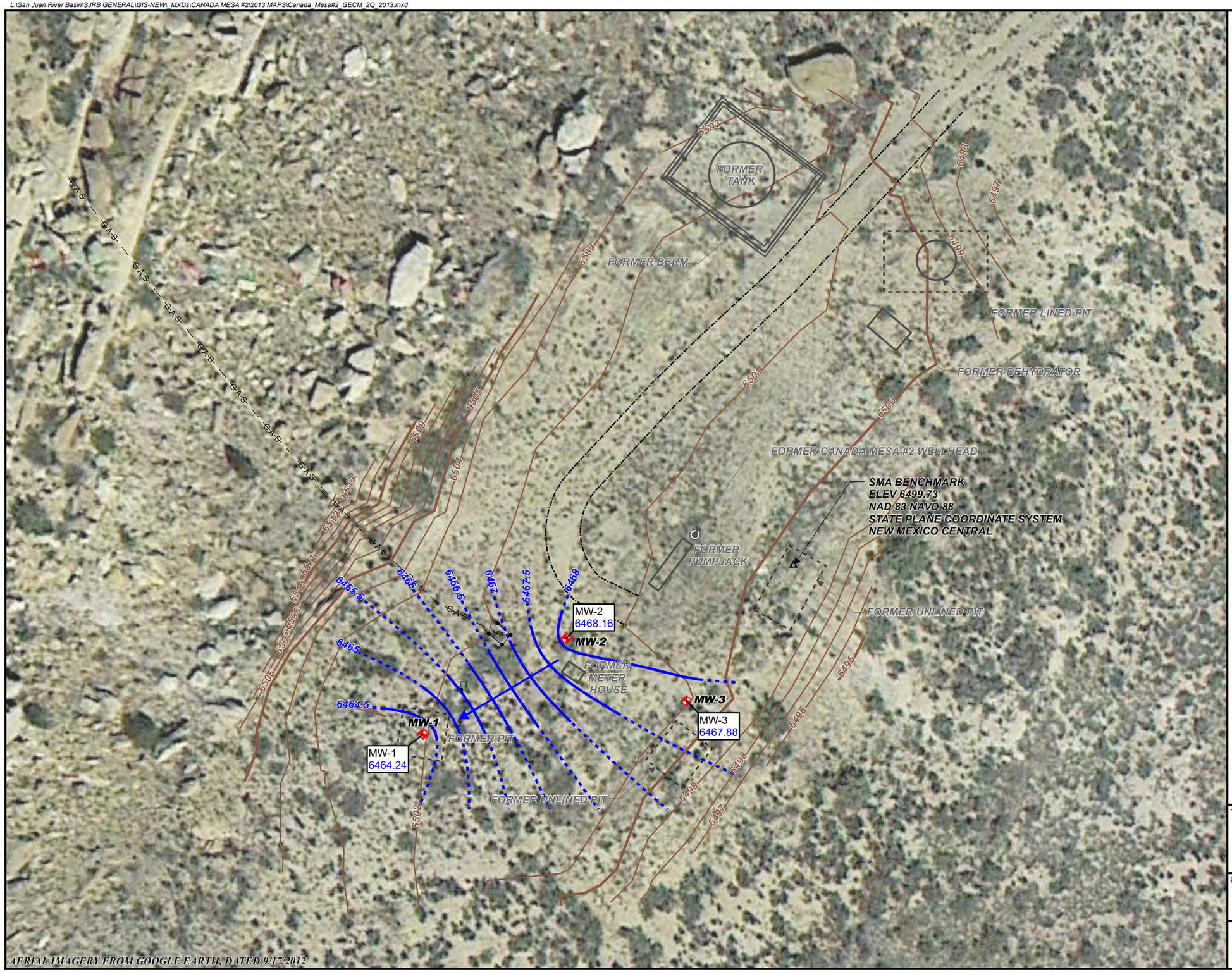
TITLE:
CANADA MESA #2
GROUNDWATER ANALYTICAL RESULTS
SAMPLED JUNE 5, 2013

PROJECT:
SAN JUAN RIVER BASIN
MONITORING AND REMEDIATION
RIO ARRIBA COUNTY, NEW MEXICO

MWH

Figure No.: 1

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\CANADA MESA #2\2013 MAPS\Canada_Mesa#2_GECM_2Q_2013.mxd



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

LEGEND:

- 6503 — APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- G A S — NATURAL GAS LINE
- MONITORING WELL
- SMA BENCHMARK

NOTES:

- 5318.24 — GROUNDWATER ELEVATION CORRECTED FOR PRODUCT THICKNESS. FEET ABOVE MEAN SEA LEVEL
- 5317 — CORRECTED WATER LEVEL ELEVATION CONTOUR DASHED WHERE INFERRED (FEET ABOVE MEAN SEA LEVEL, 0.5 FOOT CONTOUR INTERVAL)
- DIRECTION OF GROUNDWATER FLOW

N

SCALE IN FEET

0 30 60

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
A	10/15/2013	CCL	CCL	DAW

TITLE:

CANADA MESA #2
GROUNDWATER ELEVATION MAP
GAUGED JUNE 5, 2013

PROJECT:

SAN JUAN RIVER BASIN
MONITORING AND REMEDIATION
RIO ARRIBA COUNTY, NEW MEXICO

MWH

Figure No.: 2

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\CANADA MESA #2\2013 MAPS\Canada_Mesa#2_GARM_3Q_2013.mxd

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

LEGEND:

- 6503 — APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
- 6288.95 — CORRECTED GROUNDWATER ELEVATION CONTOUR
- ACCESS ROAD
- GAS — NATURAL GAS LINE
- 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
<0.30 = BELOW METHOD DETECTION LIMIT

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

N

SCALE IN FEET
0 30 60

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
A	10/15/2013	CCL	CCL	DAW

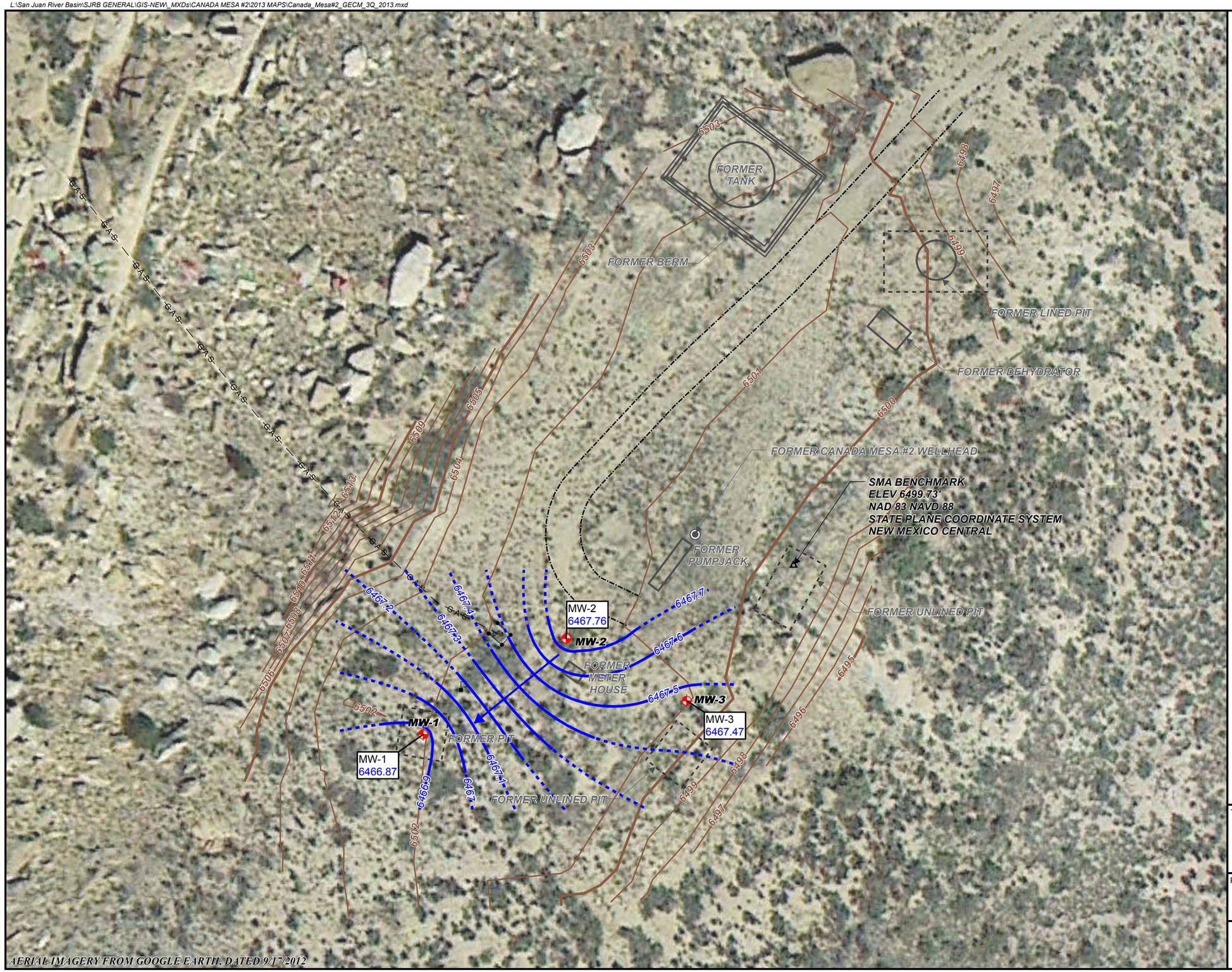
TITLE:
CANADA MESA #2
GROUNDWATER ANALYTICAL RESULTS
SAMPLED SEPTEMBER 10, 2013

PROJECT:
SAN JUAN RIVER BASIN
MONITORING AND REMEDIATION
RIO ARRIBA COUNTY, NEW MEXICO

MWH

Figure No.: 3

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\CANADA MESA #2\2013 MAPS\Canada_Mesa#2_GECM_3Q_2013.mxd



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

LEGEND:

- 6503 — APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- G A S — NATURAL GAS LINE
- MONITORING WELL
- SMA BENCHMARK

NOTES:

- 6467.4 — GROUNDWATER ELEVATION CORRECTED FOR PRODUCT THICKNESS. FEET ABOVE MEAN SEA LEVEL
- 6467.3 — CORRECTED WATER LEVEL ELEVATION CONTOUR DASHED WHERE INFERRED (FEET ABOVE MEAN SEA LEVEL, 0.1 FOOT CONTOUR INTERVAL)
- DIRECTION OF GROUNDWATER FLOW

N

SCALE IN FEET

0 30 60

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
A	2/24/2014	CCL	CCL	DAW

TITLE:

CANADA MESA #2
GROUNDWATER ELEVATION MAP
GAUGED SEPTEMBER 10, 2013

PROJECT:

SAN JUAN RIVER BASIN
MONITORING AND REMEDIATION
RIO ARRIBA COUNTY, NEW MEXICO

MWH

Figure No.: 4

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\CANADA MESA #2\2013 MAPS\Canada_Mesa#2_GARM_4Q_2013.mxd

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

LEGEND:

- 6503 — APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
- 6288.95 — CORRECTED GROUNDWATER ELEVATION CONTOUR
- ACCESS ROAD
- GAS — NATURAL GAS LINE
- 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
<0.30 = BELOW METHOD DETECTION LIMIT

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

N

SCALE IN FEET
0 30 60

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
A	1/3/2014	CCL	CCL	DAW

TITLE:
CANADA MESA #2
GROUNDWATER ANALYTICAL RESULTS
SAMPLED DECEMBER 10, 2013

PROJECT:
SAN JUAN RIVER BASIN
MONITORING AND REMEDIATION
RIO ARRIBA COUNTY, NEW MEXICO

MWH

Figure No.: 5

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\CANADA MESA #2\2013 MAPS\Canada_Mesa#2_GECM_4Q_2013.mxd

LEGEND:

- 6503 — APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- G A S — NATURAL GAS LINE
- MONITORING WELL
- SMA BENCHMARK

NOTES:

- 6467.4 — GROUNDWATER ELEVATION CORRECTED FOR PRODUCT THICKNESS. FEET ABOVE MEAN SEA LEVEL
- 6467.3 — CORRECTED WATER LEVEL ELEVATION CONTOUR DASHED WHERE INFERRED (FEET ABOVE MEAN SEA LEVEL, 0.1 FOOT CONTOUR INTERVAL)
- DIRECTION OF GROUNDWATER FLOW

FORMER TANK
FORMER BERM
FORMER LINED 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 PUMPJACK
FORMER UNLINED PIT
FORMER METER HOUSE
FORMER PIT
FORMER UNLINED PIT

MW-1 6467.99
MW-2 6467.90
MW-3 6467.67

6503 6504 6505 6509 6513 6512 6511 6510 6508 6507 6506 6502 6501 6500 6499 6498 6497 6496 6495

6467.95 6467.9 6467.85 6467.8 6467.75 6467.7

SCALE IN FEET
0 30 60

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
A	1/3/2014	CCL	CCL	DAW

TITLE:
CANADA MESA #2
GROUNDWATER ELEVATION MAP
GAUGED SEPTEMBER 10, 2013

PROJECT:
SAN JUAN RIVER BASIN
MONITORING AND REMEDIATION
RIO ARRIBA COUNTY, NEW MEXICO

MWH

Figure No.: 6

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

APPENDIX A

JUNE 5, 2013 GROUNDWATER SAMPLING ANALYTICAL REPORT
SEPTEMBER 10, 2013 GROUNDWATER SAMPLING ANALYTICAL REPORT
DECEMBER 10, 2013 GROUNDWATER SAMPLING ANALYTICAL REPORT

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Corpus Christi
1733 N. Padre Island Drive
Corpus Christi, TX 78408
Tel: (361)289-2673

TestAmerica Job ID: 560-40567-1
TestAmerica Sample Delivery Group: June 2013
Client Project/Site: Canada Mesa #2

For:
MWH Americas Inc
1801 California Street
Suite 2900
Denver, Colorado 80202

Attn: Mr. Daniel Wade

Authorized for release by:
6/19/2013 7:48:55 PM

Timothy Kellogg, Lab Director
tim.kellogg@testamericainc.com

Qualifiers

GC/MS 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
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
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: Canada Mesa #2

TestAmerica Job ID: 560-40567-1
SDG: June 2013

Job ID: 560-40567-1

Laboratory: TestAmerica Corpus Christi

Narrative

Receipt

The samples were received on 6/12/2013 10:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.0º C. No analytical or quality issues were noted.

Client Sample ID: MW-1

Lab Sample ID: 560-40567-1

Date Collected: 06/08/13 15:50

Matrix: Water

Date Received: 06/12/13 10:00

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.72**		0.050	0.0070	mg/L			06/17/13 16:32	50
Ethylbenzene	**0.092**		0.050	0.010	mg/L			06/17/13 16:32	50
Toluene	**2.2**		0.050	0.015	mg/L			06/17/13 16:32	50
Xylenes, Total	**4.0**		0.15	0.011	mg/L			06/17/13 16:32	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*70 - 130*		*06/17/13 16:32*	*50*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*		*06/17/13 16:32*	*50*
Dibromofluoromethane (Surr)	*97*		*70 - 130*		*06/17/13 16:32*	*50*
1,2-Dichloroethane-d4 (Surr)	*104*		*70 - 130*		*06/17/13 16:32*	*50*

Client Sample ID: MW-2

Lab Sample ID: 560-40567-2

Date Collected: 06/08/13 15:45

Matrix: Water

Date Received: 06/12/13 10:00

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00014		0.0010	0.00014	mg/L			06/17/13 16:57	1
Ethylbenzene	<0.00020		0.0010	0.00020	mg/L			06/17/13 16:57	1
Toluene	<0.00030		0.0010	0.00030	mg/L			06/17/13 16:57	1
Xylenes, Total	<0.00023		0.0030	0.00023	mg/L			06/17/13 16:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*98*		*70 - 130*		*06/17/13 16:57*	*1*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*		*06/17/13 16:57*	*1*
Dibromofluoromethane (Surr)	*99*		*70 - 130*		*06/17/13 16:57*	*1*
1,2-Dichloroethane-d4 (Surr)	*106*		*70 - 130*		*06/17/13 16:57*	*1*

Client Sample ID: MW-3

Lab Sample ID: 560-40567-3

Date Collected: 06/08/13 16:00

Matrix: Water

Date Received: 06/12/13 10:00

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.34**		0.0030	0.00042	mg/L			06/17/13 17:22	3
Ethylbenzene	**0.031**		0.0030	0.00060	mg/L			06/17/13 17:22	3
Toluene	**0.0013**	**J**	0.0030	0.00090	mg/L			06/17/13 17:22	3
Xylenes, Total	**0.047**		0.0090	0.00068	mg/L			06/17/13 17:22	3

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*97*		*70 - 130*		*06/17/13 17:22*	*3*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*		*06/17/13 17:22*	*3*
Dibromofluoromethane (Surr)	*97*		*70 - 130*		*06/17/13 17:22*	*3*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 130*		*06/17/13 17:22*	*3*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 560-89167/8
Matrix: Water
Analysis Batch: 89167

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00014		0.0010	0.00014	mg/L			06/17/13 11:31	1
Ethylbenzene	<0.00020		0.0010	0.00020	mg/L			06/17/13 11:31	1
Toluene	<0.00030		0.0010	0.00030	mg/L			06/17/13 11:31	1
Xylenes, Total	<0.00023		0.0030	0.00023	mg/L			06/17/13 11:31	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*97*		*70 - 130*		*06/17/13 11:31*	*1*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*		*06/17/13 11:31*	*1*
Dibromofluoromethane (Surr)	*99*		*70 - 130*		*06/17/13 11:31*	*1*
1,2-Dichloroethane-d4 (Surr)	*104*		*70 - 130*		*06/17/13 11:31*	*1*

Lab Sample ID: LCS 560-89167/3
Matrix: Water
Analysis Batch: 89167

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.0250	0.0251		mg/L		101	70 - 130
Ethylbenzene	0.0250	0.0255		mg/L		102	70 - 130
Toluene	0.0250	0.0254		mg/L		102	70 - 130
Xylenes, Total	0.0750	0.0771		mg/L		103	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*99*		*70 - 130*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*
Dibromofluoromethane (Surr)	*97*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 130*

Lab Chronicle

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

TestAmerica Job ID: 560-40567-1
SDG: June 2013

Client Sample ID: MW-1

Lab Sample ID: 560-40567-1

Date Collected: 06/08/13 15:50

Matrix: Water

Date Received: 06/12/13 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		50	89167	06/17/13 16:32	RT	TAL CC

Client Sample ID: MW-2

Lab Sample ID: 560-40567-2

Date Collected: 06/08/13 15:45

Matrix: Water

Date Received: 06/12/13 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	89167	06/17/13 16:57	RT	TAL CC

Client Sample ID: MW-3

Lab Sample ID: 560-40567-3

Date Collected: 06/08/13 16:00

Matrix: Water

Date Received: 06/12/13 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		3	89167	06/17/13 17:22	RT	TAL CC

Laboratory References:

TAL CC = TestAmerica Corpus Christi, 1733 N. Padre Island Drive, Corpus Christi, TX 78408, TEL (361)289-2673

Certification Summary

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

TestAmerica Job ID: 560-40567-1
SDG: June 2013

Laboratory: TestAmerica Corpus Christi

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Kansas	NELAP	7	E-10362	10-31-13
Oklahoma	State Program	6	9968	08-31-13
Texas	NELAP	6	T104704210-12-8	03-31-14
USDA	Federal		P330-11-00060	02-03-14

Method Summary

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

TestAmerica Job ID: 560-40567-1
SDG: June 2013

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CC

Protocol References:

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

Laboratory References:

TAL CC = TestAmerica Corpus Christi, 1733 N. Padre Island Drive, Corpus Christi, TX 78408, TEL (361)289-2673

Sample Summary

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

TestAmerica Job ID: 560-40567-1
SDG: June 2013

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
560-40567-1	MW-1	Water	06/08/13 15:50	06/12/13 10:00
560-40567-2	MW-2	Water	06/08/13 15:45	06/12/13 10:00
560-40567-3	MW-3	Water	06/08/13 16:00	06/12/13 10:00

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

No. 43412

CHAIN OF CUSTODY RECORD

Loc: 560
40567

560-40567 Chain of Custody

LA

CUSTOMER INFORMATION	PROJECT INFORMATION
COMPANY: MWH	PROJECT NAME/NUMBER: Canada Mesa #2
SEND REPORT TO Daniel Wade	**BILLING INFORMATION**
ADDRESS: 1801 California St, Suite 2900 Denver, CO 80202	BILL TO: Kinder Morgan ADDRESS: Houston, TX
PHONE: 303-291-2250	PHONE:
FAX:	FAX: PO NO:

SEAL INTACT: Yes
TEMP C: 4.8
CORR TEMP C: 4.0
IR GUN ID: 4
INITIAL/DATE: VM 6/11/13

SAMPLE NO.	SAMPLE DESCRIPTION	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	CONTAINER	PRESERV.	NUMBER OF CONTAINERS	8260							REMARKS/PRECAUTIONS.
	MW-1	6/8/13	1550	GW	VOA	HCL	3	X							
	MW-2	6/8/13	1545	GW	VOA	HCL	3	X							
	MW-3	6/8/13	1600	GW	VOA	HCL	3	X							

SAMPLER: Daniel Wade
SHIPMENT METHOD: FedEx
AIRBILL NO: 795788553894

REQUIRED TURNAROUND: ☒ ROUTINE TAT (10 BUSINESS DAYS) ☐ RUSH TAT (MAY REQUIRE SURCHARGE)

1. RELINQUISHED BY: Daniel Wade	DATE	2. RELINQUISHED BY:	DATE	3. RELINQUISHED BY:	DATE
SIGNATURE:	6/11	SIGNATURE:		SIGNATURE:	
PRINTED NAME/COMPANY: MWH	TIME 1000	PRINTED NAME/COMPANY:	TIME	PRINTED NAME/COMPANY:	TIME
1. RECEIVED BY:	DATE	2. RECEIVED BY:	DATE	3. RECEIVED BY:	DATE
SIGNATURE:	6/12/13	SIGNATURE:		SIGNATURE:	
PRINTED NAME/COMPANY:	TIME 1200	PRINTED NAME/COMPANY:	TIME	PRINTED NAME/COMPANY:	TIME

TAL-8222-560 (0412)

TestAmerica
1733 N. Padre Island Drive
Corpus Christi, TX 78408
Phone: 361.289.2673/Fax: 361.289.2471

Login Sample Receipt Checklist

Client: MWH Americas Inc

Job Number: 560-40567-1
SDG Number: June 2013

Login Number: 40567
List Number: 1
Creator: McDermott, Vivian

List Source: TestAmerica Corpus Christi

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.	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.	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 Corpus Christi
1733 N. Padre Island Drive
Corpus Christi, TX 78408
Tel: (361)289-2673

TestAmerica Job ID: 560-42541-1
TestAmerica Sample Delivery Group: September 2013
Client Project/Site: Canada Mesa Groundwater Analysis

For:
MWH Americas Inc
1801 California Street
Suite 2900
Denver, Colorado 80202

Attn: Mr. Daniel Wade

Authorized for release by:
10/3/2013 11:22:20 AM
Lindy Maingot, Project Manager I
lindy.maingot@testamericainc.com

Designee for

Timothy Kellogg, Lab Director
tim.kellogg@testamericainc.com

Qualifiers

GC/MS 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
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: 560-42541-1

Laboratory: TestAmerica Corpus Christi

Narrative

Job Narrative
560-42541-1

Comments
No additional comments.

Receipt
The samples were received on 9/14/2013 10:05 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.0º C.

GC/MS VOA
No analytical or quality issues were noted.

Organic Prep
No analytical or quality issues were noted.

Detection Summary

Client: MWH Americas Inc
Project/Site: Canada Mesa Groundwater Analysis

TestAmerica Job ID: 560-42541-1
SDG: September 2013

Client Sample ID: MW-1 — Lab Sample ID: 560-42541-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.57		0.020	0.0028	mg/L	20		8260B	Total/NA
Ethylbenzene	0.063		0.020	0.0040	mg/L	20		8260B	Total/NA
Toluene	1.7		0.020	0.0060	mg/L	20		8260B	Total/NA
Xylenes, Total	2.9		0.060	0.0045	mg/L	20		8260B	Total/NA

Client Sample ID: MW-2 — Lab Sample ID: 560-42541-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.00022	J	0.0010	0.00014	mg/L	1		8260B	Total/NA

Client Sample ID: MW-3 — Lab Sample ID: 560-42541-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.34		0.0030	0.00042	mg/L	3		8260B	Total/NA
Ethylbenzene	0.012		0.0030	0.00060	mg/L	3		8260B	Total/NA
Xylenes, Total	0.0042	J	0.0090	0.00068	mg/L	3		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-1

Lab Sample ID: 560-42541-1

Date Collected: 09/10/13 10:20
Matrix: Water
Date Received: 09/14/13 10:05

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.57**		0.020	0.0028	mg/L			09/19/13 01:56	20
Ethylbenzene	**0.063**		0.020	0.0040	mg/L			09/19/13 01:56	20
Toluene	**1.7**		0.020	0.0060	mg/L			09/19/13 01:56	20
Xylenes, Total	**2.9**		0.060	0.0045	mg/L			09/19/13 01:56	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*97*		*70 - 130*		*09/19/13 01:56*	*20*
4-Bromofluorobenzene (Surr)	*92*		*70 - 130*		*09/19/13 01:56*	*20*
Dibromofluoromethane (Surr)	*95*		*70 - 130*		*09/19/13 01:56*	*20*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 140*		*09/19/13 01:56*	*20*

Client Sample ID: MW-2

Lab Sample ID: 560-42541-2

Date Collected: 09/10/13 10:15
Matrix: Water
Date Received: 09/14/13 10:05

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.00022**	**J**	0.0010	0.00014	mg/L			09/19/13 02:21	1
Ethylbenzene	<0.00020		0.0010	0.00020	mg/L			09/19/13 02:21	1
Toluene	<0.00030		0.0010	0.00030	mg/L			09/19/13 02:21	1
Xylenes, Total	<0.00023		0.0030	0.00023	mg/L			09/19/13 02:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*98*		*70 - 130*		*09/19/13 02:21*	*1*
4-Bromofluorobenzene (Surr)	*86*		*70 - 130*		*09/19/13 02:21*	*1*
Dibromofluoromethane (Surr)	*103*		*70 - 130*		*09/19/13 02:21*	*1*
1,2-Dichloroethane-d4 (Surr)	*107*		*70 - 140*		*09/19/13 02:21*	*1*

Client Sample ID: MW-3

Lab Sample ID: 560-42541-3

Date Collected: 09/10/13 10:10
Matrix: Water
Date Received: 09/14/13 10:05

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.34**		0.0030	0.00042	mg/L			09/19/13 02:46	3
Ethylbenzene	**0.012**		0.0030	0.00060	mg/L			09/19/13 02:46	3
Toluene	<0.00090		0.0030	0.00090	mg/L			09/19/13 02:46	3
Xylenes, Total	**0.0042**	**J**	0.0090	0.00068	mg/L			09/19/13 02:46	3

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*92*		*70 - 130*		*09/19/13 02:46*	*3*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*		*09/19/13 02:46*	*3*
Dibromofluoromethane (Surr)	*99*		*70 - 130*		*09/19/13 02:46*	*3*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 140*		*09/19/13 02:46*	*3*

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 560-92892/8
Matrix: Water
Analysis Batch: 92892

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00014		0.0010	0.00014	mg/L			09/18/13 18:46	1
Ethylbenzene	<0.00020		0.0010	0.00020	mg/L			09/18/13 18:46	1
Toluene	<0.00030		0.0010	0.00030	mg/L			09/18/13 18:46	1
Xylenes, Total	<0.00023		0.0030	0.00023	mg/L			09/18/13 18:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*93*		*70 - 130*		*09/18/13 18:46*	*1*
4-Bromofluorobenzene (Surr)	*87*		*70 - 130*		*09/18/13 18:46*	*1*
Dibromofluoromethane (Surr)	*94*		*70 - 130*		*09/18/13 18:46*	*1*
1,2-Dichloroethane-d4 (Surr)	*104*		*70 - 140*		*09/18/13 18:46*	*1*

Lab Sample ID: LCS 560-92892/3
Matrix: Water
Analysis Batch: 92892

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.0250	0.0235		mg/L		94	70 - 130
Ethylbenzene	0.0250	0.0248		mg/L		99	70 - 130
Toluene	0.0250	0.0221		mg/L		89	70 - 130
Xylenes, Total	0.0750	0.0747		mg/L		100	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*96*		*70 - 130*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*
Dibromofluoromethane (Surr)	*97*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 140*

Certification Summary

Client: MWH Americas Inc
Project/Site: Canada Mesa Groundwater Analysis

TestAmerica Job ID: 560-42541-1
SDG: September 2013

Laboratory: TestAmerica Corpus Christi

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Kansas	NELAP	7	E-10362	10-31-13
Oklahoma	State Program	6	9968	08-31-14
Texas	NELAP	6	T104704210-12-8	03-31-14
USDA	Federal		P330-11-00060	02-03-14

Method Summary

Client: MWH Americas Inc
Project/Site: Canada Mesa Groundwater Analysis

TestAmerica Job ID: 560-42541-1
SDG: September 2013

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CC

Protocol References:

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

Laboratory References:

TAL CC = TestAmerica Corpus Christi, 1733 N. Padre Island Drive, Corpus Christi, TX 78408, TEL (361)289-2673

Sample Summary

Client: MWH Americas Inc
Project/Site: Canada Mesa Groundwater Analysis

TestAmerica Job ID: 560-42541-1
SDG: September 2013

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
560-42541-1	MW-1	Water	09/10/13 10:20	09/14/13 10:05
560-42541-2	MW-2	Water	09/10/13 10:15	09/14/13 10:05
560-42541-3	MW-3	Water	09/10/13 10:10	09/14/13 10:05

TestAmerica Corpus Christi
1733 N. Padre Island Drive
Corpus Christi, TX 78408
Phone (361) 289-2673 Fax (361) 289-2471

Chain of Custo

560-42541 Chain of Custody

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Loc: 560
42541

Client Information	Sampler: DAW	Lab PM: Kellogg, Timothy L.	COC No: 560-10718-1157
Client Contact: Mr. Daniel Wade	Phone: 303-912-2625	E-Mail: tim.kellogg@testame...	Page: Page _ of _
Company: MWH Americas Inc			Job #:
Address: 1801 California Street Suite 2900	Due Date Requested:		
City: Denver	TAT Requested (days): Standard		
State, Zip: CO, 80202			
Phone: 713-420-3414(Tel)	PO #: Purchase Order not required		
Email: Daniel.A.Wade@us.mwhglobal.com	WO #: TWO # C-STLI-		
Project Name: San Juan River Basin Pit Sites	Project #: 56000058		
Site: Canada Mesa	SSOW#:		

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260B - BTEX	Total Number of containers	Special Instructions/Note:
Preservation Code:							A		
MW-1	9/10/13	1020	G	Water			X		
MW-2	9/10/13	1015	G	Water			X		
MW-3	9/10/13	1010	G	Water			X		
				Water					
				Water					
				Water					
				Water					
				Water					
				Water					
				Water					
				Water					

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: 9/13/13 1200	Company	Received by:	Date/Time: 09/14/13 1005	Company TA OC
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 0.3, 0.0 IR4

10/3/2013

Login Sample Receipt Checklist

Client: MWH Americas Inc

Job Number: 560-42541-1
SDG Number: September 2013

Login Number: 42541
List Number: 1
Creator: Wing, Randi

List Source: TestAmerica Corpus Christi

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	
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	

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ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Corpus Christi
1733 N. Padre Island Drive
Corpus Christi, TX 78408
Tel: (361)289-2673

TestAmerica Job ID: 560-44350-1
TestAmerica Sample Delivery Group: December 2013
Client Project/Site: Canada Mesa #2 Groundwater Analysis

For:
MWH Americas Inc
2890 East Cottonwood Pkwy
Suite 300
Salt Lake City, Utah 84121

Attn: Mr. Cary Ruble

Authorized for release by:
12/30/2013 7:02:48 PM

Timothy Kellogg, Lab Director
(361)289-2673
tim.kellogg@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

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
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: Canada Mesa #2 Groundwater Analysis

TestAmerica Job ID: 560-44350-1
SDG: December 2013

Job ID: 560-44350-1

Laboratory: TestAmerica Corpus Christi

Narrative

Receipt

The samples were received on 12/17/2013 2:52 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.1° C. No analytical or quality issues were noted.

Detection Summary

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

TestAmerica Job ID: 560-44350-1
SDG: December 2013

Client Sample ID: MW-1 — Lab Sample ID: 560-44350-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.19		0.010	0.0010	mg/L	5		8021B	Total/NA
Toluene	0.74		0.010	0.0019	mg/L	5		8021B	Total/NA
Ethylbenzene	0.040		0.010	0.0010	mg/L	5		8021B	Total/NA
Xylenes, Total	1.0		0.010	0.0032	mg/L	5		8021B	Total/NA

Client Sample ID: MW-2 — Lab Sample ID: 560-44350-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.00024	J	0.0020	0.00020	mg/L	1		8021B	Total/NA

Client Sample ID: MW-3 — Lab Sample ID: 560-44350-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.22		0.0040	0.00040	mg/L	2		8021B	Total/NA
Toluene	0.013		0.0040	0.00075	mg/L	2		8021B	Total/NA
Ethylbenzene	0.0063		0.0040	0.00040	mg/L	2		8021B	Total/NA
Xylenes, Total	0.0026	J	0.0040	0.0013	mg/L	2		8021B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-1

Lab Sample ID: 560-44350-1

Date Collected: 12/10/13 10:30
Matrix: Water
Date Received: 12/17/13 14:52

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.19**		0.010	0.0010	mg/L			12/19/13 16:45	5
Toluene	**0.74**		0.010	0.0019	mg/L			12/19/13 16:45	5
Ethylbenzene	**0.040**		0.010	0.0010	mg/L			12/19/13 16:45	5
Xylenes, Total	**1.0**		0.010	0.0032	mg/L			12/19/13 16:45	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*86*		*58 - 129*		*12/19/13 16:45*	*5*
Trifluorotoluene (Surr)	*89*		*54 - 130*		*12/19/13 16:45*	*5*

Client Sample ID: MW-2

Lab Sample ID: 560-44350-2

Date Collected: 12/10/13 10:25
Matrix: Water
Date Received: 12/17/13 14:52

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.00024**	**J**	0.0020	0.00020	mg/L			12/19/13 17:12	1
Toluene	<0.00038		0.0020	0.00038	mg/L			12/19/13 17:12	1
Ethylbenzene	<0.00020		0.0020	0.00020	mg/L			12/19/13 17:12	1
Xylenes, Total	<0.00065		0.0020	0.00065	mg/L			12/19/13 17:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*58 - 129*		*12/19/13 17:12*	*1*
Trifluorotoluene (Surr)	*86*		*54 - 130*		*12/19/13 17:12*	*1*

Client Sample ID: MW-3

Lab Sample ID: 560-44350-3

Date Collected: 12/10/13 10:20
Matrix: Water
Date Received: 12/17/13 14:52

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.22**		0.0040	0.00040	mg/L			12/19/13 17:40	2
Toluene	**0.013**		0.0040	0.00075	mg/L			12/19/13 17:40	2
Ethylbenzene	**0.0063**		0.0040	0.00040	mg/L			12/19/13 17:40	2
Xylenes, Total	**0.0026**	**J**	0.0040	0.0013	mg/L			12/19/13 17:40	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*58 - 129*		*12/19/13 17:40*	*2*
Trifluorotoluene (Surr)	*101*		*54 - 130*		*12/19/13 17:40*	*2*

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 560-96379/5
Matrix: Water
Analysis Batch: 96379

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00020		0.0020	0.00020	mg/L			12/19/13 09:53	1
Toluene	<0.00038		0.0020	0.00038	mg/L			12/19/13 09:53	1
Ethylbenzene	<0.00020		0.0020	0.00020	mg/L			12/19/13 09:53	1
Xylenes, Total	<0.00065		0.0020	0.00065	mg/L			12/19/13 09:53	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*84*		*58 - 129*		*12/19/13 09:53*	*1*
Trifluorotoluene (Surr)	*86*		*54 - 130*		*12/19/13 09:53*	*1*

Lab Sample ID: LCS 560-96379/4
Matrix: Water
Analysis Batch: 96379

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.0400	0.0364		mg/L		91	70 - 130
Toluene	0.0400	0.0361		mg/L		90	70 - 130
Ethylbenzene	0.0400	0.0367		mg/L		92	70 - 130
Xylenes, Total	0.120	0.108		mg/L		90	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*93*		*58 - 129*
Trifluorotoluene (Surr)	*89*		*54 - 130*

Lab Chronicle

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

TestAmerica Job ID: 560-44350-1
SDG: December 2013

Client Sample ID: MW-1

Lab Sample ID: 560-44350-1

Date Collected: 12/10/13 10:30

Matrix: Water

Date Received: 12/17/13 14:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		5	96379	12/19/13 16:45	RQH	TAL CC

Client Sample ID: MW-2

Lab Sample ID: 560-44350-2

Date Collected: 12/10/13 10:25

Matrix: Water

Date Received: 12/17/13 14:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	96379	12/19/13 17:12	RQH	TAL CC

Client Sample ID: MW-3

Lab Sample ID: 560-44350-3

Date Collected: 12/10/13 10:20

Matrix: Water

Date Received: 12/17/13 14:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		2	96379	12/19/13 17:40	RQH	TAL CC

Laboratory References:

TAL CC = TestAmerica Corpus Christi, 1733 N. Padre Island Drive, Corpus Christi, TX 78408, TEL (361)289-2673

Certification Summary

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

TestAmerica Job ID: 560-44350-1
SDG: December 2013

Laboratory: TestAmerica Corpus Christi

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Kansas	NELAP	7	E-10362	10-31-14
Oklahoma	State Program	6	9968	08-31-14
Texas	NELAP	6	T104704210-12-8	03-31-14
USDA	Federal		P330-11-00060	02-03-14

Method Summary

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

TestAmerica Job ID: 560-44350-1
SDG: December 2013

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

Protocol References:

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

Laboratory References:

TAL CC = TestAmerica Corpus Christi, 1733 N. Padre Island Drive, Corpus Christi, TX 78408, TEL (361)289-2673

Sample Summary

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

TestAmerica Job ID: 560-44350-1
SDG: December 2013

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
560-44350-1	MW-1	Water	12/10/13 10:30	12/17/13 14:52
560-44350-2	MW-2	Water	12/10/13 10:25	12/17/13 14:52
560-44350-3	MW-3	Water	12/10/13 10:20	12/17/13 14:52

TestAmerica Corpus Christi
1733 N. Padre Island Drive
Corpus Christi, TX 78408
Phone (361) 289-2673 Fax (361) 289-2471

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: CCL	Lab PM: Kellogg, Timothy L.	Carrier Tracking No(s):	COC No: 560-11604-1157.1
Client Contact: ~~Mr. Daniel Wade~~ Christopher Lee	Phone: 303 291-2242	E-Mail: tim.kellogg@testamericainc.com		Page: Page 1 of
Company: MWH Americas Inc				Job #: Loc: 560 44350

Address: 1801 California Street Suite 2900	Due Date Requested:	Analysis Requested
City: Denver	TAT Requested (days): STANDARD	
State, Zip: CO, 80202	PO #: Purchase Order not required	
Phone: 713-420-3414(Tel)	WO #: TWO # C-STLI-	
Email: ~~Daniel.A.Wade@us.mwhglobal.com~~ christopher.c.lee@mwhglobal.com	Project #: 56000058	
Project Name: San Juan River Basin Pit Sites	SSOW#:	
Site: Canada Mesa #2		

Preserv:
A - HCL
B - NaOl
C - Zn Ac
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Amchlor
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA
Q - Na2SO3
R - Na2S2SO3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - ph 4-5
Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260B - BTEX	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A		
MW-1	12/10/2013	1030	G	Water			X		
MW-2	12/10/2013	1025	G	Water			X		
MW-3	12/10/2013	1020	G	Water			X		
				Water					
Trip Blank				Water					

560-44350 Chain of Custody

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
Chris C Lee	12/16/2013 900		MWH	12/17/13 10:40	TACC
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No (N)
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks: 1.1/2.1 IR Gun

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12/30/2013

Login Sample Receipt Checklist

Client: MWH Americas Inc

Job Number: 560-44350-1
SDG Number: December 2013

Login Number: 44350
List Number: 1
Creator: Rood, Vivian R

List Source: TestAmerica Corpus Christi

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.	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.	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	