

3R - 179

2013 AGWMR

04 / 03 / 2014



MWH

BUILDING A BETTER WORLD

March 4, 2014

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OCD

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

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

Gallegos Canyon Unit #142E

Meter Code: 03906

T29N, R12W Sec 25, Unit G

SITE DETAILS

Site Location: Latitude: 36.699300 N, Longitude: -108.046700 W

Land Type: State

Operator: BP

SITE BACKGROUND

- **Site Assessment:** 4/94
- **Excavation:** 4/94 (20 cy) and
- **Re-excavation:** 10/98 (882 cy)

Gallegos Canyon Unit #142, (Site), is managed pursuant to the procedures set forth in the document entitled, "Remediation Plan for Groundwater Encountered during Pit Closure Activities" (Remediation Plan, El Paso Natural Gas Company / El Paso Field Services Company, 1995). This remediation plan was conditionally approved by the New Mexico Oil Conservation Division (OCD) in correspondence dated November 30, 1995; and the OCD approval conditions were adopted into El Paso CGP Company (EPCGP's) program methods. Currently, the site is operated by BP America Production Company and is active.

The Site is located on Fee/State land (T29N, R12W, Sec25, Unit G). There are three existing monitoring wells at the site: 1997 (MW-1), 2001 (MW-2) and 2006 (TMW-1) Temporary piezometers PZ-1 through PZ-6 were installed and removed in 1997. Free product has been observed and periodically recovered. Currently, groundwater sampling is conducted on a semi-annual basis and free product was observed 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 7, September 11, and December 13, 2013, water levels were gauged at MW-1, MW-2, and TMW-1 and groundwater samples were collected from MW-1 and MW-2 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. TMW-1 was sampled with a ¾ inch disposable bailer. 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-2 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. 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

Gallegos Canyon Unit #142E

Meter Code: 03906

T29N, R12W Sec 25, Unit G

SUMMARY TABLES

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

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

The groundwater analytical lab reports are included as Appendix A..

RESULTS

- The groundwater flow direction is generally to the south-southeast at the Site, though groundwater elevations indicate a flow direction to the south-southwest during the fourth quarter of 2013 (see Figure 6).
- Concentrations of benzene in groundwater collected from MW-1 remained above the New Mexico Water Quality Control Commission (NMWQCC) standard during each of the three 2013 quarterly sampling events. Toluene, ethylbenzene, and total xylenes were not detected above standard during any sampling event in 2013.
- Benzene, was detected above the NMWQCC standard in samples collected from MW-2 during each of the three events. Toluene was detected above standard during the June and September events and total xylenes remained above standard during each event. Ethylbenzene was detected below standard in June, September, and December.
- The concentrations of benzene, toluene, and total xylenes in groundwater samples collected from TMW-1 remained above their respective NMWQCC standards for each sampling event. Ethylbenzene concentrations were detected below the NMWQCC standard for each event.
- The presence of several monitoring wells which do not belong to EPCGP implies that the current operator has had a release at this site. Additionally, concentrations at upgradient well MW-2 and cross-gradient well TMW-1 are at least one order of magnitude greater than the concentration at MW-1 located in the former EPC pit.

PLANNED FUTURE ACTIVITIES

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

2013 ANNUAL GROUNDWATER REPORT

Gallegos Canyon Unit #142E

Meter Code: 03906

T29N, R12W Sec 25, Unit G

The current operator will be contacted to determine the nature of environmental issues which have apparently occurred, based on the presence of monitoring wells observed by EPCGP personnel.

TABLE

TABLE 1 – GROUNDWATER ANALYTICAL AND WATER LEVEL RESULTS

TABLE 1 - GROUNDWATER ANALYTICAL RESULTS

Gallegos Canyon Unit #142E								
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	03/10/97	4010	7960	213	2050	16.78	-	-
MW-1	08/06/97	1040	1310	49.4	647	14.46	-	-
MW-1	11/05/97	543	719	33.9	342	15.02	-	-
MW-1	02/13/98	343	354	27.6	394	18.18	-	-
MW-1	05/06/98	429	216	13.6	176	18.69	-	-
MW-1	05/04/99	143	20.4	7.78	63.3	17.61	-	-
MW-1	05/25/00	230	4.4	6	450	16.44	-	-
MW-1	06/01/01	130	0.5	3.5	6.1	17.08	-	-
MW-1	05/14/02	34	4.9	1	3.3	14.70	-	-
MW-1	03/07/03	270	36.8	8.3	21.1	15.32	-	-
MW-1	09/17/03	150	77	1.9	12.8	DRY	-	-
MW-1	03/22/04	1.4	<0.14	<0.029	<0.082	17.38	-	-
MW-1	03/17/05	169	1.3	2.7	6.6	18.15	-	-
MW-1	06/23/05	810	1.9	0.62	8.1	14.72	-	-
MW-1	09/26/05	232	14.9	4	15.1	11.95	-	-
MW-1	12/14/05	354	10.6	5.9	25.6	14.67	-	-
MW-1	01/09/06					15.67	-	-
MW-1	01/18/06					15.97	-	-
MW-1	03/28/06	362	0.37 J	15	15.7	18.16	-	-
MW-1	06/14/06	210	6.5	2.3	6.1	13.08	-	-
MW-1	06/28/07	109	12.6	1.1	5.5	16.18	-	-
MW-1	06/23/08	2320	305	140	934	15.45	-	-
MW-1	06/02/09	35.3	<1	0.75 J	1.4 J	17.80	-	-
MW-1	12/30/09	597	10.7 J	26.5	159	16.82	-	-
MW-1	01/25/10					17.61	-	-
MW-1	05/25/10					18.45	-	-
MW-1	09/24/10					14.59	-	-
MW-1	11/09/10	8610	2770	348	2810	14.86	-	-
MW-1	02/01/11					17.46	-	-
MW-1	05/03/11					19.22	-	-
MW-1	09/27/11					11.12	-	-
MW-1	11/16/11	229	36.2	5.3	39.3	12.75	-	-
MW-1	02/16/12					15.47	-	-
MW-1	05/07/12					16.21	-	-
MW-1	06/07/13	810	<0.30	<0.20	4.3 J	14.06	-	-
MW-1	09/11/13	25	<0.30	<0.20	0.39 J	12.61	-	-
MW-1	12/13/13	330	<0.90	6.9	20	14.22	-	-

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Gallegos Canyon Unit #142E								
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	12/13/01	22000	25000	500	4300	14.52	-	-
MW-2	05/14/02					14.37	-	-
MW-2	09/17/03	6890	4760	219	1770	DRY	-	-
MW-2	03/22/04	13000	8880	321	2850	17.06	-	-
MW-2	03/17/05	2800	1640	125	978	17.83	-	-
MW-2	09/14/05	1980	915	63.8	391	11.45	-	-
MW-2	01/09/06					15.35	-	-
MW-2	01/18/06					15.65	-	-
MW-2	06/14/06	2140	811	83.5	610	12.64	-	-
MW-2	06/28/07	2100	492	140	1050	16.86	-	-
MW-2	06/23/08	221	1.5 J	3.9	5.8	15.15	-	-
MW-2	06/02/09					17.84	17.42	0.42
MW-2	12/30/09	6660	6750	764	6210	16.48	16.45	0.03
MW-2	01/25/10					17.45	17.27	0.18
MW-2	05/25/10					18.55	18.05	0.50
MW-2	09/24/10					14.25	-	-
MW-2	11/09/10	3900	2450	342	2660	14.50	14.49	0.01
MW-2	02/01/11					17.15	-	-
MW-2	05/03/11					18.91	-	-
MW-2	09/27/11					12.65	-	-
MW-2	11/16/11	2040	1020	231	1520	12.37	-	-
MW-2	02/16/12					15.13	-	-
MW-2	05/07/12					16.91	-	-
MW-2	06/07/13	6000	1100	500	3800	13.63	-	-
MW-2	09/11/13	2200	470	240	1900	12.18	-	-
MW-2	12/13/13	5500	830	510	3700	13.92	-	-

TABLE 1 - GROUNDWATER ANALYTICAL RESULTS

Gallegos Canyon Unit #142E								
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
TMW-1	01/06/06					15.29	-	-
TMW-1	01/09/06					15.27	-	-
TMW-1	01/18/06					15.57	-	-
TMW-1	06/23/08					15.04	-	-
TMW-1	12/30/09	3660	1550	520	4110	NA	-	-
TMW-1	01/25/10					17.23	-	-
TMW-1	05/25/10					18.70	17.80	0.90
TMW-1	09/24/10					14.45	14.10	0.35
TMW-1	11/09/10	8880	14400	956	9040	14.62	14.37	0.25
TMW-1	02/01/11					17.45	17.00	0.45
TMW-1	05/03/11					19.76	18.55	1.21
TMW-1	09/27/11					12.43	12.03	0.40
TMW-1	11/16/11	3890	6250	420	3610	12.44	12.31	0.13
TMW-1	02/16/12					14.25	12.03	2.22
TMW-1	05/07/12					14.20	14.18	0.02
TMW-1	06/07/13	5100	1100	190	2600	13.65	-	-
TMW-1	09/11/13	6600	960	190	2600	12.14	-	-
TMW-1	12/13/13	6500	2200	410	4000	13.90	-	-
Notes: Results highlighted yellow exceed their respective New Mexico Water Quality Control Commission standards. "J" = Result is less than the reporting limit but greater than or equal to the method detection limit and the result is an approximate value. "<" = analyte was not detected at the indicated reporting limit (some historic data were reported at the detection limit).								

FIGURES

FIGURE 1: JUNE 7, 2013 GROUNDWATER ANALYTICAL RESULTS MAP

FIGURE 2: JUNE 7, 2013 GROUNDWATER ELEVATION MAP

FIGURE 3: SEPTEMBER 11, 2013 GROUNDWATER ANALYTICAL RESULTS MAP

FIGURE 4: SEPTEMBER 11, 2013 GROUNDWATER ELEVATION MAP

FIGURE 5: DECEMBER 13, 2013 GROUNDWATER ANALYTICAL RESULTS MAP

FIGURE 6: DECEMBER 13, 2013 GROUNDWATER ELEVATION MAP



LEGEND:

5795

APPROX. GROUND SURFACE
CONTOUR AND ELEVATION, FEET

ACCESS ROAD

ABANDONED UNKNOWN LINE

-X-

FENCE

PW

PRODUCED WATER LINE

UGC

UNDERGROUND CABLE

G

UNDERGROUND GAS LINE

▲

BENCHMARK

⊠

GAS VALVE

●

MONITORING WELL

⊕

MONITORING WELL ASSOCIATED
WITH UNRELATED RELEASE

⊠

RIG ANCHOR

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

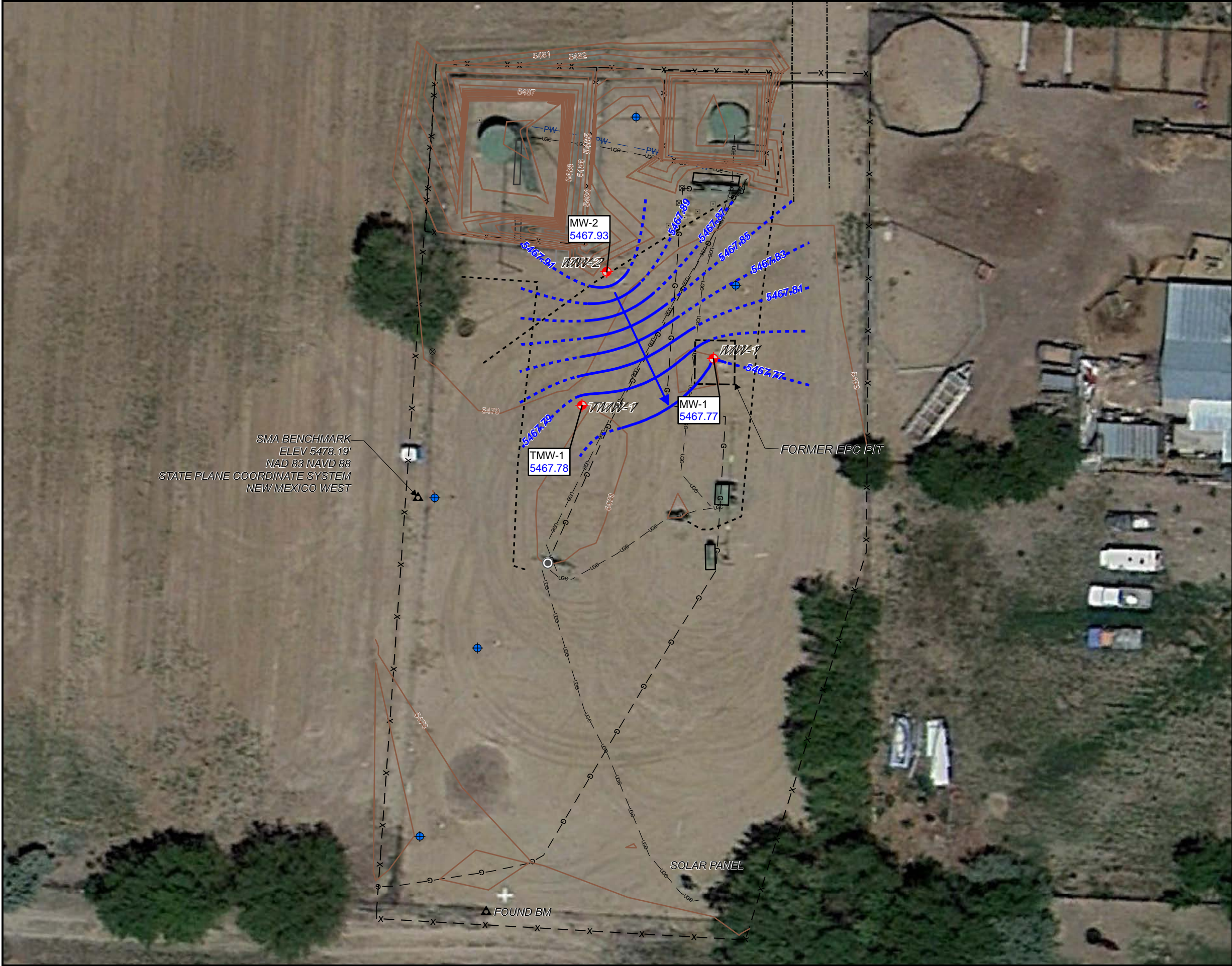
REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
A	10/14/2013	CCL	CCL	DAW

TITLE: GALLEGOS CANYON UNIT #142E
GROUNDWATER ANALYTICAL RESULTS
SAMPLED JUNE 7, 2013

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

Figure No.:

1



SMA BENCHMARK
ELEV 5478.19'
NAD 83 NAVD 88
STATE PLANE COORDINATE SYSTEM
NEW MEXICO WEST

FORMER EPC PIT

SOLAR PANEL

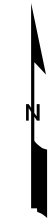
FOUND BM

LEGEND:

- APPROX. GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- ABANDONED UNKNOWN LINE
- FENCE
- PRODUCED WATER LINE
- UNDERGROUND CABLE
- UNDERGROUND GAS LINE
- BENCHMARK
- GAS VALVE
- MONITORING WELL
- MONITORING WELL ASSOCIATED WITH UNRELATED RELEASE
- RIG ANCHOR

NOTES:

- GROUNDWATER ELEVATION CORRECTED FOR PRODUCT THICKNESS. FEET ABOVE MEAN SEA LEVEL
- CORRECTED WATER LEVEL ELEVATION CONTOUR DASHED WHERE INFERRED (FEET ABOVE MEAN SEA LEVEL, 0.02 FOOT CONTOUR INTERVAL)
- DIRECTION OF GROUNDWATER FLOW



REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
A	10/24/2013	CCL	CCL	DAW

TITLE: GALLEGOS CANYON UNIT #142E
GROUNDWATER ELEVATION MAP
GAUGED JUNE 7, 2013

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



Figure No.:

2



LEGEND:

- 5795** APPROX. GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- ABANDONED UNKNOWN LINE
- X- FENCE
- PW- PRODUCED WATER LINE
- UG- UNDERGROUND CABLE
- G- UNDERGROUND GAS LINE
- ▲ BENCHMARK
- ⊠ GAS VALVE
- MONITORING WELL
- MONITORING WELL ASSOCIATED WITH UNRELATED RELEASE
- ⊠ RIG ANCHOR

EXPLANATION OF ANALYTES AND APPLICABLE STANDARDS:

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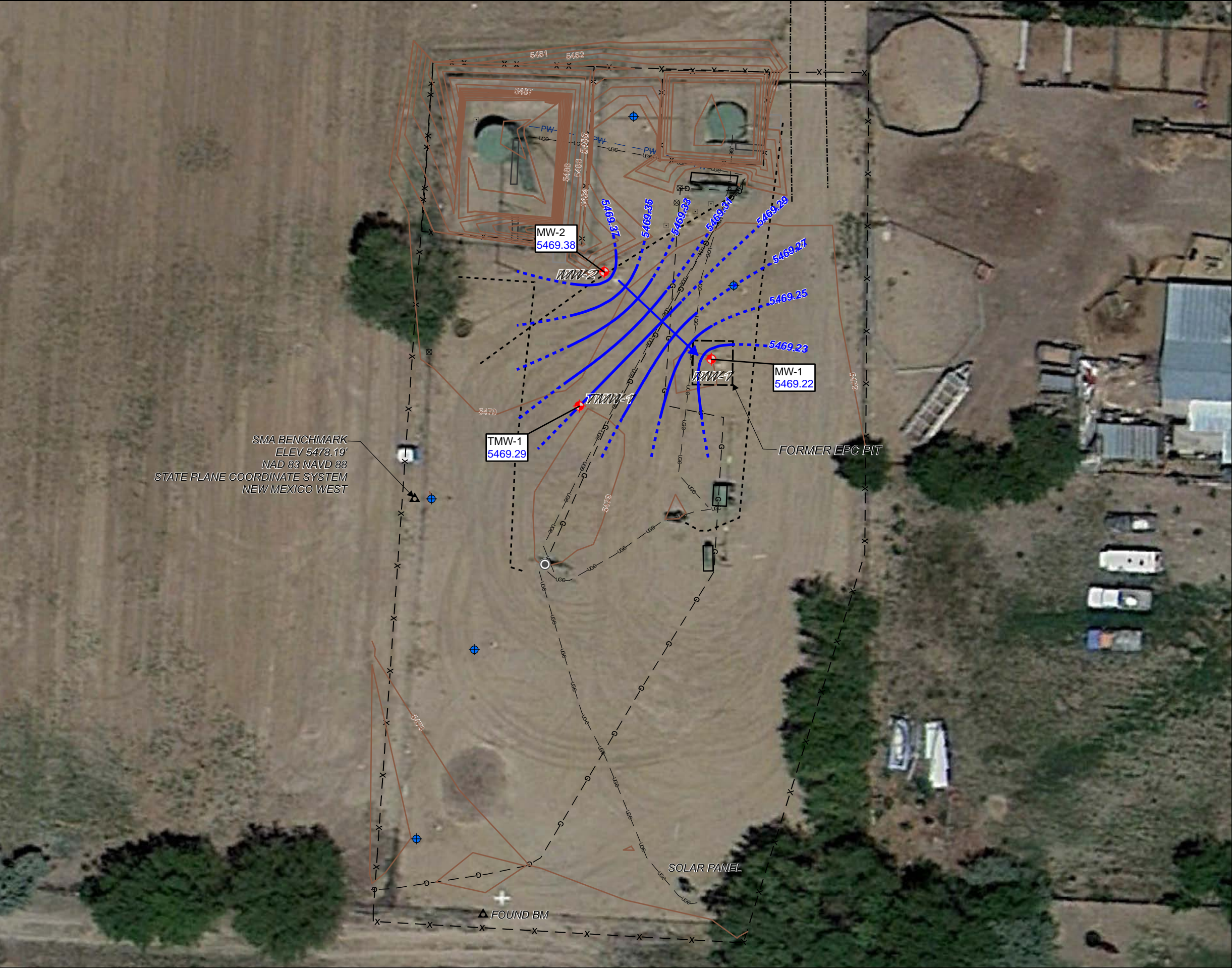
REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
A	10/14/2013	CCL	CCL	DAW

TITLE: GALLEGOS CANYON UNIT #142E
GROUNDWATER ANALYTICAL RESULTS
SAMPLED SEPTEMBER 11, 2013

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



Figure No.: 3



LEGEND:

- APPROX. GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- ABANDONED UNKNOWN LINE
- FENCE
- PRODUCED WATER LINE
- UNDERGROUND CABLE
- UNDERGROUND GAS LINE
- BENCHMARK
- GAS VALVE
- MONITORING WELL
- MONITORING WELL ASSOCIATED WITH UNRELATED RELEASE
- RIG ANCHOR

NOTES:

- GROUNDWATER ELEVATION CORRECTED FOR PRODUCT THICKNESS. FEET ABOVE MEAN SEA LEVEL
- CORRECTED WATER LEVEL ELEVATION CONTOUR DASHED WHERE INFERRED (FEET ABOVE MEAN SEA LEVEL, 0.02 FOOT CONTOUR INTERVAL)
- DIRECTION OF GROUNDWATER FLOW

SCALE IN FEET

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
A	10/24/2013	CCL	CCL	DAW

TITLE: GALLEGOS CANYON UNIT #142E
GROUNDWATER ELEVATION MAP
GAUGED SEPTEMBER 11, 2013

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



LEGEND:

- 5795** APPROX. GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- ABANDONED UNKNOWN LINE
- X- FENCE
- PW- PRODUCED WATER LINE
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N

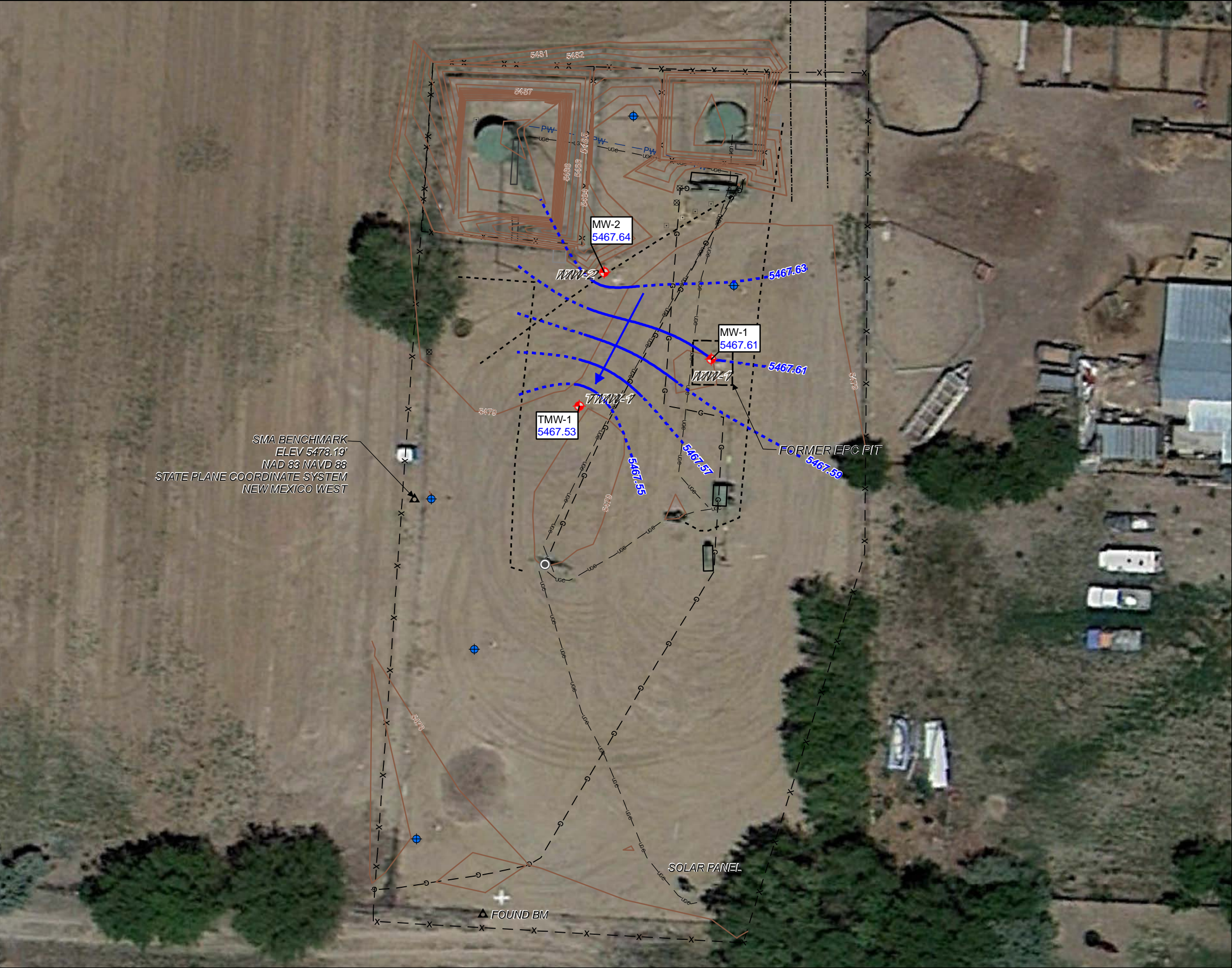
SCALE IN FEET

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
A	1/8/2014	CZL	CZL	DAW

TITLE: GALLEGOS CANYON UNIT #142E
GROUNDWATER ANALYTICAL RESULTS
SAMPLED DECEMBER 13, 2013

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

Figure No.: 5



SMA BENCHMARK
ELEV 5478.19'
NAD 83 NAVD 88
STATE PLANE COORDINATE SYSTEM
NEW MEXICO WEST

LEGEND:

- 5795** APPROX. GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- ABANDONED UNKNOWN LINE
- X- FENCE
- PW- PRODUCED WATER LINE
- UG- UNDERGROUND CABLE
- G- UNDERGROUND GAS LINE
- ▲ BENCHMARK
- ⊠ GAS VALVE
- MONITORING WELL
- MONITORING WELL ASSOCIATED WITH UNRELATED RELEASE
- ⊠ RIG ANCHOR

NOTES:

- 5469.22** GROUNDWATER ELEVATION CORRECTED FOR PRODUCT THICKNESS. FEET ABOVE MEAN SEA LEVEL
- 5469.23** CORRECTED WATER LEVEL ELEVATION CONTOUR DASHED WHERE INFERRED (FEET ABOVE MEAN SEA LEVEL, 0.02 FOOT CONTOUR INTERVAL)
- DIRECTION OF GROUNDWATER FLOW



REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
A	1/15/2014	CCL	CCL	DAW

TITLE: GALLEGOS CANYON UNIT #142E
GROUNDWATER ELEVATION MAP
GAUGED DECEMBER 13, 2013

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



Figure No.:

6

APPENDIX A

JUNE 7, 2013 GROUNDWATER SAMPLING ANALYTICAL REPORT

SEPTEMBER 11, 2013 GROUNDWATER SAMPLING ANALYTICAL REPORT

DECEMBER 13, 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

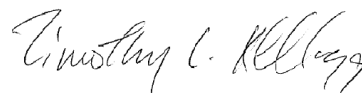
TestAmerica Job ID: 560-40566-1

TestAmerica Sample Delivery Group: June 2013
Client Project/Site: GCO #142E

For:

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

Attn: Mr. Daniel Wade



Authorized for release by:
6/19/2013 7:45:27 PM

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

LINKS

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

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

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

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Definitions/Glossary

Client: MWH Americas Inc
Project/Site: GCO #142E

TestAmerica Job ID: 560-40566-1
SDG: June 2013

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.
α	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: GCO #142E

TestAmerica Job ID: 560-40566-1
SDG: June 2013

Job ID: 560-40566-1

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 4.0° C. No analytical or quality issues were noted.

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Client Sample Results

Client: MWH Americas Inc
Project/Site: GCO #142E

TestAmerica Job ID: 560-40566-1
SDG: June 2013

Client Sample ID: MW-1

Date Collected: 06/09/13 15:45

Date Received: 06/12/13 10:00

Lab Sample ID: 560-40566-1

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.81		0.010	0.0014	mg/L			06/17/13 20:57	10
Ethylbenzene	<0.0020		0.010	0.0020	mg/L			06/17/13 20:57	10
Toluene	<0.0030		0.010	0.0030	mg/L			06/17/13 20:57	10
Xylenes, Total	0.0043	J	0.030	0.0023	mg/L			06/17/13 20:57	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	103		70 - 130					06/17/13 20:57	10
4-Bromofluorobenzene (Surr)	93		70 - 130					06/17/13 20:57	10
Dibromofluoromethane (Surr)	108		70 - 130					06/17/13 20:57	10
1,2-Dichloroethane-d4 (Surr)	101		70 - 130					06/17/13 20:57	10

Client Sample ID: MW-2

Date Collected: 06/09/13 15:40

Date Received: 06/12/13 10:00

Lab Sample ID: 560-40566-2

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	6.0		0.10	0.014	mg/L			06/17/13 15:42	100
Ethylbenzene	0.50		0.10	0.020	mg/L			06/17/13 15:42	100
Toluene	1.1		0.10	0.030	mg/L			06/17/13 15:42	100
Xylenes, Total	3.8		0.30	0.023	mg/L			06/17/13 15:42	100
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	96		70 - 130					06/17/13 15:42	100
4-Bromofluorobenzene (Surr)	95		70 - 130					06/17/13 15:42	100
Dibromofluoromethane (Surr)	93		70 - 130					06/17/13 15:42	100
1,2-Dichloroethane-d4 (Surr)	102		70 - 130					06/17/13 15:42	100

Client Sample ID: TMW-1

Date Collected: 06/09/13 16:00

Date Received: 06/12/13 10:00

Lab Sample ID: 560-40566-3

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	5.1		0.050	0.0070	mg/L			06/17/13 16:07	50
Ethylbenzene	0.19		0.050	0.010	mg/L			06/17/13 16:07	50
Toluene	1.1		0.050	0.015	mg/L			06/17/13 16:07	50
Xylenes, Total	2.6		0.15	0.011	mg/L			06/17/13 16:07	50
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	104		70 - 130					06/17/13 16:07	50
4-Bromofluorobenzene (Surr)	93		70 - 130					06/17/13 16:07	50
Dibromofluoromethane (Surr)	90		70 - 130					06/17/13 16:07	50
1,2-Dichloroethane-d4 (Surr)	98		70 - 130					06/17/13 16:07	50

QC Sample Results

Client: MWH Americas Inc
Project/Site: GCO #142E

TestAmerica Job ID: 560-40566-1
SDG: June 2013

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 Sample ID: MB 560-89169/8

Matrix: Water

Analysis Batch: 89169

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 12:32	1
Ethylbenzene	<0.00020		0.0010	0.00020	mg/L			06/17/13 12:32	1
Toluene	<0.00030		0.0010	0.00030	mg/L			06/17/13 12:32	1
Xylenes, Total	<0.00023		0.0030	0.00023	mg/L			06/17/13 12:32	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	103		70 - 130		06/17/13 12:32	1
4-Bromofluorobenzene (Surr)	91		70 - 130		06/17/13 12:32	1
Dibromofluoromethane (Surr)	110		70 - 130		06/17/13 12:32	1
1,2-Dichloroethane-d4 (Surr)	105		70 - 130		06/17/13 12:32	1

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QC Sample Results

Client: MWH Americas Inc
Project/Site: GCO #142E

TestAmerica Job ID: 560-40566-1
SDG: June 2013

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

Lab Sample ID: LCS 560-89169/3

Matrix: Water

Analysis Batch: 89169

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	0.0276		mg/L		110	70 - 130
Ethylbenzene	0.0250	0.0245		mg/L		98	70 - 130
Toluene	0.0250	0.0278		mg/L		111	70 - 130
Xylenes, Total	0.0750	0.0736		mg/L		98	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	103		70 - 130
4-Bromofluorobenzene (Surr)	108		70 - 130
Dibromofluoromethane (Surr)	103		70 - 130
1,2-Dichloroethane-d4 (Surr)	96		70 - 130

Lab Chronicle

Client: MWH Americas Inc
Project/Site: GCO #142E

TestAmerica Job ID: 560-40566-1
SDG: June 2013

Client Sample ID: MW-1

Date Collected: 06/09/13 15:45

Date Received: 06/12/13 10:00

Lab Sample ID: 560-40566-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		10	89169	06/17/13 20:57	RT	TAL CC

Client Sample ID: MW-2

Date Collected: 06/09/13 15:40

Date Received: 06/12/13 10:00

Lab Sample ID: 560-40566-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		100	89167	06/17/13 15:42	RT	TAL CC

Client Sample ID: TMW-1

Date Collected: 06/09/13 16:00

Date Received: 06/12/13 10:00

Lab Sample ID: 560-40566-3

Matrix: Water

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 16:07	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: GCO #142E

TestAmerica Job ID: 560-40566-1
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: GCO #142E

TestAmerica Job ID: 560-40566-1
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

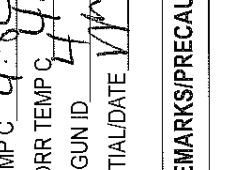


Sample Summary

Client: MWH Americas Inc
Project/Site: GCO #142E

TestAmerica Job ID: 560-40566-1
SDG: June 2013

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
560-40566-1	MW-1	Water	06/09/13 15:45	06/12/13 10:00
560-40566-2	MW-2	Water	06/09/13 15:40	06/12/13 10:00
560-40566-3	TMW-1	Water	06/09/13 16:00	06/12/13 10:00

CHAIN OF CUSTODY RECORD

CUSTOMER INFORMATION			PROJECT INFORMATION			ANALYSIS/METHOD REQUEST		
COMPANY:	MWH		PROJECT NAME/NUMBER:	GCO #142E		 560-40566 Chain of Custody		
SEND REPORT TO:	Daniel Wade		BILLING INFORMATION					
ADDRESS:	1801 California St. Suite 2900 Denver, CO 80202		BILL TO: Kinder Morgan Houston, TX					
PHONE:	303-291-2250		ADDRESS:					
FAX:			PHONE:			IR GUN ID		
			FAX:	PO NO:		INITIAL/DATE		
SAMPLE NO.	SAMPLE DESCRIPTION	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	CONTAINER	PRESERV.	REMARKS/PRECAUTIONS.	
	MW-1	6/9/13	1545	GW	VOA	HCL	3 X	
	MW-2	6/9/13	1540	GW	VOA	HCL	3 X	
	PMW-1	6/9/13	1600	GW	VOA	HCL	3 X	
SAMPLER: Daniel Wade							AIRBILL NO.: 79576855 389V	
REQUIRED TURNAROUND ROUTINE TAT (10 BUSINESS DAYS) <input checked="" type="checkbox"/> RUSH TAT (MAY REQUIRE SURCHARGE)								
1. RELINQUISHED BY: Daniel Wade			2. RELINQUISHED BY:			3. RELINQUISHED BY:		
SIGNATURE: 			SIGNATURE:			SIGNATURE:		
PRINTED NAME/COMPANY: MWH			PRINTED NAME/COMPANY:			PRINTED NAME/COMPANY:		
1. RECEIVED BY:			2. RECEIVED BY:			3. RECEIVED BY:		
SIGNATURE: 			SIGNATURE:			SIGNATURE:		
PRINTED NAME/COMPANY:			PRINTED NAME/COMPANY:			PRINTED NAME/COMPANY:		

Login Sample Receipt Checklist

Client: MWH Americas Inc

Job Number: 560-40566-1

SDG Number: June 2013

Login Number: 40566

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	

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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: 560-42543-1

TestAmerica Sample Delivery Group: September 2013
Client Project/Site: GCU#142E 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 11:25:35 AM

Lindy Maingot, Project Manager I
lindy.maingot@testamericainc.com

Designee for

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

LINKS

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Have a Question?



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

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

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Definitions/Glossary

Client: MWH Americas Inc
Project/Site: GCU#142E Groundwater Analysis

TestAmerica Job ID: 560-42543-1
SDG: September 2013

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.
4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
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: GCU#142E Groundwater Analysis

TestAmerica Job ID: 560-42543-1
SDG: September 2013

Job ID: 560-42543-1

Laboratory: TestAmerica Corpus Christi

Narrative

Job Narrative
560-42543-1

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 2.0° 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: GCU#142E Groundwater Analysis

TestAmerica Job ID: 560-42543-1
SDG: September 2013

Client Sample ID: MW-1

Lab Sample ID: 560-42543-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.025		0.0010	0.00014	mg/L	1		8260B	Total/NA
Xylenes, Total	0.00039	J	0.0030	0.00023	mg/L	1		8260B	Total/NA

Client Sample ID: MW-2

Lab Sample ID: 560-42543-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	2.2		0.020	0.0028	mg/L	20		8260B	Total/NA
Ethylbenzene	0.24		0.020	0.0040	mg/L	20		8260B	Total/NA
Toluene	0.47		0.020	0.0060	mg/L	20		8260B	Total/NA
Xylenes, Total	1.9		0.060	0.0045	mg/L	20		8260B	Total/NA

Client Sample ID: TMW-1

Lab Sample ID: 560-42543-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	6.6		0.050	0.0070	mg/L	50		8260B	Total/NA
Ethylbenzene	0.19		0.050	0.010	mg/L	50		8260B	Total/NA
Toluene	0.96		0.050	0.015	mg/L	50		8260B	Total/NA
Xylenes, Total	2.6		0.15	0.011	mg/L	50		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Corpus Christi

Client Sample Results

Client: MWH Americas Inc
Project/Site: GCU#142E Groundwater Analysis

TestAmerica Job ID: 560-42543-1
SDG: September 2013

Client Sample ID: MW-1

Date Collected: 09/11/13 09:45

Date Received: 09/14/13 10:05

Lab Sample ID: 560-42543-1

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.025		0.0010	0.00014	mg/L			09/20/13 12:00	1
Ethylbenzene	<0.00020		0.0010	0.00020	mg/L			09/20/13 12:00	1
Toluene	<0.00030		0.0010	0.00030	mg/L			09/20/13 12:00	1
Xylenes, Total	0.00039	J	0.0030	0.00023	mg/L			09/20/13 12:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	95		70 - 130		09/20/13 12:00	1
4-Bromofluorobenzene (Surr)	83		70 - 130		09/20/13 12:00	1
Dibromofluoromethane (Surr)	95		70 - 130		09/20/13 12:00	1
1,2-Dichloroethane-d4 (Surr)	104		70 - 140		09/20/13 12:00	1

Client Sample ID: MW-2

Date Collected: 09/11/13 09:55

Date Received: 09/14/13 10:05

Lab Sample ID: 560-42543-2

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	2.2		0.020	0.0028	mg/L			09/20/13 12:26	20
Ethylbenzene	0.24		0.020	0.0040	mg/L			09/20/13 12:26	20
Toluene	0.47		0.020	0.0060	mg/L			09/20/13 12:26	20
Xylenes, Total	1.9		0.060	0.0045	mg/L			09/20/13 12:26	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	96		70 - 130		09/20/13 12:26	20
4-Bromofluorobenzene (Surr)	89		70 - 130		09/20/13 12:26	20
Dibromofluoromethane (Surr)	89		70 - 130		09/20/13 12:26	20
1,2-Dichloroethane-d4 (Surr)	101		70 - 140		09/20/13 12:26	20

Client Sample ID: TMW-1

Date Collected: 09/11/13 09:50

Date Received: 09/14/13 10:05

Lab Sample ID: 560-42543-3

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	6.6		0.050	0.0070	mg/L			09/20/13 11:35	50
Ethylbenzene	0.19		0.050	0.010	mg/L			09/20/13 11:35	50
Toluene	0.96		0.050	0.015	mg/L			09/20/13 11:35	50
Xylenes, Total	2.6		0.15	0.011	mg/L			09/20/13 11:35	50

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	94		70 - 130		09/20/13 11:35	50
4-Bromofluorobenzene (Surr)	89		70 - 130		09/20/13 11:35	50
Dibromofluoromethane (Surr)	91		70 - 130		09/20/13 11:35	50
1,2-Dichloroethane-d4 (Surr)	101		70 - 140		09/20/13 11:35	50

TestAmerica Corpus Christi

QC Sample Results

Client: MWH Americas Inc
Project/Site: GCU#142E Groundwater Analysis

TestAmerica Job ID: 560-42543-1
SDG: September 2013

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

Lab Sample ID: MB 560-92959/8

Matrix: Water

Analysis Batch: 92959

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			09/20/13 11:10	1
Ethylbenzene	<0.00020		0.0010	0.00020	mg/L			09/20/13 11:10	1
Toluene	<0.00030		0.0010	0.00030	mg/L			09/20/13 11:10	1
Xylenes, Total	<0.00023		0.0030	0.00023	mg/L			09/20/13 11:10	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	98		70 - 130		09/20/13 11:10	1
4-Bromofluorobenzene (Surr)	84		70 - 130		09/20/13 11:10	1
Dibromofluoromethane (Surr)	97		70 - 130		09/20/13 11:10	1
1,2-Dichloroethane-d4 (Surr)	107		70 - 140		09/20/13 11:10	1

Lab Sample ID: LCS 560-92959/3

Matrix: Water

Analysis Batch: 92959

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	0.0243		mg/L		97	70 - 130
Ethylbenzene	0.0250	0.0240		mg/L		96	70 - 130
Toluene	0.0250	0.0234		mg/L		93	70 - 130
Xylenes, Total	0.0750	0.0738		mg/L		98	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	94		70 - 130
4-Bromofluorobenzene (Surr)	98		70 - 130
Dibromofluoromethane (Surr)	100		70 - 130
1,2-Dichloroethane-d4 (Surr)	100		70 - 140

Lab Sample ID: 560-42543-3 MS

Matrix: Water

Analysis Batch: 92959

Client Sample ID: TMW-1

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	6.6		1.25	7.87	4	mg/L		100	70 - 130
Ethylbenzene	0.19		1.25	1.40		mg/L		97	70 - 130
Toluene	0.96		1.25	2.12		mg/L		93	70 - 130
Xylenes, Total	2.6		3.75	6.46		mg/L		102	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
Toluene-d8 (Surr)	98		70 - 130
4-Bromofluorobenzene (Surr)	98		70 - 130
Dibromofluoromethane (Surr)	97		70 - 130
1,2-Dichloroethane-d4 (Surr)	101		70 - 140

TestAmerica Corpus Christi

QC Sample Results

Client: MWH Americas Inc
Project/Site: GCU#142E Groundwater Analysis

TestAmerica Job ID: 560-42543-1
SDG: September 2013

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

Lab Sample ID: 560-42543-3 MSD

Matrix: Water

Analysis Batch: 92959

Client Sample ID: TMW-1

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	6.6		1.25	7.77	4	mg/L		91	70 - 130	1	20
Ethylbenzene	0.19		1.25	1.49		mg/L		104	70 - 130	6	20
Toluene	0.96		1.25	2.18		mg/L		98	70 - 130	3	20
Xylenes, Total	2.6		3.75	6.64		mg/L		107	70 - 130	3	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Toluene-d8 (Surr)	94		70 - 130
4-Bromofluorobenzene (Surr)	96		70 - 130
Dibromofluoromethane (Surr)	96		70 - 130
1,2-Dichloroethane-d4 (Surr)	99		70 - 140

Certification Summary

Client: MWH Americas Inc
Project/Site: GCU#142E Groundwater Analysis

TestAmerica Job ID: 560-42543-1
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: GCU#142E Groundwater Analysis

TestAmerica Job ID: 560-42543-1
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: GCU#142E Groundwater Analysis

TestAmerica Job ID: 560-42543-1
SDG: September 2013


Lab Sample ID	Client Sample ID	Matrix	Collected	Received
560-42543-1	MW-1	Water	09/11/13 09:45	09/14/13 10:05
560-42543-2	MW-2	Water	09/11/13 09:55	09/14/13 10:05
560-42543-3	TMW-1	Water	09/11/13 09:50	09/14/13 10:05

Client Information		Lab PM:
Client Contact:	Sampler:	Kellogg, Timothy L
Mr. Daniel Wade	Phone:	E-Mail:
		tim.kellogg@testam

Company:	MWV Americas Inc		
Address:	1801 California Street, Suite 2900		
City:	Denver		
State, Zip:	CO, 80202		
Phone:	773-420-3414(Tel)		
Email:	Daniel.A.Wade@us.mwglobal.com		
Project Name:	San Juan River Basin Pitt Sites		
Site:	GC1 # 142 E		

[illegible]

Possible Hazard Identification		<input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Sample Disposal <input type="checkbox"/> Return
Deliverable Requested: I, II, III, IV, Other (specify)				Special Instructions
Empty Kit Relinquished by: <i>[Signature]</i>		Date: 9/13/13		Time: 1200
Relinquished by: <i>[Signature]</i>		Date/Time: 9/13/13 1200		Received
Relinquished by: <i>[Signature]</i>		Date/Time:		Received
Relinquished by:		Date/Time:		Received
Custody Seals Intact: <i>[Signature]</i>		Custody Seal No.:		Cooler Temperature

	COC No:		560-10718-1157
	Page:	Page 1 of 1	
	Job #:		
	560-42543 Chain of Custody		

[illegible]

(A fee may be assessed if samples are retained longer than 1 month) Patient <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	
S/QC Requirements: _____	
Method of Shipment: <u>FedEx Sat</u>	Date/Time: <u>10/24/3:00S</u> Company: <u>PTCC</u>
Date/Time: _____	Company: _____
Date/Time: _____	Company: _____
Remarks: <u>Cor 200124</u>	

Login Sample Receipt Checklist

Client: MWH Americas Inc

Job Number: 560-42543-1

SDG Number: September 2013

Login Number: 42543

List Number: 1

Creator: Wing, Randi

List Source: TestAmerica Corpus Christi

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

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

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

TestAmerica Job ID: 560-44353-1

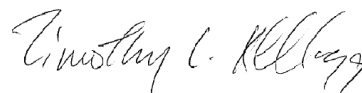
TestAmerica Sample Delivery Group: December 2013

Client Project/Site: Gallegos Canyon Unit #142E Groundwater

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 7:14:46 PM

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

LINKS

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Have a Question?



Visit us at:
www.testamericainc.com

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

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

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

Definitions/Glossary

Client: MWH Americas Inc
Project/Site: Gallegos Canyon Unit #142E Groundwater

TestAmerica Job ID: 560-44353-1
SDG: December 2013

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
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: Gallegos Canyon Unit #142E Groundwater

TestAmerica Job ID: 560-44353-1
SDG: December 2013

Job ID: 560-44353-1

Laboratory: TestAmerica Corpus Christi

Narrative

Receipt

The samples were received on 12/17/2013 10:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.5° C. No analytical or quality issues were noted.

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Detection Summary

Client: MWH Americas Inc
Project/Site: Gallegos Canyon Unit #142E Groundwater

TestAmerica Job ID: 560-44353-1
SDG: December 2013

Client Sample ID: MW-1

Lab Sample ID: 560-44353-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.33		0.0030	0.00042	mg/L	3		8260B	Total/NA
Ethylbenzene	0.0069		0.0030	0.00060	mg/L	3		8260B	Total/NA
Xylenes, Total	0.020		0.0090	0.00068	mg/L	3		8260B	Total/NA

Client Sample ID: MW-2

Lab Sample ID: 560-44353-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	5.5		0.050	0.0070	mg/L	50		8260B	Total/NA
Ethylbenzene	0.51		0.050	0.010	mg/L	50		8260B	Total/NA
Toluene	0.83		0.050	0.015	mg/L	50		8260B	Total/NA
Xylenes, Total	3.7		0.15	0.011	mg/L	50		8260B	Total/NA

Client Sample ID: TMW-1

Lab Sample ID: 560-44353-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	6.5		0.080	0.0080	mg/L	40		8021B	Total/NA
Toluene	2.2		0.080	0.015	mg/L	40		8021B	Total/NA
Ethylbenzene	0.41		0.080	0.0080	mg/L	40		8021B	Total/NA
Xylenes, Total	4.0		0.080	0.026	mg/L	40		8021B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Corpus Christi

Client Sample Results

Client: MWH Americas Inc
Project/Site: Gallegos Canyon Unit #142E Groundwater

TestAmerica Job ID: 560-44353-1
SDG: December 2013

Client Sample ID: MW-1

Date Collected: 12/13/13 15:40

Date Received: 12/17/13 10:40

Lab Sample ID: 560-44353-1

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.33		0.0030	0.00042	mg/L			12/24/13 16:55	3
Ethylbenzene	0.0069		0.0030	0.00060	mg/L			12/24/13 16:55	3
Toluene	<0.00090		0.0030	0.00090	mg/L			12/24/13 16:55	3
Xylenes, Total	0.020		0.0090	0.00068	mg/L			12/24/13 16:55	3
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	98		70 - 130					12/24/13 16:55	3
4-Bromofluorobenzene (Surr)	101		70 - 130					12/24/13 16:55	3

Client Sample ID: MW-2

Date Collected: 12/13/13 15:30

Date Received: 12/17/13 10:40

Lab Sample ID: 560-44353-2

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	5.5		0.050	0.0070	mg/L			12/24/13 17:19	50
Ethylbenzene	0.51		0.050	0.010	mg/L			12/24/13 17:19	50
Toluene	0.83		0.050	0.015	mg/L			12/24/13 17:19	50
Xylenes, Total	3.7		0.15	0.011	mg/L			12/24/13 17:19	50
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	100		70 - 130					12/24/13 17:19	50
4-Bromofluorobenzene (Surr)	100		70 - 130					12/24/13 17:19	50

Client Sample ID: TMW-1

Date Collected: 12/13/13 15:35

Date Received: 12/17/13 10:40

Lab Sample ID: 560-44353-3

Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	6.5		0.080	0.0080	mg/L			12/23/13 10:23	40
Toluene	2.2		0.080	0.015	mg/L			12/23/13 10:23	40
Ethylbenzene	0.41		0.080	0.0080	mg/L			12/23/13 10:23	40
Xylenes, Total	4.0		0.080	0.026	mg/L			12/23/13 10:23	40
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		58 - 129					12/23/13 10:23	40
Trifluorotoluene (Surr)	109		54 - 130					12/23/13 10:23	40

QC Sample Results

Client: MWH Americas Inc
Project/Site: Gallegos Canyon Unit #142E Groundwater

TestAmerica Job ID: 560-44353-1
SDG: December 2013

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

Lab Sample ID: MB 560-96541/8

Matrix: Water

Analysis Batch: 96541

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			12/24/13 11:54	1
Ethylbenzene	<0.00020		0.0010	0.00020	mg/L			12/24/13 11:54	1
Toluene	<0.00030		0.0010	0.00030	mg/L			12/24/13 11:54	1
Xylenes, Total	<0.00023		0.0030	0.00023	mg/L			12/24/13 11:54	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	102		70 - 130		12/24/13 11:54	1
4-Bromofluorobenzene (Surr)	99		70 - 130		12/24/13 11:54	1

Lab Sample ID: LCS 560-96541/3

Matrix: Water

Analysis Batch: 96541

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	0.0263		mg/L		105	70 - 130
Ethylbenzene	0.0250	0.0242		mg/L		97	70 - 130
Toluene	0.0250	0.0259		mg/L		104	70 - 130
Xylenes, Total	0.0750	0.0731		mg/L		98	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	102		70 - 130
4-Bromofluorobenzene (Surr)	100		70 - 130

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 560-96487/5

Matrix: Water

Analysis Batch: 96487

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			12/22/13 22:55	1
Toluene	<0.00038		0.0020	0.00038	mg/L			12/22/13 22:55	1
Ethylbenzene	<0.00020		0.0020	0.00020	mg/L			12/22/13 22:55	1
Xylenes, Total	<0.00065		0.0020	0.00065	mg/L			12/22/13 22:55	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		58 - 129		12/22/13 22:55	1
Trifluorotoluene (Surr)	87		54 - 130		12/22/13 22:55	1

Lab Sample ID: LCS 560-96487/4

Matrix: Water

Analysis Batch: 96487

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	0.0358		mg/L		90	70 - 130
Toluene	0.0400	0.0361		mg/L		90	70 - 130
Ethylbenzene	0.0400	0.0366		mg/L		91	70 - 130

TestAmerica Corpus Christi

QC Sample Results

Client: MWH Americas Inc
Project/Site: Gallegos Canyon Unit #142E Groundwater

TestAmerica Job ID: 560-44353-1
SDG: December 2013

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

Lab Sample ID: LCS 560-96487/4

Matrix: Water

Analysis Batch: 96487

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
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)	87		54 - 130

Lab Chronicle

Client: MWH Americas Inc
Project/Site: Gallegos Canyon Unit #142E Groundwater

TestAmerica Job ID: 560-44353-1
SDG: December 2013

Client Sample ID: MW-1

Date Collected: 12/13/13 15:40

Date Received: 12/17/13 10:40

Lab Sample ID: 560-44353-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		3	96541	12/24/13 16:55	RP56	TAL CC

Client Sample ID: MW-2

Date Collected: 12/13/13 15:30

Date Received: 12/17/13 10:40

Lab Sample ID: 560-44353-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		50	96541	12/24/13 17:19	RP56	TAL CC

Client Sample ID: TMW-1

Date Collected: 12/13/13 15:35

Date Received: 12/17/13 10:40

Lab Sample ID: 560-44353-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		40	96487	12/23/13 10:23	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: Gallegos Canyon Unit #142E Groundwater

TestAmerica Job ID: 560-44353-1
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: Gallegos Canyon Unit #142E Groundwater

TestAmerica Job ID: 560-44353-1
SDG: December 2013

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CC
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: Gallegos Canyon Unit #142E Groundwater

TestAmerica Job ID: 560-44353-1
SDG: December 2013

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
560-44353-1	MW-1	Water	12/13/13 15:40	12/17/13 10:40
560-44353-2	MW-2	Water	12/13/13 15:30	12/17/13 10:40
560-44353-3	TMW-1	Water	12/13/13 15:35	12/17/13 10:40

12/30/2013

Login Sample Receipt Checklist

Client: MWH Americas Inc

Job Number: 560-44353-1

SDG Number: December 2013

Login Number: 44353

List Number: 1

Creator: Rood, Vivian R

List Source: TestAmerica Corpus Christi

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	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 $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	