

2015 ANNUAL GROUNDWATER REPORT

Sandoval GC A#1A
NMOCD Case#: 3RP-235-0
Meter Code: 89620

Latitude: 36.772101, Longitude: -107.753601

SITE DETAILS

Site Location: Latitude: 36.772101, Longitude: -107.753601
Land Type: Federal
Operator: BP/America Production Company

SITE BACKGROUND

- **Site Assessment:** 5/94
- **Excavation:** 9/94 (50 cy)
- **Re-Excavation:** 7/97 (504 cy)
- **ORC Nutrient Injection** 10/01

Environmental Remediation activities at the Sandoval GC A#1A (Site) are managed pursuant to the procedures set forth in the document entitled, "Remediation Plan for Groundwater Encountered during Pit Closure Activities" (Remediation Plan, El Paso Natural Gas Company / El Paso Field Services Company, 1995). This Remediation Plan was conditionally approved by the New Mexico Oil Conservation Division (OCD) in correspondence dated November 30, 1995; and the OCD approval conditions were adopted into El Paso CGP Company (EPCPG) program methods. Currently, the Site is operated by BP America Production Company and is active.

The Site is located on Federal land. Various site investigations have occurred from 1994 through 2015. A monitoring well was installed in 1994 (MW-1), additional borings were advanced for well installation purposes but were refused in 1995 and 1997. Wells MW-2 through MW-5 were installed in 2015. Currently, groundwater sampling is conducted on a semi-annual basis and free product was not observed in 2015.

SUMMARY OF 2015 ACTIVITIES

In September 2015, new monitoring well locations were staked and surveyed for permitting and utility locating purposes. The monitoring well advancement and installation activities were completed in accordance with the Monitoring Well Installation Work Plan, submitted on October 5, 2015.

Four new wells (MW-2, MW-3, MW-4, and MW-5) and one soil boring (SB-1) were drilled in October 2015, to further characterize the extent of the dissolved-phase hydrocarbons and to define the groundwater gradient at the Site. Ground surface and casing elevations of the new monitoring wells were surveyed on November 13, 2015, by a licensed surveyor using state plane coordinates.

Monitoring wells were constructed of 2-inch-diameter, Schedule 40 polyvinyl chloride (PVC), with 0.010-inch, continuous, factory-slotted PVC screen. The well screen was installed from 15 feet below ground surface (bgs) to 45 feet bgs and bisects the observed water table located at depths ranging from 34-44 feet below the top of the monitoring well casings during 2015 gauging events. A 3-foot seal of bentonite chips was placed above the sandpack and hydrated, and the remaining annular space filled with bentonite grout. The wells were completed as stick-up wells with locking protective casings and a concrete

2015 ANNUAL GROUNDWATER REPORT

Sandoval GC A#1A

NMOCD Case#: 3RP-235-0

Meter Code: 89620

Latitude: 36.772101, Longitude: -107.753601

surface completion. Four protective bollards were installed around each new monitoring well. Borehole logs and well construction diagrams are provided in Appendix A. Well MW-2 was installed to the west of the former El Paso pit location. Monitoring well MW-3 was installed north-northwest, and well MW-4 was installed east of the former pit. Monitoring well MW-5 was installed south of the former pit location. Soil boring SB-1 was completed near MW-1 to evaluate remaining soil impacts in the vicinity of the former pit. Pertinent site features and soil boring/monitoring well locations are shown on maps in Figures 1 through 4.

During the drilling of the soil borings completed in October 2015, the soil sample interval exhibiting the highest photoionization detector (PID) reading was collected and placed in a 4-ounce jar for laboratory analysis. Soil samples were analyzed for the presence of benzene, toluene, ethylbenzene, and total xylenes (BTEX) according to United States Environmental Protection Agency (EPA) Method SW846 8021B, total petroleum hydrocarbons (TPH) gasoline-range organics, diesel-range organics, and mineral range organics using EPA Method 8015B; and chloride according to EPA Method 300. Sample jars were stored in an ice-filled cooler and shipped under standard chain-of-custody protocols to TestAmerica Laboratories, Inc. in Pensacola, Florida (TestAmerica). The soil sample analytical report is provided in Appendix B.

Monitoring well development was performed using a well swab and stainless steel bailer until all sediment was removed and visibly clear groundwater was observed. Purged groundwater was containerized and transported to Basin Disposal, Inc. in Bloomfield, New Mexico, for disposal. Soil drums were staged on site for later disposal at Envirotech, Inc. (Envirotech), located south of Bloomfield, New Mexico. On November 13, 2015, Sierra Oilfield Services, Inc. removed 12 drums of soil cuttings from the Site and delivered them to Envirotech. Disposal documentation is contained in Appendix C.

On May 30 and November 20, 2015, water levels were gauged at MW-1, and groundwater samples were collected using HydraSleeve™ (HydraSleeve) no-purge passive groundwater sampling devices. New monitoring wells MW-2, MW-3, MW-4 and MW-5 were also gauged and sampled during the November 2015 sampling event. The HydraSleeves were set during the previous sampling event or after well installation to approximately 0.5 foot above termination depth of the monitoring wells. HydraSleeves were suspended in the well using a suspension tether and stainless steel weights to collect a sample from the screened interval. Groundwater samples were placed into laboratory-supplied sample containers, packed on ice, and shipped under standard chain-of-custody protocols to TestAmerica where they were analyzed for BTEX. Additional field parameters are collected from the excess sample water recovered by the HydraSleeve. Excess sample water is poured into a YSI multi-parameter instrument sample cup and analyzed. Field parameters include dissolved oxygen, temperature, conductivity, pH, and oxidation reduction potential. Field parameters are not collected if free product is present. The unused sample water is combined in a waste container and taken to Basin Disposal, Inc. for disposal.

2015 ANNUAL GROUNDWATER REPORT

Sandoval GC A#1A
NMOCD Case#: 3RP-235-0

Meter Code: 89620
Latitude: 36.772101, Longitude: -107.753601

SUMMARY TABLES

Historic groundwater analytical results and well gauging data are summarized in Tables 1 and 2, respectively. Soil analytical results are summarized in Table 3.

SITE MAPS

Groundwater analytical maps and groundwater elevation contour maps from each sampling event are included as Figures 1 through 4.

ANALYTICAL LAB REPORTS

The soil and groundwater analytical lab reports are included as Appendices B and D, respectively.

GROUNDWATER RESULTS

- The groundwater flow direction at the Site is generally to the south/southeast (see Figure 4).
- Groundwater samples collected in 2015 from MW-2, MW-3, MW-4, and MW-5 exceeded the New Mexico Water Quality Control Commission (NMWQCC) standard (10 micrograms per liter [µg/L]) for benzene in groundwater. The concentration of benzene in the groundwater sample collected from monitoring well MW-1 was below the NMWQCC standard.
- Groundwater samples collected in 2015 from MW-2 and MW-5 exceeded the NMWQCC standard (750 µg/L) for toluene in groundwater. The concentrations of toluene in the groundwater samples collected from monitoring wells MW-1, MW-3, and MW-4 were below the NMWQCC standard.
- All site monitoring wells that were sampled in 2015 were below the NMWQCC standard for ethylbenzene in groundwater (750 µg/L).
- Groundwater samples collected in 2015 from MW-2 and MW-5 exceeded the NMWQCC standard (620 µg/L) for total xylenes in groundwater. The concentrations of total xylenes in the groundwater samples collected from monitoring wells MW-1, MW-3, and MW-4 were below the NMWQCC standard.

2015 ANNUAL GROUNDWATER REPORT

Sandoval GC A#1A
NMOCD Case#: 3RP-235-0

Meter Code: 89620
Latitude: 36.772101, Longitude: -107.753601

SOIL RESULTS

- Soil samples were collected from the borings for monitoring wells MW-2 through MW-5 and soil boring SB-1. Sample locations were based on elevated soil screening results. Constituents of BTEX and TPH were below the reporting limit in all of the 2015 soil samples collected.
- Concentrations of chloride were detected in the soil sample collected during the installation of MW-4 (35 milligrams per kilogram (mg/kg) was below the applicable NMOCD standard (600 mg/kg).

PLANNED FUTURE ACTIVITIES

Groundwater monitoring events will be conducted on a semi-annual basis. Based on the 2015 investigation activities, additional assessment will be required. The 2016 Annual Report will be submitted in early 2017.

P:\Word Processing\KINDER MORGANVEL PASO - NM\SANDOVAL GC A#1A\2015 ANNUAL REPORT (SANDOVAL GC A#1A)\2016-01_Rpt_Sandoval GC A #1A _2015 Annual Report.doc

TABLES

TABLE 1 – GROUNDWATER ANALYTICAL RESULTS

TABLE 2 – GROUNDWATER ELEVATION RESULTS

TABLE 3 – SOIL ANALYTICAL RESULTS

TABLE 1 - GROUNDWATER ANALYTICAL RESULTS

Sandoval GC A #1A					
Location	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
NMWQCC Standards:		10	750	750	620
MW-1	05/30/95	5500	3980	579	4780
MW-1	04/12/96	10400	8960	925	10100
MW-1	07/26/96	8980	7980	1000	9430
MW-1	10/18/96	11050	9960	900	10700
MW-1	01/21/97	7700	7210	787	8430
MW-1	04/16/97	8900	8680	996	9250
MW-1	07/11/97	8240	7850	709	8230
MW-1	09/04/97	4420	2370	850	9660
MW-1	10/22/97	3460	39.6	714	7690
MW-1	01/06/98	3850	194	795	8570
MW-1	04/23/98	4330	406	783	7220
MW-1	04/19/99	4300	1260	629	7440
MW-1	04/13/00	2300	1500	590	5900
MW-1	05/30/01	2800	710	560	5200
MW-1	10/08/01	NS	NS	NS	NS
MW-1	05/16/02	3000	1500	440	5300
MW-1	05/21/03	3850	601	443	6360
MW-1	11/16/04	2490	30.9	346	2860
MW-1	11/08/05	338	8.5	80.1	757
MW-1	11/08/06	198	3.4	14.9	83.6
MW-1	11/29/07	441	3.8	52.2	72.2
MW-1	11/18/08	120	<2	17.9	8.3
MW-1	11/04/09	88.4	<1	14.8	4.3
MW-1	06/03/10	NS	NS	NS	NS
MW-1	11/09/10	54	<2	8.7	12.7

TABLE 1 - GROUNDWATER ANALYTICAL RESULTS

Sandoval GC A #1A					
Location	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
NMWQCC Standards:		10	750	750	620
MW-1	11/16/11	31.3	<1	14.2	8.9
MW-1	06/08/13	0.27 J	<0.30	<0.20	<0.23
MW-1	09/09/13	0.36 J	<0.30	<0.20	<0.23
MW-1	12/12/13	0.31 J	<0.38	<0.20	<0.65
MW-1	04/02/14	1.1 J	1.7 J	<0.20	1.4 J
MW-1	10/23/14	3.3	<0.70	3.8	<1.6
MW-1	05/30/15	5.7	<5.0	5.3	6
MW-1	11/20/15	8.3	<5.0	5.2	14
MW-2	11/20/15	2400	3700	530	7400
MW-3	11/20/15	55	62	16	140
MW-4	11/20/15	490	<10	4.0	140
MW-5	11/20/15	7500	17000	590	7100
Notes: "µg/L" = micrograms per liter Results highlighted yellow exceed their respective New Mexico Water Quality Control Commission (NMWQCC) standards. "J" = Result is less than the reporting limit but greater than or equal to the method detection limit and the result is an approximate value. "<" = analyte was not detected at the indicated reporting limit (some historic data were reported at the detection limit). "NS" = Monitoring well not sampled					

TABLE 2 - GROUNDWATER ELEVATION RESULTS

Sandoval GC A #1A						
Location	Date	TOC	Depth to Water (ft.)	Depth to LNAPL (ft.)	LNAPL Thickness (ft.)	GW Elevation (ft.)
MW-1	05/30/95	5716.63	34.49	NR		5682.14
MW-1	04/12/96	5716.63	35.39	NR		5681.24
MW-1	07/26/96	5716.63	35.61	NR		5681.02
MW-1	10/18/96	5716.63	35.79	NR		5680.84
MW-1	01/21/97	5716.63	35.80	NR		5680.83
MW-1	04/16/97	5716.63	35.99	NR		5680.64
MW-1	07/11/97	5716.63	36.05	NR		5680.58
MW-1	09/04/97	5716.63	35.18	NR		5681.45
MW-1	10/22/97	5716.63	35.14	NR		5681.49
MW-1	01/06/98	5716.63	35.10	NR		5681.53
MW-1	04/23/98	5716.63	35.15	NR		5681.48
MW-1	04/19/99	5716.63	35.10	NR		5681.53
MW-1	04/13/00	5716.63	34.70	NR		5681.93
MW-1	05/30/01	5716.63	34.97	NR		5681.66
MW-1	10/08/01	5716.63	35.19	NR		5681.44
MW-1	05/16/02	5716.63	35.11	NR		5681.52
MW-1	05/21/03	5716.63	35.26	ND		5681.37
MW-1	11/16/04	5716.63	34.84	ND		5681.79
MW-1	11/08/05	5716.63	33.87	ND		5682.76
MW-1	11/08/06	5716.63	34.02	ND		5682.61
MW-1	11/29/07	5716.63	33.29	ND		5683.34
MW-1	11/18/08	5716.63	33.41	ND		5683.22

TABLE 2 - GROUNDWATER ELEVATION RESULTS

Sandoval GC A #1A						
Location	Date	TOC	Depth to Water (ft.)	Depth to LNAPL (ft.)	LNAPL Thickness (ft.)	GW Elevation (ft.)
MW-1	11/04/09	5716.63	33.64	ND		5682.99
MW-1	06/03/10	5716.63	33.46	ND		5683.17
MW-1	11/09/10	5716.63	32.94	ND		5683.69
MW-1	11/16/11	5716.63	33.28	ND		5683.35
MW-1	06/08/13	5716.63	33.67	ND		5682.96
MW-1	09/09/13	5716.63	33.78	ND		5682.85
MW-1	12/12/13	5716.63	33.80	ND		5682.83
MW-1	04/02/14	5716.63	33.85	ND		5682.78
MW-1	10/23/14	5716.63	34.04	ND		5682.59
MW-1	05/30/15	5716.63	34.19	ND		5682.44
MW-1	11/20/15	5716.63	34.33	ND		5682.30
MW-2	11/20/15	5717.56	35.29	ND		5682.27
MW-3	11/20/15	5718.73	37.16	ND		5681.57
MW-4	11/23/15	5718.15	44.93	ND		5673.22
MW-5	11/23/15	5714.35	41.16	ND		5673.19

Notes:

"ft" = feet

"TOC" = Top of casing

"LNAPL" = Light non-aqueous phase liquid

"ND" = LNAPL not detected

"NR" = LNAPL not recorded

TABLE 3 - SOIL ANALYTICAL RESULTS

Sandoval GC A #1A											
Location (depth in feet bgs)	Date (mm/dd/yy)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	BTEX Total (mg/kg)	GRO C6-10 (mg/kg)	DRO C10-28 (mg/kg)	MRO C28-35 (mg/kg)	TPH (mg/kg)	Chloride (mg/kg)
NMOCD Criteria:		10	NE	NE	NE	50	NE	NE	NE	100	600
MW-2 (20-22')	10/26/15	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
MW-3 (30-31')	10/25/15	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
MW-4 (20-22.2')	10/26/15	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	36
MW-5 (16.5-18')	10/26/15	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
SB-1 (22-23.8')	10/26/15	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
SB-1 (25-26.1')	10/26/15	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
Notes:											
mg/kg	Milligrams per kilogram										
NE	New Mexico Oil Conservation Division (NMOCD) Standard Not Established										
BRL	Below Reporting Limit										
BTEX	Benzene, toluene, ethylbenzene, xylenes										
GRO	Gasoline range organics										
DRO	Diesel range organics										
MRO	Motor oil range organics										
Total BTEX	Sum of the detectable concentrations of individual BTEX constituents										
TPH	Total Petroleum Hydrocarbon concentration is calculated by adding GRO, DRO, and MRO and rounded to the nearest mg/kg.										
NMOCD Criteria	New Mexico Oil Conservation Division closure criteria for pits ≤50 feet below bottom of pit to groundwater less than 10,000 mg/L TDS										
	Results bolded and highlighted yellow exceed their respective NMOCD Standards										

FIGURES

FIGURE 1: MAY 30, 2015 GROUNDWATER ANALYTICAL RESULTS MAP

FIGURE 2: MAY 30, 2015 GROUNDWATER ELEVATION MAP

FIGURE 3: NOVEMBER 20, 2015 GROUNDWATER ANALYTICAL RESULTS MAP

FIGURE 4: NOVEMBER 20, 2015 GROUNDWATER ELEVATION MAP



AERIAL IMAGERY FROM GOOGLE EARTH, DATED 5/2/2013

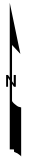
LEGEND:

- 6503 APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- FORMER PIT
- GAS — NATURAL GAS LINE
- O V H D — OVERHEAD ELECTRIC LINE
- MONITORING WELL
- OTHER MONITORING WELL
- SMA BENCHMARK
- RIG ANCHOR

EXPLANATION OF ANALYTES AND APPLICABLE STANDARDS:

RESULTS IN **BOLDFACE** TYPE INDICATE CONCENTRATION IN EXCESS OF THE STANDARD FOR THAT ANALYTE.
µg/L = MICROGRAMS PER LITER
<5.0 = BELOW REPORTING LIMIT

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



REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
A	2/10/2016	CCL	CCL	SRV

TITLE:

**GROUNDWATER ANALYTICAL RESULTS
MAY 30, 2015**

PROJECT:

**SANDOVAL GC A#1A
SAN JUAN RIVER BASIN
SAN JUAN COUNTY, NEW MEXICO**



Figure No.:

1

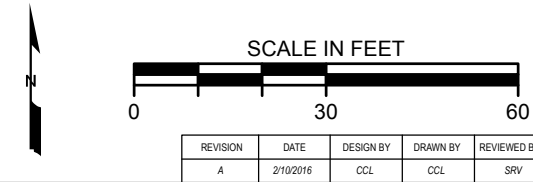


AERIAL IMAGERY FROM GOOGLE EARTH, DATED 5/2/2013

LEGEND:

- APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- FORMER PIT
- NATURAL GAS LINE
- OVERHEAD ELECTRIC LINE
- MONITORING WELL
- OTHER MONITORING WELL
- SMA BENCHMARK
- RIG ANCHOR

NOTE:
NO MEASUREABLE FREE PRODUCT WAS DETECTED



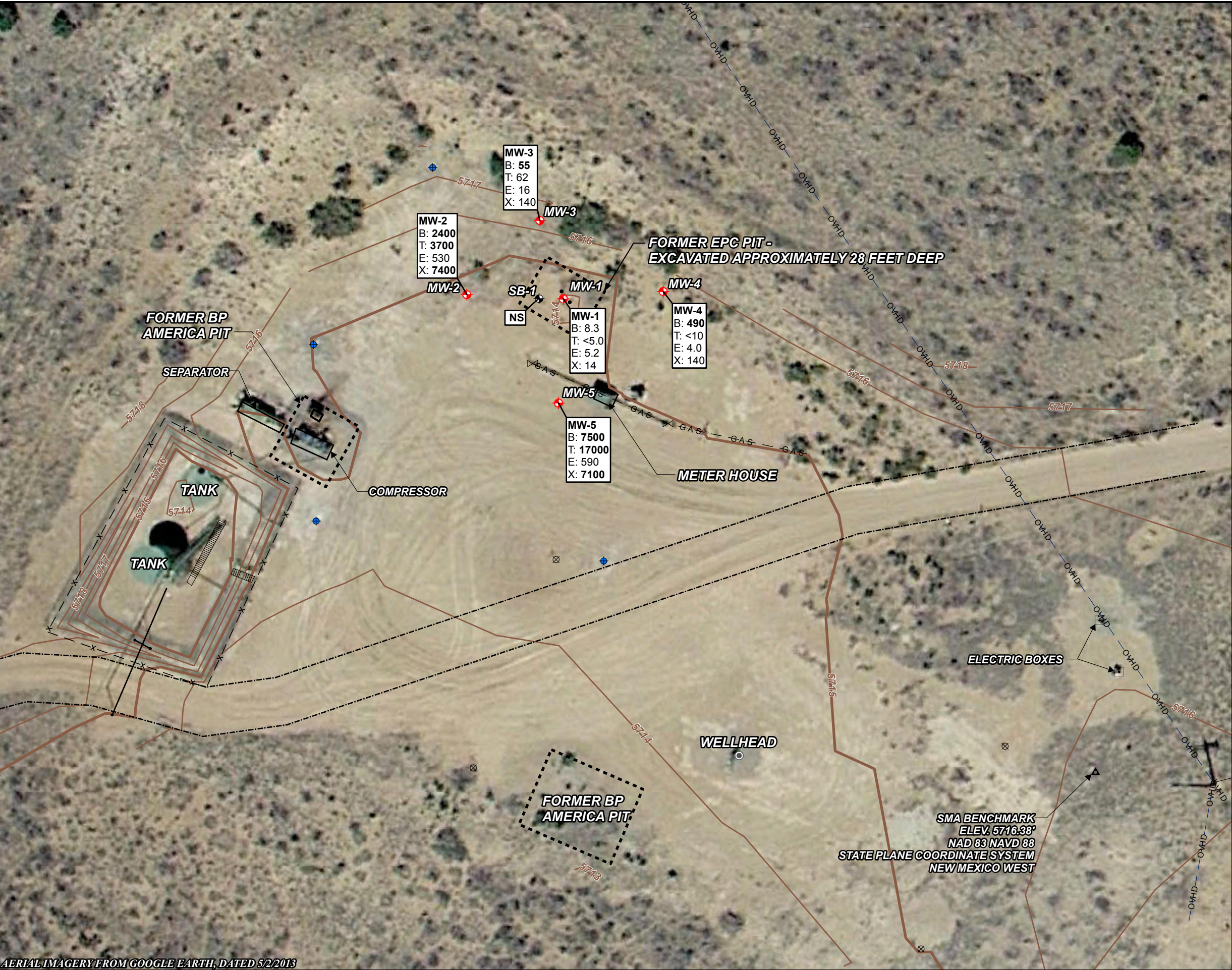
TITLE:
**GROUNDWATER ELEVATION MAP
MAY 30, 2015**

PROJECT: **SANDOVAL GC A#1A
SAN JUAN RIVER BASIN
SAN JUAN COUNTY, NEW MEXICO**



Figure No.:

2



	APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
	ACCESS ROAD
	FORMER PIT
	NATURAL GAS LINE
	OVERHEAD ELECTRIC LINE
	MONITORING WELL
	OTHER MONITORING WELL
	SMA BENCHMARK
	RIG ANCHOR

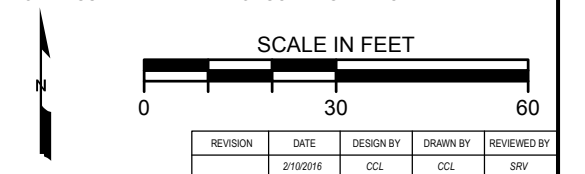
5673.19 GROUNDWATER ELEVATION
IN FEET ABOVE MEAN SEA LEVEL

~~5677~~ WATER LEVEL ELEVATION CONTOUR
DASHED WHERE INFERRED (FEET ABOVE MEAN
SEA LEVEL, 2 FOOT CONTOUR INTERVAL).

→ DIRECTION OF APPARENT GROUNDWATER FLOW

MW-4 AND MW-5 WERE ERRONEOUSLY GAUGED AS DRY ON
NOVEMBER 20. BOTH WELLS WERE REGAUGED AND SAMPLED ON
NOVEMBER 23, 2015.

NO MEASUREABLE FREE PRODUCT WAS DETECTED



TITLE: **GROUNDWATER ELEVATION MAP
NOVEMBER 20 AND NOVEMBER 23, 2015**

PROJECT: **SANDOVAL GC A#1A**
SAN JUAN RIVER BASIN
SAN JUAN COUNTY, NEW MEXICO



Figure No.: **4**

APPENDICES

APPENDIX A – BOREHOLE AND WELL CONSTRUCTION LOGS

APPENDIX B – SOIL SAMPLING ANALYTICAL REPORTS

APPENDIX C – WASTE DISPOSAL DOCUMENTATION

APPENDIX D – MAY 30, 2015 GROUNDWATER SAMPLING ANALYTICAL REPORT

NOVEMBER 20, 2015 GROUNDWATER SAMPLING ANALYTICAL REPORT

APPENDIX A



MWH

Drilling Log

Monitoring Well

MW-2

Page: 1 of 2

Project Sandoval GC A#1A Owner El Paso Remediation Company

Location San Juan County, New Mexico Project Number 10508033.0102

Surface Elev. 5715.27 ft North NA East NA

Top of Casing 5717.56 ft Water Level Initial 0 Static 5682.25

Hole Depth 45.0ft Screen: Diameter 2 in Length 20.0 ft Type/Size PVC/0.01 in

Hole Diameter 8.25 in Casing: Diameter 2 in Length 26.5 ft Type PVC

Drill Co. National EWP Drilling Method See Comment Sand Pack 12/20 Silica Sand

Driller Matt Cain Driller Reg. # WD 1210 Log By Brad Barton

Start Date 10/20/2015 Completion Date 11/5/2015 Checked By S. Varsa

Bentonite Grout
 Bentonite Granules
 Grout
 Portland Cement
 Sand Pack
 Sand Pack

COMMENTS
 Drilling Method - Hollow Stem
 Auger/Air Rotary/Casing
 Hammer

Depth (ft)	PID (ppm)	% Recovery	Blow Count Recovery	Graphic Log	USCS	Description (Color, Moisture, Texture, Structure, Odor) Geologic Descriptions are Based on the USCS.	Well Completion	Elevation (ft)
0						Silty with gravel and cobbles, minor vegetation. 0-8 Hydro-Vac		5715.27
0.0						(0 - 8) Silty SAND: with gravel, minor cementation, coarse medium fine size, medium brown, dry to slight moist, wet from hydro vac, no hydrocarbon odor, minor clay content 5-10 percent.		5715
5					SM			5710
10		100%			SM	↓ increasing clay content with depth 10-20 percent. (8 - 10) Silty SAND: continued ★ Excess recovery due to slough in hole.		5705
10.0		100%			SM	(10 - 13.8) Silty SAND: continued, increasing clay content.		
15		76%				(13.8 - 15) No Recovery		5700
15.0					SM	(15 - 17.5) Silty SAND with Clay: some discoloration, reddish brown (Fe staining), light brown to medium brown, very fine sand, loose, low plasticity, slight moist, no hydrocarbon odor.		
20		50% MW-2 (20-22ft) sample			SW	(17.5 - 20) No Recovery (20 - 22) Well Graded SAND: light brown, all sand sizes, cobbles start at 21 feet, cobbles up to 3 inch, rounded, no hydrocarbon odor, dry to slight moist. Driller reports cobbles at about 22 feet bgs. (22 - 24) No Recovery		5695
25		50%			SW	(24 - 24.5) Well Graded SAND with Cobbles: continued, not enough volume for sample.		

Continued Next Page

Drilling Log SANDOVAL GC A#1A LOGS.GPJ MWH I.A.GDT 1/7/16



MWH

Drilling Log

Monitoring Well

MW-2

Page: 2 of 2

Project Sandoval GC A#1A

Owner El Paso Remediation Company

Location San Juan County, New Mexico

Project Number 10508033.0102

Depth (ft)	PID (ppm)	% Recovery	Blow Count Recovery	Graphic Log	USCS	Description (Color, Moisture, Texture, Structure, Odor) Geologic Descriptions are Based on the USCS.	Well Completion	Elevation (ft)
25						<i>Continued</i>		
						(24.5 - 25) No Recovery (25 - 30) No Recovery		5690
30		0%				(30 - 31) No Recovery, refusal with hollow stem auger.		5685
	★50.8	0%				(31 - 45) Cuttings, ground up sand, light grayish brown, moist, slight hydrocarbon odor, coarse sand to fine sand, minor gravel, cobbles suspected with possible sandstone. At 31 feet switched to air rotary rig.		
35		100%				↓cuttings, light brown, wet, slight hydrocarbon odor.		5680
	★5.4							
40		100%				↓crushed sandstone, light brown, fine to medium sand, very slight hydrocarbon odor.		5675
	★0.9							
45		100%				★PID from cuttings Bottom of Boring 45 feet Monitoring Well TD = 44.5 feet		5670
50								5665
55								5660



MWH

Drilling Log

Monitoring Well

MW-3

Page: 1 of 2

Project Sandoval GC A#1A Owner El Paso Remediation Company
 Location San Juan County, New Mexico Project Number 10508033.0102
 Surface Elev. 5716.24 ft North NA East NA
 Top of Casing 5718.73 ft Water Level Initial 5685.23 Static 5681.32
 Hole Depth 45.0ft Screen: Diameter 2 in Length 20.0 ft Type/Size PVC/0.01 in
 Hole Diameter 8.25 in Casing: Diameter 2 in Length 26.5 ft Type PVC
 Drill Co. National EWP Drilling Method See Comment Sand Pack 12/20 Silica
 Driller Matt Cain Driller Reg. # WD 1210 Log By Brad Barton
 Start Date 10/20/2015 Completion Date 10/25/2015 Checked By S. Varsa

COMMENTS

Drilling Method - Hollow Stem
 Auger/Air Rotary/Casing
 Hammer

Bentonite Grout Bentonite Granules Grout Portland Cement Sand Pack Sand Pack

Depth (ft)	PID (ppm)	% Recovery	Blow Count Recovery	Graphic Log	USCS	Description (Color, Moisture, Texture, Structure, Odor) Geologic Descriptions are Based on the USCS.	Well Completion	Elevation (ft)
0						Dirt with minor vegetation		5716.24
0.0						0-8 Hydro-Vac		5715
0.0						(0 - 8) Silty SAND: medium brown, dry to slight moist, wet from hydro vac, minor cementation.		
0.0						Driller reports cobbles and clay at about 5 feet bgs.		
5					SM			5710
0.0						↓increasing cementation		
10		100%				(8 - 15) Silty SAND: with minor clay, minor cementation, fine to medium sand, trace coarse sand, dry to slight moist, medium brown, no hydrocarbon odor.		
0.0		100%				Excess recovery due to slough in hole.		
0.0					SM	↓trace cobbles, minor gravel - subrounded and rounded		5705
0.0						↓increasing cementation, color changes to light brown, white cementation visible, no hydrocarbon odor.		
15		100%						5700
0.0					SP	(15 - 17.8) Grades to Poorly Graded SAND: loose, weakly to no cementation, fine sand, light brown, no hydrocarbon odor, dry, minor discoloration in matrix, reddish brown (Fe staining).		
0.0						(17.8 - 20) No Recovery		
20		56%						5695
0.0					SWG	(20 - 21.5) Well Graded Gravel with Sand: loose gravel up to cobble size - about 2 inch, rounded, brown, no hydrocarbon odor, slight moist.		
0.0						Driller reports hard drilling 20-25 feet bgs due to cobbles and rock.		
						(21.5 - 25) No Recovery		
25		30%						

Continued Next Page

Drilling Log SANDOVAL GC A#1A LOGS.GPJ MWH IA.GDT 1/7/16



MWH

Drilling Log

Monitoring Well

MW-3

Page: 2 of 2

Project Sandoval GC A#1A

Owner El Paso Remediation Company

Location San Juan County, New Mexico

Project Number 10508033.0102

Depth (ft)	PID (ppm)	% Recovery	Blow Count Recovery	Graphic Log	USCS	Description (Color, Moisture, Texture, Structure, Odor) Geologic Descriptions are Based on the USCS.	Well Completion	Elevation (ft)
25						<i>Continued</i>		
						(25 - 30) No Recovery (cuttings all cobbles) very hard drilling, pulverized cobbles in sample barrel at about 30 feet.		5690
30	0.2 0.0	0% MW-3 (30-31ft) sample				(30 - 31.8) Poorly Graded SAND with Cobbles: olive brown to gray, cobbles up to 2 inch, rounded, wet at 31.0 feet bgs, no hydrocarbon odor, medium sand.		5685
						(31.8 - 35) No Recovery		
35	★512.6 ★10.2	36%				(35 - 38.1) Poorly Graded SAND: strongly cemented to sandstone, barrel is heated so sample is drying out fast, wet to dry, slight hydrocarbon odor, barrel really hot from drilling, medium sand, olive brown to gray. ★High PID reading due to super heated barrel drying out wet sample.		5680
						(38.1 - 40) No Recovery		
40	★65.7 ★35.8	62%				(40 - 42.1) Poorly Graded SAND to Sandstone: continued, heated from drilling, very slight hydrocarbon odor, wet to dry.		5675
						(42.8 - 45) No Recovery		
45		56%						
						★PID from cuttings Bottom of Boring 45 feet Monitoring Well TD = 44.5 feet		5670
50								5665
55								5660

Drilling Log SANDOVAL GC A#1A LOGS.GPJ MWH I.A.GDT 1/7/16



MWH

Drilling Log

Monitoring Well

MW-4

Page: 1 of 2

Project Sandoval GC A#1A Owner El Paso Remediation Company
 Location San Juan County, New Mexico Project Number 10508033.0102
 Surface Elev. 5715.62 ft North NA East NA
 Top of Casing 5718.15 ft Water Level Initial 5680.65 Static 0
 Hole Depth 45.0ft Screen: Diameter 2 in Length 20.0 ft Type/Size PVC/0.01 in
 Hole Diameter 8.25 in Casing: Diameter 2 in Length 24.0 ft Type PVC
 Drill Co. National EWP Drilling Method See Comment Sand Pack 12/20 Silica
 Driller Matt Cain Driller Reg. # WD 1210 Log By Brad Barton
 Start Date 10/20/2015 Completion Date 11/5/2015 Checked By S. Varsa

COMMENTS

Drilling Method - Hollow Stem
 Auger/Air Rotary/Casing
 Hammer

Bentonite Grout Bentonite Granules Grout Portland Cement Sand Pack Sand Pack

Depth (ft)	PID (ppm)	% Recovery	Blow Count Recovery	Graphic Log	USCS	Description (Color, Moisture, Texture, Structure, Odor) Geologic Descriptions are Based on the USCS.	Well Completion	Elevation (ft)
0						Dirt with gravel, minor vegetation. 0-8 Hydro-Vac		5715.6
0.0						(0 - 8) Silty SAND: loose, medium brown, dry to slightly moist, wet from hydro vac, fine sand minor gravel, minor clay content (5-10 percent, no hydrocarbon odor).		5715
5					SM			5710
10		100%			SM	(8 - 9.1) Silty SAND: continued		
10.0		55%				↓ increasing cementation at 9 feet bgs.		
10.0						(9.1 - 10) No Recovery		
10.0					SM	(10 - 14.4) Silty SAND: continued		5705
15		88%				↓ color grades to light brown.		
15.0						(14.4 - 15) No Recovery		
15.0					SM	(15 - 18) Silty SAND: continued		5700
20		78% MW-4 (20-22.2ft) sample			SW	(18 - 18.9) Well Graded SAND: weakly cemented, light brown, loose, medium and fine sand sizes, trace coarse sand, no hydrocarbon odor.		
20.0						(18.5 - 20) No Recovery		
20.0					SW	(20 - 22.2) Well Graded SAND with Cobbles: minor clay lenses, dry to slight moist, medium to coarse sand, cobbles up to 3 inch, no hydrocarbon odor.		5695
25		55%				(22.2 - 24) No Recovery		
25.0		100%				(24 - 35) Cuttings - cobbles, pulverized to well graded sand, brown, dry to slightly moist, no hydrocarbon odor.		

Continued Next Page

Drilling Log SANDOVAL GC A#1A LOGS.GPJ MWH IA.GDT 1/7/16



MWH

Drilling Log

Monitoring Well

MW-4

Page: 2 of 2

Project Sandoval GC A#1A

Owner El Paso Remediation Company

Location San Juan County, New Mexico

Project Number 10508033.0102

Depth (ft)	PID (ppm)	% Recovery	Blow Count Recovery	Graphic Log	USCS	Description (Color, Moisture, Texture, Structure, Odor) Geologic Descriptions are Based on the USCS.	Well Completion	Elevation (ft)
25						<i>Continued</i>		
	☆0.0					At 25 feet switched to air rotary rig. ↓ bigger gravels in cuttings		5690
30		100%				↓ less gravel in cuttings continued.		5685
	☆0.0							
35		100%				↓ light olive brown, shale pulverized to FAT Clay.		5680
	☆0.1							
40		100%				↓ very moist, FAT Clay cuttings, SHALE.		5675
	☆0.5							
45		100%				☆PID from cuttings Bottom of Boring 45 feet Monitoring Well TD = 44.5 feet		5670
50								5665
55								5660

Drilling Log SANDOVAL GC A#1A LOGS.GPJ MWH IA.GDT 1/7/16



MWH

Drilling Log

Monitoring Well

MW-5

Page: 1 of 2

Project Sandoval GC A#1A Owner El Paso Remediation Company

Location San Juan County, New Mexico Project Number 10508033.0102

Surface Elev. 5714.58 ft North NA East NA

Top of Casing 5714.35 ft Water Level Initial 5679.35 Static 0

Hole Depth 45.0ft Screen: Diameter 2 in Length 20.0 ft Type/Size PVC/0.01 in

Hole Diameter 8.25 in Casing: Diameter 2 in Length 24.0 ft Type PVC

Drill Co. National EWP Drilling Method See Comment Sand Pack 12/20 Silica

Driller Matt Cain Driller Reg. # WD 1210 Log By Brad Barton

Start Date 10/20/2015 Completion Date 11/3/2015 Checked By S. Varsa

COMMENTS

Drilling Method - Hollow Stem
Auger/Air Rotary/Casing
Hammer

Bentonite Grout Bentonite Granules Grout Portland Cement Sand Pack Sand Pack

Depth (ft)	PID (ppm)	% Recovery	Blow Count Recovery	Graphic Log	USCS	Description (Color, Moisture, Texture, Structure, Odor) Geologic Descriptions are Based on the USCS.	Well Completion	Elevation (ft)
0						Dirt, road area, near meter house 0-8 Hydro-Vac (0 - 8) Silty SAND: medium brown, loose, fine to medium sand, dry to slightly moist, wet from hydro vac, minor clay content, trace gravel, no hydrocarbon odor.		5714.5
5					SM			5710
10		100%			SM	(8 - 13.5) Silty SAND: continued Excess recovery due to slough in hole.		5705
15		70%			CH	(13.5 - 15) No Recovery (15 - 18) FAT CLAY: discoloration reddish brown and white in clay matrix, weak cementation (white), iron staining reddish brown, stiff, moist, high plasticity, cobbles at 18 feet bgs.		5700
20	NA	100%				Cobbles at 18 feet bgs. (18 - 35) Cobbles: cuttings from air rotary are gravel of cobbles, dry, no hydrocarbon odor, powdered cobbles. Driller reports cobbles at 18 feet bgs, refusal at 18 feet of hollow stem auger. At 18 feet switched to air rotary rig.		5695
25	☆0.0	100%						5690

Drilling Log SANDOVAL GC A#1A LOGS.GPJ MWH IA.GDT 1/7/16

Continued Next Page



MWH

Drilling Log

Monitoring Well

MW-5

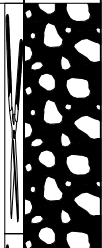
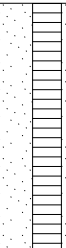
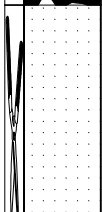
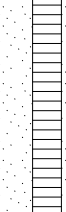
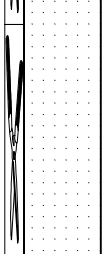
Page: 2 of 2

Project Sandoval GC A#1A

Owner El Paso Remediation Company

Location San Juan County, New Mexico

Project Number 10508033.0102

Depth (ft)	PID (ppm)	% Recovery	Blow Count Recovery	Graphic Log	USCS	Description (Color, Moisture, Texture, Structure, Odor) Geologic Descriptions are Based on the USCS.	Well Completion	Elevation (ft)
25						<i>Continued</i>		
30	★0.0	100%				↓ cobbles, crushed and fine to medium sand from hammering on cobbles, no hydrocarbon odor, slight moist.		5685
35	★0.0	100%				(35 - 45) Cobbles/Sandstone: Bedrock ↓ very moist, very slight hydrocarbon odor, crushed sandstone, light brown.		5680
40	★2.7	100%				↓ moist to slight moist, no hydrocarbon odor, crushed sandstone, light brown.		5675
45	★0.2	100%				★PID from cuttings Bottom of Boring 45 feet Monitoring Well TD = 44.5 feet		5670
50								5665
55								5660

Drilling Log SANDOVAL GC A#1A LOGS.GPJ MWH IA.GDT 1/7/16



MWH

Drilling Log

Soil Boring **SB-1**

Page: 1 of 1

Project Sandoval GC A#1A Owner El Paso Remediation Company
 Location San Juan County, New Mexico Project Number 10508033.0102
 Surface Elev. 5713.87 ft North NA East NA
 Top of Casing NA Water Level Initial NA Static NA
 Hole Depth 27.0ft Screen: Diameter NA Length NA Type/Size NA
 Hole Diameter 8.25 in Casing: Diameter NA Length NA Type NA
 Drill Co. National EWP Drilling Method See Comment Sand Pack NA
 Driller Matt Cain Driller Reg. # WD 1210 Log By Brad Barton
 Start Date 10/20/2015 Completion Date 10/26/2015 Checked By S. Varsa

COMMENTS

Drilling Method - Hollow Stem
 Auger/Air Rotary/Casing
 Hammer
 SB-1 located 6 to 7 feet south
 southeast of MW-1.

Bentonite Grout Bentonite Granules Grout Portland Cement Sand Pack Sand Pack

Depth (ft)	PID (ppm)	% Recovery	Blow Count Recovery	Graphic Log	USCS	Description (Color, Moisture, Texture, Structure, Odor) Geologic Descriptions are Based on the USCS.	Elevation (ft)
0						Silty soil at surface, minor gravel/cobbles.	5713.87
0.0						0-8 Hydro-Vac	
0.0					SM	(0 - 8) Silty SAND: medium brown, very fine sand, loose, dry to slight moist, minor clay content, no hydrocarbon odor, no cementation. cuttings moist due to hydro vac.	5710
5.0							
0.0		100%					
0.0					SM	(8 - 9.6) Silty SAND: continued, loose, fine sand, no hydrocarbon odor.	5705
10.0		80%				(9.6 - 10) No Recovery	
0.0					SM	(10 - 14.6) Silty SAND: continued ↓ minor gravel up to 1/4 inch, subrounded.	5700
0.0							
15.0		92%				(14.6 - 15) No Recovery	
0.0					SM	(15 - 18.9) Silty SAND: continued, slight moist, no hydrocarbon odor (Fill),	5695
0.0							
20.0		78%				(18.9 - 20) No Recovery	5695
0.0		SB-1 (22- 23.8ft) sample			SW	(20 - 23.8) Silty SAND with minor gravel: continued, slight moist, no hydrocarbon odor.	
0.0							
25.0		76%				(23.8 - 25) No Recovery	5690
0.0					SW	(25 - 26.1) Well Graded SAND: pulverized cobbles to sand, fine to medium sand, no hydrocarbon odor.	
		55%				(26.1 - 27) No Recovery	
30.0						Refusal at 27 feet bgs.	5685

Drilling Log SANDOVAL GC A#1A LOGS.GPJ MWH I.A.GDT 1/7/16

APPENDIX B

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

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

TestAmerica Job ID: 400-113029-1

Client Project/Site: NM-Sandoval GC A#1
Revision: 2

For:

MWH Americas Inc
1560 Broadway
Suite 1800
Denver, Colorado 80202

Attn: Ms. Sarah Gardner



Authorized for release by:
1/25/2016 5:00:16 PM

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

LINKS

Review your project
results through

TotalAccess

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.

Table of Contents

Cover Page	1
Table of Contents	2
Definitions	3
Case Narrative	4
Detection Summary	5
Sample Summary	6
Client Sample Results	7
QC Association	13
QC Sample Results	16
Chronicle	20
Certification Summary	24
Method Summary	25
Chain of Custody	26
Receipt Checklists	27



Definitions/Glossary

Client: MWH Americas Inc
Project/Site: NM-Sandoval GC A#1

TestAmerica Job ID: 400-113029-1

Glossary

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

Case Narrative

Client: MWH Americas Inc
Project/Site: NM-Sandoval GC A#1

TestAmerica Job ID: 400-113029-1

Job ID: 400-113029-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-113029-1

Comments

No additional comments.

Receipt

The samples were received on 10/28/2015 10:01 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.0° C.

Revised Report

Rev(01): The deliverable was revised to report results to the RL only.

Rev(02): The report was revised to change the analyte descriptions for the 8015 DRO/ORO analysis.

HPLC/IC

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

GC VOA

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

GC Semi VOA

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

Organic Prep

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

Detection Summary

Client: MWH Americas Inc
Project/Site: NM-Sandoval GC A#1

TestAmerica Job ID: 400-113029-1

Client Sample ID: MW-3 (30-31')

Lab Sample ID: 400-113029-1

☐ No Detections.

Client Sample ID: MW-2 (20-22')

Lab Sample ID: 400-113029-2

☐ No Detections.

Client Sample ID: MW-4 (20-22.2')

Lab Sample ID: 400-113029-3

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Chloride	36		25	mg/Kg	1	☆	300.0	Soluble

Client Sample ID: SB-1 (22-23.8')

Lab Sample ID: 400-113029-4

☐ No Detections.

Client Sample ID: SB-1 (25-26.1')

Lab Sample ID: 400-113029-5

☐ No Detections.

Client Sample ID: MW-5 (16.5-18')

Lab Sample ID: 400-113029-6

☐ No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Sample Summary

Client: MWH Americas Inc
Project/Site: NM-Sandoval GC A#1

TestAmerica Job ID: 400-113029-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-113029-1	MW-3 (30-31')	Solid	10/25/15 13:00	10/28/15 10:01
400-113029-2	MW-2 (20-22')	Solid	10/26/15 09:05	10/28/15 10:01
400-113029-3	MW-4 (20-22.2')	Solid	10/26/15 13:30	10/28/15 10:01
400-113029-4	SB-1 (22-23.8')	Solid	10/26/15 15:00	10/28/15 10:01
400-113029-5	SB-1 (25-26.1')	Solid	10/26/15 15:25	10/28/15 10:01
400-113029-6	MW-5 (16.5-18')	Solid	10/26/15 16:45	10/28/15 10:01

Client Sample Results

Client: MWH Americas Inc
Project/Site: NM-Sandoval GC A#1

TestAmerica Job ID: 400-113029-1

Client Sample ID: MW-3 (30-31')

Date Collected: 10/25/15 13:00

Date Received: 10/28/15 10:01

Lab Sample ID: 400-113029-1

Matrix: Solid

Percent Solids: 90.0

Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) C6-C10	<0.11		0.11	mg/Kg	☼	11/05/15 17:00	11/06/15 00:47	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid)	101		65 - 125			11/05/15 17:00	11/06/15 00:47	1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0011		0.0011	mg/Kg	☼	11/05/15 17:00	11/06/15 00:47	1
Ethylbenzene	<0.0011		0.0011	mg/Kg	☼	11/05/15 17:00	11/06/15 00:47	1
Toluene	<0.0055		0.0055	mg/Kg	☼	11/05/15 17:00	11/06/15 00:47	1
Xylenes, Total	<0.0055		0.0055	mg/Kg	☼	11/05/15 17:00	11/06/15 00:47	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (pid)	101		40 - 150			11/05/15 17:00	11/06/15 00:47	1

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	<11		11	mg/Kg	☼	10/29/15 11:10	10/30/15 17:50	1
Oil Range Organics (C28-C35)	<11		11	mg/Kg	☼	10/29/15 11:10	10/30/15 17:50	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
o-Terphenyl	99		27 - 151			10/29/15 11:10	10/30/15 17:50	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<22		22	mg/Kg	☼		11/04/15 23:03	1

Client Sample Results

Client: MWH Americas Inc
Project/Site: NM-Sandoval GC A#1

TestAmerica Job ID: 400-113029-1

Client Sample ID: MW-2 (20-22')

Date Collected: 10/26/15 09:05

Date Received: 10/28/15 10:01

Lab Sample ID: 400-113029-2

Matrix: Solid

Percent Solids: 79.0

Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) C6-C10	<0.12		0.12	mg/Kg	☼	11/05/15 17:00	11/06/15 03:04	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid)	103		65 - 125			11/05/15 17:00	11/06/15 03:04	1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0012		0.0012	mg/Kg	☼	11/05/15 17:00	11/06/15 03:04	1
Ethylbenzene	<0.0012		0.0012	mg/Kg	☼	11/05/15 17:00	11/06/15 03:04	1
Toluene	<0.0059		0.0059	mg/Kg	☼	11/05/15 17:00	11/06/15 03:04	1
Xylenes, Total	<0.0059		0.0059	mg/Kg	☼	11/05/15 17:00	11/06/15 03:04	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (pid)	99		40 - 150			11/05/15 17:00	11/06/15 03:04	1

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	<12		12	mg/Kg	☼	10/29/15 11:10	10/30/15 18:00	1
Oil Range Organics (C28-C35)	<12		12	mg/Kg	☼	10/29/15 11:10	10/30/15 18:00	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
o-Terphenyl	99		27 - 151			10/29/15 11:10	10/30/15 18:00	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<26		26	mg/Kg	☼		11/05/15 00:12	1

TestAmerica Pensacola

Client Sample Results

Client: MWH Americas Inc
Project/Site: NM-Sandoval GC A#1

TestAmerica Job ID: 400-113029-1

Client Sample ID: MW-4 (20-22.2')

Date Collected: 10/26/15 13:30

Date Received: 10/28/15 10:01

Lab Sample ID: 400-113029-3

Matrix: Solid

Percent Solids: 81.1

Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) C6-C10	<0.11		0.11	mg/Kg	☼	11/05/15 17:00	11/06/15 04:53	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid)	103		65 - 125			11/05/15 17:00	11/06/15 04:53	1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0011		0.0011	mg/Kg	☼	11/05/15 17:00	11/06/15 04:53	1
Ethylbenzene	<0.0011		0.0011	mg/Kg	☼	11/05/15 17:00	11/06/15 04:53	1
Toluene	<0.0053		0.0053	mg/Kg	☼	11/05/15 17:00	11/06/15 04:53	1
Xylenes, Total	<0.0053		0.0053	mg/Kg	☼	11/05/15 17:00	11/06/15 04:53	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (pid)	98		40 - 150			11/05/15 17:00	11/06/15 04:53	1

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	<12		12	mg/Kg	☼	10/29/15 11:10	10/30/15 18:10	1
Oil Range Organics (C28-C35)	<12		12	mg/Kg	☼	10/29/15 11:10	10/30/15 18:10	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
o-Terphenyl	104		27 - 151			10/29/15 11:10	10/30/15 18:10	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	36		25	mg/Kg	☼		11/05/15 00:35	1

TestAmerica Pensacola

Client Sample Results

Client: MWH Americas Inc
Project/Site: NM-Sandoval GC A#1

TestAmerica Job ID: 400-113029-1

Client Sample ID: SB-1 (22-23.8')

Date Collected: 10/26/15 15:00

Date Received: 10/28/15 10:01

Lab Sample ID: 400-113029-4

Matrix: Solid

Percent Solids: 82.7

Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) C6-C10	<0.12		0.12	mg/Kg	☼	11/05/15 17:00	11/06/15 05:20	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid)	103		65 - 125			11/05/15 17:00	11/06/15 05:20	1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0012		0.0012	mg/Kg	☼	11/05/15 17:00	11/06/15 05:20	1
Ethylbenzene	<0.0012		0.0012	mg/Kg	☼	11/05/15 17:00	11/06/15 05:20	1
Toluene	<0.0059		0.0059	mg/Kg	☼	11/05/15 17:00	11/06/15 05:20	1
Xylenes, Total	<0.0059		0.0059	mg/Kg	☼	11/05/15 17:00	11/06/15 05:20	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (pid)	100		40 - 150			11/05/15 17:00	11/06/15 05:20	1

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	<12		12	mg/Kg	☼	10/29/15 11:10	10/30/15 18:20	1
Oil Range Organics (C28-C35)	<12		12	mg/Kg	☼	10/29/15 11:10	10/30/15 18:20	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
o-Terphenyl	96		27 - 151			10/29/15 11:10	10/30/15 18:20	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<24		24	mg/Kg	☼		11/05/15 00:57	1

TestAmerica Pensacola

Client Sample Results

Client: MWH Americas Inc
Project/Site: NM-Sandoval GC A#1

TestAmerica Job ID: 400-113029-1

Client Sample ID: SB-1 (25-26.1')

Date Collected: 10/26/15 15:25

Date Received: 10/28/15 10:01

Lab Sample ID: 400-113029-5

Matrix: Solid

Percent Solids: 96.6

Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) C6-C10	<0.11		0.11	mg/Kg	☼	11/05/15 17:00	11/06/15 05:48	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid)	102		65 - 125			11/05/15 17:00	11/06/15 05:48	1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0011		0.0011	mg/Kg	☼	11/05/15 17:00	11/06/15 05:48	1
Ethylbenzene	<0.0011		0.0011	mg/Kg	☼	11/05/15 17:00	11/06/15 05:48	1
Toluene	<0.0055		0.0055	mg/Kg	☼	11/05/15 17:00	11/06/15 05:48	1
Xylenes, Total	<0.0055		0.0055	mg/Kg	☼	11/05/15 17:00	11/06/15 05:48	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (pid)	100		40 - 150			11/05/15 17:00	11/06/15 05:48	1

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	<10		10	mg/Kg	☼	10/29/15 11:10	10/30/15 18:30	1
Oil Range Organics (C28-C35)	<10		10	mg/Kg	☼	10/29/15 11:10	10/30/15 18:30	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
o-Terphenyl	129		27 - 151			10/29/15 11:10	10/30/15 18:30	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<21		21	mg/Kg	☼		11/05/15 01:20	1

TestAmerica Pensacola

Client Sample Results

Client: MWH Americas Inc
Project/Site: NM-Sandoval GC A#1

TestAmerica Job ID: 400-113029-1

Client Sample ID: MW-5 (16.5-18')

Date Collected: 10/26/15 16:45

Date Received: 10/28/15 10:01

Lab Sample ID: 400-113029-6

Matrix: Solid

Percent Solids: 83.7

Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) C6-C10	<0.12		0.12	mg/Kg	☼	11/05/15 17:00	11/06/15 06:15	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid)	102		65 - 125			11/05/15 17:00	11/06/15 06:15	1

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0012		0.0012	mg/Kg	☼	11/05/15 17:00	11/06/15 06:15	1
Ethylbenzene	<0.0012		0.0012	mg/Kg	☼	11/05/15 17:00	11/06/15 06:15	1
Toluene	<0.0058		0.0058	mg/Kg	☼	11/05/15 17:00	11/06/15 06:15	1
Xylenes, Total	<0.0058		0.0058	mg/Kg	☼	11/05/15 17:00	11/06/15 06:15	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (pid)	102		40 - 150			11/05/15 17:00	11/06/15 06:15	1

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	<12		12	mg/Kg	☼	10/29/15 11:10	10/30/15 18:39	1
Oil Range Organics (C28-C35)	<12		12	mg/Kg	☼	10/29/15 11:10	10/30/15 18:39	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
o-Terphenyl	88		27 - 151			10/29/15 11:10	10/30/15 18:39	1

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<24		24	mg/Kg	☼		11/05/15 01:43	1

TestAmerica Pensacola

QC Association Summary

Client: MWH Americas Inc
Project/Site: NM-Sandoval GC A#1

TestAmerica Job ID: 400-113029-1

GC VOA

Analysis Batch: 282099

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-113029-1	MW-3 (30-31')	Total/NA	Solid	8015B	282227
400-113029-1 MS	MW-3 (30-31')	Total/NA	Solid	8015B	282227
400-113029-1 MSD	MW-3 (30-31')	Total/NA	Solid	8015B	282227
400-113029-2	MW-2 (20-22')	Total/NA	Solid	8015B	282227
400-113029-3	MW-4 (20-22.2')	Total/NA	Solid	8015B	282227
400-113029-4	SB-1 (22-23.8')	Total/NA	Solid	8015B	282227
400-113029-5	SB-1 (25-26.1')	Total/NA	Solid	8015B	282227
400-113029-6	MW-5 (16.5-18')	Total/NA	Solid	8015B	282227
LCS 400-282227/2-A	Lab Control Sample	Total/NA	Solid	8015B	282227
MB 400-282227/3-A	Method Blank	Total/NA	Solid	8015B	282227

Analysis Batch: 282100

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-113029-1	MW-3 (30-31')	Total/NA	Solid	8021B	282227
400-113029-1 MS	MW-3 (30-31')	Total/NA	Solid	8021B	282227
400-113029-1 MSD	MW-3 (30-31')	Total/NA	Solid	8021B	282227
400-113029-2	MW-2 (20-22')	Total/NA	Solid	8021B	282227
400-113029-3	MW-4 (20-22.2')	Total/NA	Solid	8021B	282227
400-113029-4	SB-1 (22-23.8')	Total/NA	Solid	8021B	282227
400-113029-5	SB-1 (25-26.1')	Total/NA	Solid	8021B	282227
400-113029-6	MW-5 (16.5-18')	Total/NA	Solid	8021B	282227
LCS 400-282227/1-A	Lab Control Sample	Total/NA	Solid	8021B	282227
MB 400-282227/3-A	Method Blank	Total/NA	Solid	8021B	282227

Prep Batch: 282227

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-113029-1	MW-3 (30-31')	Total/NA	Solid	5035	
400-113029-1 MS	MW-3 (30-31')	Total/NA	Solid	5035	
400-113029-1 MS	MW-3 (30-31')	Total/NA	Solid	5035	
400-113029-1 MSD	MW-3 (30-31')	Total/NA	Solid	5035	
400-113029-1 MSD	MW-3 (30-31')	Total/NA	Solid	5035	
400-113029-2	MW-2 (20-22')	Total/NA	Solid	5035	
400-113029-3	MW-4 (20-22.2')	Total/NA	Solid	5035	
400-113029-4	SB-1 (22-23.8')	Total/NA	Solid	5035	
400-113029-5	SB-1 (25-26.1')	Total/NA	Solid	5035	
400-113029-6	MW-5 (16.5-18')	Total/NA	Solid	5035	
LCS 400-282227/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCS 400-282227/2-A	Lab Control Sample	Total/NA	Solid	5035	
MB 400-282227/3-A	Method Blank	Total/NA	Solid	5035	

GC Semi VOA

Prep Batch: 281109

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-112985-A-1-B MS	Matrix Spike	Total/NA	Solid	3546	
400-112985-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	3546	
400-113029-1	MW-3 (30-31')	Total/NA	Solid	3546	
400-113029-2	MW-2 (20-22')	Total/NA	Solid	3546	
400-113029-3	MW-4 (20-22.2')	Total/NA	Solid	3546	
400-113029-4	SB-1 (22-23.8')	Total/NA	Solid	3546	

TestAmerica Pensacola

QC Association Summary

Client: MWH Americas Inc
Project/Site: NM-Sandoval GC A#1

TestAmerica Job ID: 400-113029-1

GC Semi VOA (Continued)

Prep Batch: 281109 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-113029-5	SB-1 (25-26.1')	Total/NA	Solid	3546	
400-113029-6	MW-5 (16.5-18')	Total/NA	Solid	3546	
LCS 400-281109/15-A	Lab Control Sample	Total/NA	Solid	3546	
MB 400-281109/16-A	Method Blank	Total/NA	Solid	3546	

Analysis Batch: 281293

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-112985-A-1-B MS	Matrix Spike	Total/NA	Solid	8015B	281109
400-112985-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B	281109
400-113029-1	MW-3 (30-31')	Total/NA	Solid	8015B	281109
400-113029-2	MW-2 (20-22')	Total/NA	Solid	8015B	281109
400-113029-3	MW-4 (20-22.2')	Total/NA	Solid	8015B	281109
400-113029-4	SB-1 (22-23.8')	Total/NA	Solid	8015B	281109
400-113029-5	SB-1 (25-26.1')	Total/NA	Solid	8015B	281109
400-113029-6	MW-5 (16.5-18')	Total/NA	Solid	8015B	281109
LCS 400-281109/15-A	Lab Control Sample	Total/NA	Solid	8015B	281109
MB 400-281109/16-A	Method Blank	Total/NA	Solid	8015B	281109

HPLC/IC

Leach Batch: 281997

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-112934-A-1-H MS	Matrix Spike	Soluble	Solid	DI Leach	
400-112934-A-1-I MSD	Matrix Spike Duplicate	Soluble	Solid	DI Leach	
400-113029-1	MW-3 (30-31')	Soluble	Solid	DI Leach	
400-113029-2	MW-2 (20-22')	Soluble	Solid	DI Leach	
400-113029-3	MW-4 (20-22.2')	Soluble	Solid	DI Leach	
400-113029-4	SB-1 (22-23.8')	Soluble	Solid	DI Leach	
400-113029-5	SB-1 (25-26.1')	Soluble	Solid	DI Leach	
400-113029-6	MW-5 (16.5-18')	Soluble	Solid	DI Leach	
LCS 400-281997/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 400-281997/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
MB 400-281997/1-A	Method Blank	Soluble	Solid	DI Leach	

Analysis Batch: 282113

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-112934-A-1-H MS	Matrix Spike	Soluble	Solid	300.0	281997
400-112934-A-1-I MSD	Matrix Spike Duplicate	Soluble	Solid	300.0	281997
400-113029-1	MW-3 (30-31')	Soluble	Solid	300.0	281997
400-113029-2	MW-2 (20-22')	Soluble	Solid	300.0	281997
400-113029-3	MW-4 (20-22.2')	Soluble	Solid	300.0	281997
400-113029-4	SB-1 (22-23.8')	Soluble	Solid	300.0	281997
400-113029-5	SB-1 (25-26.1')	Soluble	Solid	300.0	281997
400-113029-6	MW-5 (16.5-18')	Soluble	Solid	300.0	281997
LCS 400-281997/2-A	Lab Control Sample	Soluble	Solid	300.0	281997
LCSD 400-281997/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	281997
MB 400-281997/1-A	Method Blank	Soluble	Solid	300.0	281997

TestAmerica Pensacola

QC Association Summary

Client: MWH Americas Inc
Project/Site: NM-Sandoval GC A#1

TestAmerica Job ID: 400-113029-1

General Chemistry

Analysis Batch: 281220

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-113011-A-3 MS	Matrix Spike	Total/NA	Solid	Moisture	
400-113011-A-3 MSD	Matrix Spike Duplicate	Total/NA	Solid	Moisture	
400-113029-1	MW-3 (30-31')	Total/NA	Solid	Moisture	
400-113029-2	MW-2 (20-22')	Total/NA	Solid	Moisture	
400-113029-3	MW-4 (20-22.2')	Total/NA	Solid	Moisture	
400-113029-4	SB-1 (22-23.8')	Total/NA	Solid	Moisture	
400-113029-5	SB-1 (25-26.1')	Total/NA	Solid	Moisture	
400-113029-5 DU	SB-1 (25-26.1')	Total/NA	Solid	Moisture	
400-113029-6	MW-5 (16.5-18')	Total/NA	Solid	Moisture	

QC Sample Results

Client: MWH Americas Inc
Project/Site: NM-Sandoval GC A#1

TestAmerica Job ID: 400-113029-1

Method: 8015B - Gasoline Range Organics - (GC)

Lab Sample ID: MB 400-282227/3-A

Matrix: Solid

Analysis Batch: 282099

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 282227

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) C6-C10	<0.10		0.10	mg/Kg		11/05/15 17:00	11/06/15 00:20	1
Surrogate	%Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid)	101		65 - 125			11/05/15 17:00	11/06/15 00:20	1

Lab Sample ID: LCS 400-282227/2-A

Matrix: Solid

Analysis Batch: 282099

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 282227

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics (GRO) C6-C10	1.00	1.07		mg/Kg		107	62 - 141	
Surrogate	%Recovery	LCS Qualifier	Limits					
a,a,a-Trifluorotoluene (fid)	102		65 - 125					

Lab Sample ID: 400-113029-1 MS

Matrix: Solid

Analysis Batch: 282099

Client Sample ID: MW-3 (30-31')

Prep Type: Total/NA

Prep Batch: 282227

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits	
Gasoline Range Organics (GRO) C6-C10	<0.11		1.09	1.17		mg/Kg	☼	107	10 - 150	
Surrogate	%Recovery	MS Qualifier	Limits							
a,a,a-Trifluorotoluene (fid)	103		65 - 125							

Lab Sample ID: 400-113029-1 MSD

Matrix: Solid

Analysis Batch: 282099

Client Sample ID: MW-3 (30-31')

Prep Type: Total/NA

Prep Batch: 282227

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Gasoline Range Organics (GRO) C6-C10	<0.11		1.09	0.971		mg/Kg	☼	89	10 - 150	18	32
Surrogate	%Recovery	MSD Qualifier	Limits								
a,a,a-Trifluorotoluene (fid)	103		65 - 125								

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 400-282227/3-A

Matrix: Solid

Analysis Batch: 282100

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 282227

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0010		0.0010	mg/Kg		11/05/15 17:00	11/06/15 00:20	1
Ethylbenzene	<0.0010		0.0010	mg/Kg		11/05/15 17:00	11/06/15 00:20	1

TestAmerica Pensacola

QC Sample Results

Client: MWH Americas Inc
Project/Site: NM-Sandoval GC A#1

TestAmerica Job ID: 400-113029-1

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

Lab Sample ID: MB 400-282227/3-A

Matrix: Solid

Analysis Batch: 282100

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 282227

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	<0.0050		0.0050	mg/Kg		11/05/15 17:00	11/06/15 00:20	1
Xylenes, Total	<0.0050		0.0050	mg/Kg		11/05/15 17:00	11/06/15 00:20	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (pid)	101		40 - 150			11/05/15 17:00	11/06/15 00:20	1

Lab Sample ID: LCS 400-282227/1-A

Matrix: Solid

Analysis Batch: 282100

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 282227

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Benzene	0.0500	0.0549		mg/Kg		110	74 - 127
Ethylbenzene	0.0500	0.0551		mg/Kg		110	79 - 131
Toluene	0.0500	0.0558		mg/Kg		112	76 - 127
Xylenes, Total	0.150	0.165		mg/Kg		110	80 - 129
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
a,a,a-Trifluorotoluene (pid)	100		40 - 150				

Lab Sample ID: 400-113029-1 MS

Matrix: Solid

Analysis Batch: 282100

Client Sample ID: MW-3 (30-31')

Prep Type: Total/NA

Prep Batch: 282227

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Benzene	<0.0011		0.0530	0.0592		mg/Kg	☼	112	10 - 150
Ethylbenzene	<0.0011		0.0530	0.0592		mg/Kg	☼	112	10 - 150
Toluene	<0.0055		0.0530	0.0600		mg/Kg	☼	113	10 - 150
Xylenes, Total	<0.0055		0.159	0.177		mg/Kg	☼	111	50 - 150
Surrogate	MS %Recovery	MS Qualifier	Limits						
a,a,a-Trifluorotoluene (pid)	100		40 - 150						

Lab Sample ID: 400-113029-1 MSD

Matrix: Solid

Analysis Batch: 282100

Client Sample ID: MW-3 (30-31')

Prep Type: Total/NA

Prep Batch: 282227

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	<0.0011		0.0546	0.0604		mg/Kg	☼	111	10 - 150	2	34
Ethylbenzene	<0.0011		0.0546	0.0573		mg/Kg	☼	105	10 - 150	3	66
Toluene	<0.0055		0.0546	0.0595		mg/Kg	☼	109	10 - 150	1	44
Xylenes, Total	<0.0055		0.164	0.171		mg/Kg	☼	104	50 - 150	4	46
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
a,a,a-Trifluorotoluene (pid)	98		40 - 150								

TestAmerica Pensacola

QC Sample Results

Client: MWH Americas Inc
Project/Site: NM-Sandoval GC A#1

TestAmerica Job ID: 400-113029-1

Method: 8015B - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 400-281109/16-A

Matrix: Solid

Analysis Batch: 281293

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 281109

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	<9.7		9.7	mg/Kg		10/29/15 11:10	10/30/15 16:01	1
Oil Range Organics (C28-C35)	<9.7		9.7	mg/Kg		10/29/15 11:10	10/30/15 16:01	1
Surrogate	MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
o-Terphenyl	102		27 - 151			10/29/15 11:10	10/30/15 16:01	1

Lab Sample ID: LCS 400-281109/15-A

Matrix: Solid

Analysis Batch: 281293

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 281109

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits	
Diesel Range Organics [C10-C28]	332	330		mg/Kg		99	63 - 153	
Surrogate	LCS %Recovery	LCS Qualifier	Limits					
o-Terphenyl	110		27 - 151					

Lab Sample ID: 400-112985-A-1-B MS

Matrix: Solid

Analysis Batch: 281293

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 281109

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits	
Diesel Range Organics [C10-C28]	730		550	1590		mg/Kg	☼	157	62 - 204	
Surrogate	MS %Recovery	MS Qualifier	Limits							
o-Terphenyl	120		27 - 151							

Lab Sample ID: 400-112985-A-1-C MSD

Matrix: Solid

Analysis Batch: 281293

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 281109

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Diesel Range Organics [C10-C28]	730		543	1350		mg/Kg	☼	115	62 - 204	17	30
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
o-Terphenyl	106		27 - 151								

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 400-281997/1-A

Matrix: Solid

Analysis Batch: 282113

Client Sample ID: Method Blank

Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<20		20	mg/Kg			11/04/15 18:30	1

TestAmerica Pensacola

QC Sample Results

Client: MWH Americas Inc
Project/Site: NM-Sandoval GC A#1

TestAmerica Job ID: 400-113029-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 400-281997/2-A

Matrix: Solid

Analysis Batch: 282113

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	100	99.7		mg/Kg		100	80 - 120

Lab Sample ID: LCSD 400-281997/3-A

Matrix: Solid

Analysis Batch: 282113

Client Sample ID: Lab Control Sample Dup
Prep Type: Soluble

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	100	94.8		mg/Kg		95	80 - 120	5	15

Lab Sample ID: 400-112934-A-1-H MS

Matrix: Solid

Analysis Batch: 282113

Client Sample ID: Matrix Spike
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	<25		132	131		mg/Kg	☼	92	80 - 120

Lab Sample ID: 400-112934-A-1-I MSD

Matrix: Solid

Analysis Batch: 282113

Client Sample ID: Matrix Spike Duplicate
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	<25		128	124		mg/Kg	☼	90	80 - 120	5	15

Lab Chronicle

Client: MWH Americas Inc
Project/Site: NM-Sandoval GC A#1

TestAmerica Job ID: 400-113029-1

Client Sample ID: MW-3 (30-31')

Date Collected: 10/25/15 13:00

Date Received: 10/28/15 10:01

Lab Sample ID: 400-113029-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			281220	10/29/15 18:39	LEC	TAL PEN
Instrument ID: NOEQUIP										

Client Sample ID: MW-3 (30-31')

Date Collected: 10/25/15 13:00

Date Received: 10/28/15 10:01

Lab Sample ID: 400-113029-1

Matrix: Solid

Percent Solids: 90.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.06 g	5.0 g	282227	11/05/15 17:00	GRK	TAL PEN
Total/NA	Analysis	8015B		1	5.06 g	5.0 g	282099	11/06/15 00:47	GRK	TAL PEN
Instrument ID: CH_RITA										
Total/NA	Prep	5035			5.06 g	5.0 g	282227	11/05/15 17:00	GRK	TAL PEN
Total/NA	Analysis	8021B		1	5.06 g	5.0 g	282100	11/06/15 00:47	GRK	TAL PEN
Instrument ID: CH_RITA										
Total/NA	Prep	3546			15.16 g	2.0 mL	281109	10/29/15 11:10	RDT	TAL PEN
Total/NA	Analysis	8015B		1	15.16 g	2.0 mL	281293	10/30/15 17:50	C1M	TAL PEN
Instrument ID: WALLE										
Soluble	Leach	DI Leach			2.52 g	50 mL	281997	11/04/15 14:38	TAJ	TAL PEN
Soluble	Analysis	300.0		1	1 mL		282113	11/04/15 23:03	TAJ	TAL PEN
Instrument ID: IC2										

Client Sample ID: MW-2 (20-22')

Date Collected: 10/26/15 09:05

Date Received: 10/28/15 10:01

Lab Sample ID: 400-113029-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			281220	10/29/15 18:39	LEC	TAL PEN
Instrument ID: NOEQUIP										

Client Sample ID: MW-2 (20-22')

Date Collected: 10/26/15 09:05

Date Received: 10/28/15 10:01

Lab Sample ID: 400-113029-2

Matrix: Solid

Percent Solids: 79.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.38 g	5.0 g	282227	11/05/15 17:00	GRK	TAL PEN
Total/NA	Analysis	8015B		1	5.38 g	5.0 g	282099	11/06/15 03:04	GRK	TAL PEN
Instrument ID: CH_RITA										
Total/NA	Prep	5035			5.38 g	5.0 g	282227	11/05/15 17:00	GRK	TAL PEN
Total/NA	Analysis	8021B		1	5.38 g	5.0 g	282100	11/06/15 03:04	GRK	TAL PEN
Instrument ID: CH_RITA										
Total/NA	Prep	3546			15.24 g	2.0 mL	281109	10/29/15 11:10	RDT	TAL PEN
Total/NA	Analysis	8015B		1	15.24 g	2.0 mL	281293	10/30/15 18:00	C1M	TAL PEN
Instrument ID: WALLE										

TestAmerica Pensacola

Lab Chronicle

Client: MWH Americas Inc
Project/Site: NM-Sandoval GC A#1

TestAmerica Job ID: 400-113029-1

Client Sample ID: MW-2 (20-22')

Date Collected: 10/26/15 09:05

Date Received: 10/28/15 10:01

Lab Sample ID: 400-113029-2

Matrix: Solid

Percent Solids: 79.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			2.46 g	50 mL	281997	11/04/15 14:38	TAJ	TAL PEN
Soluble	Analysis	300.0		1	1 mL		282113	11/05/15 00:12	TAJ	TAL PEN
Instrument ID: IC2										

Client Sample ID: MW-4 (20-22.2')

Date Collected: 10/26/15 13:30

Date Received: 10/28/15 10:01

Lab Sample ID: 400-113029-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			281220	10/29/15 18:39	LEC	TAL PEN
Instrument ID: NOEQUIP										

Client Sample ID: MW-4 (20-22.2')

Date Collected: 10/26/15 13:30

Date Received: 10/28/15 10:01

Lab Sample ID: 400-113029-3

Matrix: Solid

Percent Solids: 81.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.77 g	5.0 g	282227	11/05/15 17:00	GRK	TAL PEN
Total/NA	Analysis	8015B		1	5.77 g	5.0 g	282099	11/06/15 04:53	GRK	TAL PEN
Instrument ID: CH_RITA										
Total/NA	Prep	5035			5.77 g	5.0 g	282227	11/05/15 17:00	GRK	TAL PEN
Total/NA	Analysis	8021B		1	5.77 g	5.0 g	282100	11/06/15 04:53	GRK	TAL PEN
Instrument ID: CH_RITA										
Total/NA	Prep	3546			15.14 g	2.0 mL	281109	10/29/15 11:10	RDT	TAL PEN
Total/NA	Analysis	8015B		1	15.14 g	2.0 mL	281293	10/30/15 18:10	C1M	TAL PEN
Instrument ID: WALLE										
Soluble	Leach	DI Leach			2.46 g	50 mL	281997	11/04/15 14:38	TAJ	TAL PEN
Soluble	Analysis	300.0		1	1 mL		282113	11/05/15 00:35	TAJ	TAL PEN
Instrument ID: IC2										

Client Sample ID: SB-1 (22-23.8')

Date Collected: 10/26/15 15:00

Date Received: 10/28/15 10:01

Lab Sample ID: 400-113029-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			281220	10/29/15 18:39	LEC	TAL PEN
Instrument ID: NOEQUIP										

TestAmerica Pensacola

Lab Chronicle

Client: MWH Americas Inc
Project/Site: NM-Sandoval GC A#1

TestAmerica Job ID: 400-113029-1

Client Sample ID: SB-1 (22-23.8')

Date Collected: 10/26/15 15:00

Date Received: 10/28/15 10:01

Lab Sample ID: 400-113029-4

Matrix: Solid

Percent Solids: 82.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.13 g	5.0 g	282227	11/05/15 17:00	GRK	TAL PEN
Total/NA	Analysis	8015B		1	5.13 g	5.0 g	282099	11/06/15 05:20	GRK	TAL PEN
		Instrument ID: CH_RITA								
Total/NA	Prep	5035			5.13 g	5.0 g	282227	11/05/15 17:00	GRK	TAL PEN
Total/NA	Analysis	8021B		1	5.13 g	5.0 g	282100	11/06/15 05:20	GRK	TAL PEN
		Instrument ID: CH_RITA								
Total/NA	Prep	3546			15.17 g	2.0 mL	281109	10/29/15 11:10	RDT	TAL PEN
Total/NA	Analysis	8015B		1	15.17 g	2.0 mL	281293	10/30/15 18:20	C1M	TAL PEN
		Instrument ID: WALLE								
Soluble	Leach	DI Leach			2.52 g	50 mL	281997	11/04/15 14:38	TAJ	TAL PEN
Soluble	Analysis	300.0		1	1 mL		282113	11/05/15 00:57	TAJ	TAL PEN
		Instrument ID: IC2								

Client Sample ID: SB-1 (25-26.1')

Date Collected: 10/26/15 15:25

Date Received: 10/28/15 10:01

Lab Sample ID: 400-113029-5

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			281220	10/29/15 18:39	LEC	TAL PEN
		Instrument ID: NOEQUIP								

Client Sample ID: SB-1 (25-26.1')

Date Collected: 10/26/15 15:25

Date Received: 10/28/15 10:01

Lab Sample ID: 400-113029-5

Matrix: Solid

Percent Solids: 96.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.73 g	5.0 g	282227	11/05/15 17:00	GRK	TAL PEN
Total/NA	Analysis	8015B		1	4.73 g	5.0 g	282099	11/06/15 05:48	GRK	TAL PEN
		Instrument ID: CH_RITA								
Total/NA	Prep	5035			4.73 g	5.0 g	282227	11/05/15 17:00	GRK	TAL PEN
Total/NA	Analysis	8021B		1	4.73 g	5.0 g	282100	11/06/15 05:48	GRK	TAL PEN
		Instrument ID: CH_RITA								
Total/NA	Prep	3546			15.09 g	2.0 mL	281109	10/29/15 11:10	RDT	TAL PEN
Total/NA	Analysis	8015B		1	15.09 g	2.0 mL	281293	10/30/15 18:30	C1M	TAL PEN
		Instrument ID: WALLE								
Soluble	Leach	DI Leach			2.50 g	50 mL	281997	11/04/15 14:38	TAJ	TAL PEN
Soluble	Analysis	300.0		1	1 mL		282113	11/05/15 01:20	TAJ	TAL PEN
		Instrument ID: IC2								

TestAmerica Pensacola

Lab Chronicle

Client: MWH Americas Inc
Project/Site: NM-Sandoval GC A#1

TestAmerica Job ID: 400-113029-1

Client Sample ID: MW-5 (16.5-18')

Lab Sample ID: 400-113029-6

Date Collected: 10/26/15 16:45

Matrix: Solid

Date Received: 10/28/15 10:01

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			281220	10/29/15 18:39	LEC	TAL PEN
Instrument ID: NOEQUIP										

Client Sample ID: MW-5 (16.5-18')

Lab Sample ID: 400-113029-6

Date Collected: 10/26/15 16:45

Matrix: Solid

Date Received: 10/28/15 10:01

Percent Solids: 83.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.13 g	5.0 g	282227	11/05/15 17:00	GRK	TAL PEN
Total/NA	Analysis	8015B		1	5.13 g	5.0 g	282099	11/06/15 06:15	GRK	TAL PEN
Instrument ID: CH_RITA										
Total/NA	Prep	5035			5.13 g	5.0 g	282227	11/05/15 17:00	GRK	TAL PEN
Total/NA	Analysis	8021B		1	5.13 g	5.0 g	282100	11/06/15 06:15	GRK	TAL PEN
Instrument ID: CH_RITA										
Total/NA	Prep	3546			15.49 g	2.0 mL	281109	10/29/15 11:10	RDT	TAL PEN
Total/NA	Analysis	8015B		1	15.49 g	2.0 mL	281293	10/30/15 18:39	C1M	TAL PEN
Instrument ID: WALLE										
Soluble	Leach	DI Leach			2.48 g	50 mL	281997	11/04/15 14:38	TAJ	TAL PEN
Soluble	Analysis	300.0		1	1 mL		282113	11/05/15 01:43	TAJ	TAL PEN
Instrument ID: IC2										

Laboratory References:

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

Certification Summary

Client: MWH Americas Inc
Project/Site: NM-Sandoval GC A#1

TestAmerica Job ID: 400-113029-1

Laboratory: TestAmerica Pensacola

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	01-31-16
Arizona	State Program	9	AZ0710	01-11-17
Arkansas DEQ	State Program	6	88-0689	09-01-16
Florida	NELAP	4	E81010	06-30-16
Georgia	State Program	4	N/A	06-30-16
Illinois	NELAP	5	200041	10-09-16
Iowa	State Program	7	367	07-31-16
Kansas	NELAP	7	E-10253	01-31-16 *
Kentucky (UST)	State Program	4	53	06-30-16
Kentucky (WW)	State Program	4	98030	12-31-16
Louisiana	NELAP	6	30976	06-30-16
Maryland	State Program	3	233	09-30-16
Massachusetts	State Program	1	M-FL094	06-30-16
Michigan	State Program	5	9912	06-30-16
New Jersey	NELAP	2	FL006	06-30-16
North Carolina (WW/SW)	State Program	4	314	12-31-15 *
Oklahoma	State Program	6	9810	08-31-16
Pennsylvania	NELAP	3	68-00467	01-31-16
Rhode Island	State Program	1	LAO00307	12-30-16
South Carolina	State Program	4	96026	06-30-16
Tennessee	State Program	4	TN02907	06-30-16
Texas	NELAP	6	T104704286-15-9	09-30-16
USDA	Federal		P330-13-00193	07-01-16
Virginia	NELAP	3	460166	06-14-16
West Virginia DEP	State Program	3	136	06-30-16

* Certification renewal pending - certification considered valid.

TestAmerica Pensacola

Method Summary

Client: MWH Americas Inc
Project/Site: NM-Sandoval GC A#1

TestAmerica Job ID: 400-113029-1

Method	Method Description	Protocol	Laboratory
8015B	Gasoline Range Organics - (GC)	SW846	TAL PEN
8021B	Volatile Organic Compounds (GC)	SW846	TAL PEN
8015B	Diesel Range Organics (DRO) (GC)	SW846	TAL PEN
300.0	Anions, Ion Chromatography	MCAWW	TAL PEN
Moisture	Percent Moisture	EPA	TAL PEN

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

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

Laboratory References:

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

TestAmerica Pensacola
3355 McLeure Drive
Pensacola, FL 32514
Phone (850) 474-1001 Fax (850) 478-2671

Chain of Custody Record

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Client Information Client Contact: <u>Brad Barton</u> Client: <u>Overbrook</u> Company: <u>MWH Americas Inc</u>		Lab Pkt: Edwards, Marty P E-Mail: <u>marty.edwards@testamericainc.com</u>	Carrier Tracking No(s): 400-49280-22813.1	COC No: 400-49280-22813.1																																			
Address: <u>11153 Aurora Avenue</u> City: <u>Des Moines</u> State: <u>IA</u> Zip: <u>50322-7904</u> Phone: <u>303-291-2239 (Tel)</u> Email: <u>clint.w.oberbroeckling@mwhglobal.com</u> Project Name: <u>Sandwich GC A#14</u> Pkt GW: <u>Sadova GA#1</u> Site: <u>7</u>		Due Date Requested: TAT Requested (days): <u>Normal</u> PO #: <u>40005479</u> Purchase Order Requested: <u>40005479</u> Project #: <u>40005479</u> SOW#: <u>7</u>	Analysis Requested Preservation Codes: A - HCl B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Anchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:	Page 1 of 1 Job #																																			
Sample Identification <table border="1"> <thead> <tr> <th>Sample ID</th> <th>Sample Date</th> <th>Sample Time</th> <th>Sample Type (C=comp, G=grab)</th> <th>Matrix (W=water, S=solid, O=oil, B=soil, A=air)</th> </tr> </thead> <tbody> <tr> <td>MW-3 (30-31)</td> <td>10/25/15</td> <td>1300</td> <td>G</td> <td>S</td> </tr> <tr> <td>MW-2 (20-22)</td> <td>10/26/15</td> <td>0905</td> <td>G</td> <td>S</td> </tr> <tr> <td>MW-4 (20-22.2)</td> <td>10/26/15</td> <td>1330</td> <td>G</td> <td>S</td> </tr> <tr> <td>SB-1 (22-23.8)</td> <td>10/26/15</td> <td>1500</td> <td>G</td> <td>S</td> </tr> <tr> <td>SB-1 (25-26.1)</td> <td>10/26/15</td> <td>1525</td> <td>G</td> <td>S</td> </tr> <tr> <td>MW-5 (16-5-18)</td> <td>10/26/15</td> <td>1645</td> <td>G</td> <td>S</td> </tr> </tbody> </table>		Sample ID	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=oil, B=soil, A=air)	MW-3 (30-31)	10/25/15	1300	G	S	MW-2 (20-22)	10/26/15	0905	G	S	MW-4 (20-22.2)	10/26/15	1330	G	S	SB-1 (22-23.8)	10/26/15	1500	G	S	SB-1 (25-26.1)	10/26/15	1525	G	S	MW-5 (16-5-18)	10/26/15	1645	G	S	Special Instructions/Note: 400-113029 COC		
Sample ID	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=oil, B=soil, A=air)																																			
MW-3 (30-31)	10/25/15	1300	G	S																																			
MW-2 (20-22)	10/26/15	0905	G	S																																			
MW-4 (20-22.2)	10/26/15	1330	G	S																																			
SB-1 (22-23.8)	10/26/15	1500	G	S																																			
SB-1 (25-26.1)	10/26/15	1525	G	S																																			
MW-5 (16-5-18)	10/26/15	1645	G	S																																			
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) <u>Per ARF</u>		Special Instructions/QC Requirements: <u>Per ARF</u>																																					
Empty Kit Relinquished by: <u>Brad Barton</u>		Method of Shipment: <u>Per ARF</u>																																					
Relinquished by: <u>Brad Barton</u> Date: <u>10/27/15</u> Time: <u>0800</u>		Received by: <u>Fel FX</u> Date: <u>10/27/15</u> Time: <u>0800</u>																																					
Relinquished by: <u>Fel FX</u> Date: <u>10/27/15</u> Time: <u>1001</u>		Received by: <u>Fel FX</u> Date: <u>10/27/15</u> Time: <u>1001</u>																																					
Relinquished by: <u>Fel FX</u> Date: <u>10/27/15</u> Time: <u>1001</u>		Received by: <u>Fel FX</u> Date: <u>10/27/15</u> Time: <u>1001</u>																																					
Custody Seals Intact: <u>Yes</u>		Cooler Temperature(s): <u>0.0°C</u>																																					

Login Sample Receipt Checklist

Client: MWH Americas Inc

Job Number: 400-113029-1

Login Number: 113029

List Source: TestAmerica Pensacola

List Number: 1

Creator: Crawford, Lauren E

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.0°C IR-5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

APPENDIX C

BOL# 53587

CHLORIDE TESTING / PAINT FILTER TESTING

DATE 11-13-15 TIME 15:30

Attach test strip here

CUSTOMER EL PASOSITE SANDOVAL GC A#1DRIVER Jimmy ValdezSAMPLE ☒ Soil ☐ Straight ☐ With DirtCHLORIDE TEST -305 mg/KgACCEPTED YES ☒ NO ☐PAINT FILTER TEST Time started 15:30 Time completed 15:35PASS YES ☒ NO ☐SAMPLER/ANALYST Dave Lee

APPENDIX D

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pensacola

3355 McLemore Drive

Pensacola, FL 32514

Tel: (850)474-1001

TestAmerica Job ID: 400-106461-1

Client Project/Site: NM-GW Pits, Sandoval GC A#1

For:

MWH Americas Inc

1560 Broadway

Suite 1800

Denver, Colorado 80202

Attn: Ms. Sarah Gardner



Authorized for release by:

6/16/2015 4:53:38 PM

Marty Edwards, Manager of Project Management

(850)474-1001

marty.edwards@testamericainc.com

LINKS

Review your project
results through

TotalAccess

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.

1
2
3
4
5
6
7
8
9
10
11
12
13
14

Table of Contents

Cover Page	1
Table of Contents	2
Definitions	3
Case Narrative	4
Detection Summary	5
Sample Summary	6
Client Sample Results	7
QC Association	9
QC Sample Results	10
Chronicle	11
Certification Summary	12
Method Summary	13
Chain of Custody	14
Receipt Checklists	15

Definitions/Glossary

Client: MWH Americas Inc
Project/Site: NM-GW Pits, Sandoval GC A#1

TestAmerica Job ID: 400-106461-1

Glossary

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

Case Narrative

Client: MWH Americas Inc
Project/Site: NM-GW Pits, Sandoval GC A#1

TestAmerica Job ID: 400-106461-1

Job ID: 400-106461-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-106461-1

Comments

No additional comments.

Receipt

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

GC VOA

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

Detection Summary

Client: MWH Americas Inc
Project/Site: NM-GW Pits, Sandoval GC A#1

TestAmerica Job ID: 400-106461-1

Client Sample ID: SANDOVAL GC A#1 MW-1

Lab Sample ID: 400-106461-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	5.7		1.0	0.56	ug/L	1		8021B	Total/NA
Ethylbenzene	5.3		1.0	0.64	ug/L	1		8021B	Total/NA
Xylenes, Total	6.0		5.0	1.7	ug/L	1		8021B	Total/NA

Client Sample ID: SANDOVAL GC A#1 TRIP BLANK

Lab Sample ID: 400-106461-2

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Sample Summary

Client: MWH Americas Inc
Project/Site: NM-GW Pits, Sandoval GC A#1

TestAmerica Job ID: 400-106461-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-106461-1	SANDOVAL GC A#1 MW-1	Water	05/30/15 11:15	06/02/15 09:37
400-106461-2	SANDOVAL GC A#1 TRIP BLANK	Water	05/30/15 11:10	06/02/15 09:37

Client Sample Results

Client: MWH Americas Inc
Project/Site: NM-GW Pits, Sandoval GC A#1

TestAmerica Job ID: 400-106461-1

Client Sample ID: SANDOVAL GC A#1 MW-1

Lab Sample ID: 400-106461-1

Date Collected: 05/30/15 11:15

Matrix: Water

Date Received: 06/02/15 09:37

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	5.7		1.0	0.56	ug/L			06/06/15 09:46	1
Ethylbenzene	5.3		1.0	0.64	ug/L			06/06/15 09:46	1
Toluene	<5.0		5.0	0.98	ug/L			06/06/15 09:46	1
Xylenes, Total	6.0		5.0	1.7	ug/L			06/06/15 09:46	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (pid)	101		78 - 124					06/06/15 09:46	1

Client Sample Results

Client: MWH Americas Inc
Project/Site: NM-GW Pits, Sandoval GC A#1

TestAmerica Job ID: 400-106461-1

Client Sample ID: SANDOVAL GC A#1 TRIP BLANK

Lab Sample ID: 400-106461-2

Date Collected: 05/30/15 11:10

Matrix: Water

Date Received: 06/02/15 09:37

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0	0.56	ug/L			06/06/15 10:17	1
Ethylbenzene	<1.0		1.0	0.64	ug/L			06/06/15 10:17	1
Toluene	<5.0		5.0	0.98	ug/L			06/06/15 10:17	1
Xylenes, Total	<5.0		5.0	1.7	ug/L			06/06/15 10:17	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (pid)	101		78 - 124					06/06/15 10:17	1

QC Association Summary

Client: MWH Americas Inc
Project/Site: NM-GW Pits, Sandoval GC A#1

TestAmerica Job ID: 400-106461-1

GC VOA

Analysis Batch: 260178

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-106461-1	SANDOVAL GC A#1 MW-1	Total/NA	Water	8021B	
400-106461-2	SANDOVAL GC A#1 TRIP BLANK	Total/NA	Water	8021B	
400-106465-A-1 MS	Matrix Spike	Total/NA	Water	8021B	
400-106465-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8021B	
LCS 400-260178/1034	Lab Control Sample	Total/NA	Water	8021B	
MB 400-260178/35	Method Blank	Total/NA	Water	8021B	

QC Sample Results

Client: MWH Americas Inc
Project/Site: NM-GW Pits, Sandoval GC A#1

TestAmerica Job ID: 400-106461-1

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 400-260178/35

Matrix: Water

Analysis Batch: 260178

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0	0.56	ug/L			06/06/15 12:55	1
Ethylbenzene	<1.0		1.0	0.64	ug/L			06/06/15 12:55	1
Toluene	<5.0		5.0	0.98	ug/L			06/06/15 12:55	1
Xylenes, Total	<5.0		5.0	1.7	ug/L			06/06/15 12:55	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (pid)	99		78 - 124		06/06/15 12:55	1

Lab Sample ID: LCS 400-260178/1034

Matrix: Water

Analysis Batch: 260178

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	50.0	53.2		ug/L		106	85 - 115
Ethylbenzene	50.0	53.2		ug/L		106	85 - 115
Toluene	50.0	52.8		ug/L		106	85 - 115
Xylenes, Total	150	156		ug/L		104	85 - 115

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

Lab Sample ID: 400-106465-A-1 MS

Matrix: Water

Analysis Batch: 260178

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<1.0		50.0	59.1		ug/L		118	44 - 150
Ethylbenzene	<1.0		50.0	59.7		ug/L		119	70 - 142
Toluene	<5.0		50.0	59.0		ug/L		118	69 - 136
Xylenes, Total	<5.0		150	176		ug/L		117	68 - 142

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

Lab Sample ID: 400-106465-A-1 MSD

Matrix: Water

Analysis Batch: 260178

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<1.0		50.0	59.0		ug/L		118	44 - 150	0	16
Ethylbenzene	<1.0		50.0	60.4		ug/L		121	70 - 142	1	16
Toluene	<5.0		50.0	59.5		ug/L		119	69 - 136	1	16
Xylenes, Total	<5.0		150	178		ug/L		119	68 - 142	1	15

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

TestAmerica Pensacola

Lab Chronicle

Client: MWH Americas Inc
Project/Site: NM-GW Pits, Sandoval GC A#1

TestAmerica Job ID: 400-106461-1

Client Sample ID: SANDOVAL GC A#1 MW-1

Date Collected: 05/30/15 11:15

Date Received: 06/02/15 09:37

Lab Sample ID: 400-106461-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	260178	06/06/15 09:46	MKA	TAL PEN
Instrument ID: CH_PAULA										

Client Sample ID: SANDOVAL GC A#1 TRIP BLANK

Date Collected: 05/30/15 11:10

Date Received: 06/02/15 09:37

Lab Sample ID: 400-106461-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	260178	06/06/15 10:17	MKA	TAL PEN
Instrument ID: CH_PAULA										

Laboratory References:

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

Certification Summary

Client: MWH Americas Inc
Project/Site: NM-GW Pits, Sandoval GC A#1

TestAmerica Job ID: 400-106461-1

Laboratory: TestAmerica Pensacola

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

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

* Certification renewal pending - certification considered valid.

TestAmerica Pensacola

Method Summary

Client: MWH Americas Inc
Project/Site: NM-GW Pits, Sandoval GC A#1

TestAmerica Job ID: 400-106461-1

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

Protocol References:

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

Laboratory References:

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



400-106461 COC

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYSIS REQUEST AND
CHAIN OF CUSTODY RECORD

TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514

Phone: 850-474-1001
Fax: 850-478-2671
Website: www.testamericainc.com

SERIAL NUMBER: 80220

BOTTLE ORDER NO. ORDER LOG-IN NO.

C

CLIENT		ADDRESS		PROJECT NO.		CLIENT PROJECT MANAGER		PROJECT LOC. (STATE)		REQUESTED ANALYSIS		PAGE		OF	
MNH		1560 Broadway Suite 1800 Denver CO 80202		40005479		Steve Varsa		NM				1		1	
PROJECT NAME		PROJECT NO.		CLIENT PROJECT MANAGER		PROJECT LOC. (STATE)		PROJECT LOC. (STATE)		REQUESTED ANALYSIS		PAGE		OF	
Sandoval GC #1		40005479		Steve Varsa		NM		NM				1		1	
SAMPLED BY		CONTRACT / P.O. NO.		PRESERVATIVE		MATRIX		LABORATORY USE ONLY		LABORATORY USE ONLY		LABORATORY USE ONLY		LABORATORY USE ONLY	
Chris Lee / Sarah Gardner		303 291 2239		HCL - Hydrochloric Acid		Drinking Water		Non-Aqueous (Oil, Solvent, etc.)		80218-BTX		C		C	
CLIENT PHONE		CLIENT E-MAIL OR FAX		HNO3 - Nitric Acid		Other:		Air							
303 291 2239		Sandra.gardner@minn.com		H2SO4 - Sulfuric Acid or H3PO4		NAHSO4 - Sodium Bisulfate		Aqueous GW, SW, WW							
TAT REQUESTED: RUSH NEEDS LAB PRE-APPROVAL		NORMAL 10 BUSINESS DAYS		CH3OH - Methanol		NA2S2O3 - Sodium Thiosulfate		Solid, Semisolid, Sediment							
1 DAY 2 DAYS 3 DAYS 5 DAYS 20 DAYS (Package) OTHER:				NAOH - Sodium Hydroxide				Non-Aqueous (Oil, Solvent, etc.)							
SAMPLE DISPOSAL: RETURN TO CLIENT DISPOSAL BY LAB				H2SO4 - Sulfuric Acid or H3PO4				Other:							
SEE CONTRACT OTHER:				HNO3 - Nitric Acid				Drinking Water							
				HCL - Hydrochloric Acid				Other:							
				H2SO4 - Sulfuric Acid or H3PO4				Drinking Water							
				CH3OH - Methanol				Other:							
				NAHSO4 - Sodium Bisulfate				Drinking Water							
				NA2S2O3 - Sodium Thiosulfate				Other:							
				HNO3 - Nitric Acid				Drinking Water							
				H2SO4 - Sulfuric Acid or H3PO4				Other:							
				CH3OH - Methanol				Drinking Water							
				NAHSO4 - Sodium Bisulfate				Other:							
				NA2S2O3 - Sodium Thiosulfate				Drinking Water							
				HNO3 - Nitric Acid				Other:							
				H2SO4 - Sulfuric Acid or H3PO4				Drinking Water							
				CH3OH - Methanol				Other:							
				NAHSO4 - Sodium Bisulfate				Drinking Water							
				NA2S2O3 - Sodium Thiosulfate				Other:							
				HNO3 - Nitric Acid				Drinking Water							
				H2SO4 - Sulfuric Acid or H3PO4				Other:							
				CH3OH - Methanol				Drinking Water							
				NAHSO4 - Sodium Bisulfate				Other:							
				NA2S2O3 - Sodium Thiosulfate				Drinking Water							
				HNO3 - Nitric Acid				Other:							
				H2SO4 - Sulfuric Acid or H3PO4				Drinking Water							
				CH3OH - Methanol				Other:							
				NAHSO4 - Sodium Bisulfate				Drinking Water							
				NA2S2O3 - Sodium Thiosulfate				Other:							
				HNO3 - Nitric Acid				Drinking Water							
				H2SO4 - Sulfuric Acid or H3PO4				Other:							
				CH3OH - Methanol				Drinking Water							
				NAHSO4 - Sodium Bisulfate				Other:							
				NA2S2O3 - Sodium Thiosulfate				Drinking Water							
				HNO3 - Nitric Acid				Other:							
				H2SO4 - Sulfuric Acid or H3PO4				Drinking Water							
				CH3OH - Methanol				Other:							
				NAHSO4 - Sodium Bisulfate				Drinking Water							
				NA2S2O3 - Sodium Thiosulfate				Other:							
				HNO3 - Nitric Acid				Drinking Water							
				H2SO4 - Sulfuric Acid or H3PO4				Other:							
				CH3OH - Methanol				Drinking Water							
				NAHSO4 - Sodium Bisulfate				Other:							
				NA2S2O3 - Sodium Thiosulfate				Drinking Water							
				HNO3 - Nitric Acid				Other:							
				H2SO4 - Sulfuric Acid or H3PO4				Drinking Water							
				CH3OH - Methanol				Other:							
				NAHSO4 - Sodium Bisulfate				Drinking Water							
				NA2S2O3 - Sodium Thiosulfate				Other:							
				HNO3 - Nitric Acid				Drinking Water							
				H2SO4 - Sulfuric Acid or H3PO4				Other:							
				CH3OH - Methanol				Drinking Water							
				NAHSO4 - Sodium Bisulfate				Other:							
				NA2S2O3 - Sodium Thiosulfate				Drinking Water							
				HNO3 - Nitric Acid				Other:							
				H2SO4 - Sulfuric Acid or H3PO4				Drinking Water							
				CH3OH - Methanol				Other:							
				NAHSO4 - Sodium Bisulfate				Drinking Water							
				NA2S2O3 - Sodium Thiosulfate				Other:							
				HNO3 - Nitric Acid				Drinking Water							
				H2SO4 - Sulfuric Acid or H3PO4				Other:							
				CH3OH - Methanol				Drinking Water							
				NAHSO4 - Sodium Bisulfate				Other:							
				NA2S2O3 - Sodium Thiosulfate				Drinking Water							
				HNO3 - Nitric Acid				Other:							
				H2SO4 - Sulfuric Acid or H3PO4				Drinking Water							
				CH3OH - Methanol				Other:							
				NAHSO4 - Sodium Bisulfate				Drinking Water							
				NA2S2O3 - Sodium Thiosulfate				Other:							
				HNO3 - Nitric Acid				Drinking Water							
				H2SO4 - Sulfuric Acid or H3PO4				Other:							
				CH3OH - Methanol				Drinking Water							
				NAHSO4 - Sodium Bisulfate				Other:							
				NA2S2O3 - Sodium Thiosulfate				Drinking Water							
				HNO3 - Nitric Acid				Other:							
				H2SO4 - Sulfuric Acid or H3PO4				Drinking Water							
				CH3OH - Methanol				Other:							
				NAHSO4 - Sodium Bisulfate				Drinking Water							
				NA2S2O3 - Sodium Thiosulfate				Other:							
				HNO3 - Nitric Acid				Drinking Water							
				H2SO4 - Sulfuric Acid or H3PO4				Other:							
				CH3OH - Methanol				Drinking Water							
				NAHSO4 - Sodium Bisulfate				Other:							
				NA2S2O3 - Sodium Thiosulfate				Drinking Water							
				HNO3 - Nitric Acid				Other:							
				H2SO4 - Sulfuric Acid or H3PO4				Drinking Water							
				CH3OH - Methanol				Other:							
				NAHSO4 - Sodium Bisulfate				Drinking Water							
				NA2S2O3 - Sodium Thiosulfate				Other:							
				HNO3 - Nitric Acid				Drinking Water							
				H2SO4 - Sulfuric Acid or H3PO4				Other:							
				CH3OH - Methanol				Drinking Water							
				NAHSO4 - Sodium Bisulfate				Other:							
				NA2S2O3 - Sodium Thiosulfate				Drinking Water							
				HNO3 - Nitric Acid				Other:							
				H2SO4 - Sulfuric Acid or H3PO4				Drinking Water							
				CH3OH - Methanol				Other:							
				NAHSO4 - Sodium Bisulfate				Drinking Water							
				NA2S2O3 - Sodium Thiosulfate				Other:							
				HNO3 - Nitric Acid				Drinking Water							
				H2SO4 - Sulfuric Acid or H3PO4				Other:							
				CH3OH - Methanol				Drinking Water							
				NAHSO4 - Sodium Bisulfate				Other:							
				NA2S2O3 - Sodium Thiosulfate				Drinking Water							
				HNO3 - Nitric Acid				Other:							
				H2SO4 - Sulfuric Acid or H3PO4				Drinking Water							
				CH3OH - Methanol				Other:							
				NAHSO4 - Sodium Bisulfate				Drinking Water							
				NA2S2O3 - Sodium Thiosulfate				Other:							
				HNO3 - Nitric Acid				Drinking Water							
				H2SO4 - Sulfuric Acid or H3PO4				Other:							
				CH3OH - Methanol				Drinking Water							
				NAHSO4 - Sodium Bisulfate				Other:							
				NA2S2O3 - Sodium Thiosulfate				Drinking Water							
				HNO3 - Nitric Acid				Other:							
				H2SO4 - Sulfuric Acid or H3PO4				Drinking Water							
				CH3OH - Methanol				Other:							
				NAHSO4 - Sodium Bisulfate				Drinking Water							
				NA2S2O3 - Sodium Thiosulfate				Other:							
				HNO3 - Nitric Acid				Drinking Water							
				H2SO4 - Sulfuric Acid or H3PO4				Other:							
				CH3OH - Methanol				Drinking Water							
				NAHSO4 - Sodium Bisulfate				Other:							
				NA2S2O3 - Sodium Thiosulfate				Drinking Water							
				HNO3 - Nitric Acid				Other:							
				H2SO4 - Sulfuric Acid or H3PO4				Drinking Water							
				CH3OH - Methanol				Other:							
				NAHSO4 - Sodium Bisulfate				Drinking Water							
				NA2S2O3 - Sodium Thiosulfate				Other:							
				HNO3 - Nitric Acid				Drinking Water							
				H2SO4 - Sulfuric Acid or H3PO4				Other:							
				CH3OH - Methanol				Drinking Water							
				NAHSO4 - Sodium Bisulfate				Other:							
				NA2S2O3 - Sodium Thiosulfate				Drinking Water							
				HNO3 - Nitric Acid				Other:							
				H2SO4 - Sulfuric Acid or H3PO4				Drinking Water							
				CH3OH - Methanol				Other:							
				NAHSO4 - Sodium Bisulfate				Drinking Water							
				NA2S2O3 - Sodium Thiosulfate				Other:							
				HNO3 - Nitric Acid				Drinking Water							
				H2SO4 - Sulfuric Acid or H3PO4				Other:							
				CH3OH - Methanol				Drinking Water							
				NAHSO4 - Sodium Bisulfate				Other:							
				NA2S2O3 - Sodium Thiosulfate				Drinking Water							
				HNO3 - Nitric Acid				Other:							
				H2SO4 - Sulfuric Acid or H3PO4				Drinking Water							
				CH3OH - Methanol				Other:							
				NAHSO4 - Sodium Bisulfate				Drinking Water							
				NA2S2O3 - Sodium Thiosulfate				Other:							
				HNO3 - Nitric Acid				Drinking Water							

Login Sample Receipt Checklist

Client: MWH Americas Inc

Job Number: 400-106461-1

Login Number: 106461

List Source: TestAmerica Pensacola

List Number: 1

Creator: Crawford, Lauren E

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

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pensacola

3355 McLemore Drive

Pensacola, FL 32514

Tel: (850)474-1001

TestAmerica Job ID: 400-114400-1

Client Project/Site: Sandoval GC A#1

Revision: 1

For:

MWH Americas Inc

11153 Aurora Avenue

Des Moines, Iowa 50322-7904

Attn: Steve Varsa



Authorized for release by:

12/22/2015 1:48:15 PM

Marty Edwards, Manager of Project Management

(850)474-1001

marty.edwards@testamericainc.com

LINKS

Review your project
results through

TotalAccess

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.

Table of Contents

Cover Page	1
Table of Contents	2
Definitions	3
Case Narrative	4
Detection Summary	5
Sample Summary	6
Client Sample Results	7
QC Association	13
QC Sample Results	14
Chronicle	16
Certification Summary	18
Method Summary	19
Chain of Custody	20
Receipt Checklists	21



Definitions/Glossary

Client: MWH Americas Inc
Project/Site: Sandoval GC A#1

TestAmerica Job ID: 400-114400-1

Qualifiers

GC VOA

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

Glossary

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

Case Narrative

Client: MWH Americas Inc
Project/Site: Sandoval GC A#1

TestAmerica Job ID: 400-114400-1

Job ID: 400-114400-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative 400-114400-1

Comments

No additional comments.

Receipt

The samples were received on 11/25/2015 9:29 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.7° C.

Revised Report

The deliverable was revised to report to the RL.

GC VOA

Method 8021B: The following sample was collected in properly preserved vials for analysis of volatile organic compounds (VOCs). However, the pH was outside the required criteria when verified by the laboratory, and corrective action was not possible: MW-1 (400-114400-1).

Method 8021B: Surrogate recovery for the following samples was outside control limits: MW-4 (400-114400-4), (400-114400-A-4 MS) and (400-114400-A-4 MSD). Evidence of matrix interference is present; therefore, re-analysis was not performed.

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

VOA Prep

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

Detection Summary

Client: MWH Americas Inc
Project/Site: Sandoval GC A#1

TestAmerica Job ID: 400-114400-1

Client Sample ID: MW-1

Lab Sample ID: 400-114400-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Benzene	8.3		1.0	ug/L	1		8021B	Total/NA
Ethylbenzene	5.2		1.0	ug/L	1		8021B	Total/NA
Xylenes, Total	14		5.0	ug/L	1		8021B	Total/NA

Client Sample ID: MW-2

Lab Sample ID: 400-114400-2

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Benzene	2400		50	ug/L	50		8021B	Total/NA
Ethylbenzene	530		50	ug/L	50		8021B	Total/NA
Toluene	3700		250	ug/L	50		8021B	Total/NA
Xylenes, Total	7400		250	ug/L	50		8021B	Total/NA

Client Sample ID: MW-3

Lab Sample ID: 400-114400-3

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Benzene	55		1.0	ug/L	1		8021B	Total/NA
Ethylbenzene	16		1.0	ug/L	1		8021B	Total/NA
Toluene	62		5.0	ug/L	1		8021B	Total/NA
Xylenes, Total	140		5.0	ug/L	1		8021B	Total/NA

Client Sample ID: MW-4

Lab Sample ID: 400-114400-4

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Benzene	490		2.0	ug/L	2		8021B	Total/NA
Ethylbenzene	4.0		2.0	ug/L	2		8021B	Total/NA
Xylenes, Total	140		10	ug/L	2		8021B	Total/NA

Client Sample ID: MW-5

Lab Sample ID: 400-114400-5

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Benzene	7500		50	ug/L	50		8021B	Total/NA
Ethylbenzene	590		50	ug/L	50		8021B	Total/NA
Xylenes, Total	7100		250	ug/L	50		8021B	Total/NA
Toluene - DL	17000		500	ug/L	100		8021B	Total/NA

Client Sample ID: TRIP BLANK

Lab Sample ID: 400-114400-6

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Pensacola

Sample Summary

Client: MWH Americas Inc
Project/Site: Sandoval GC A#1

TestAmerica Job ID: 400-114400-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-114400-1	MW-1	Water	11/20/15 11:50	11/25/15 09:29
400-114400-2	MW-2	Water	11/20/15 11:40	11/25/15 09:29
400-114400-3	MW-3	Water	11/20/15 11:30	11/25/15 09:29
400-114400-4	MW-4	Water	11/20/15 10:50	11/25/15 09:29
400-114400-5	MW-5	Water	11/20/15 11:00	11/25/15 09:29
400-114400-6	TRIP BLANK	Water	11/20/15 11:45	11/25/15 09:29

Client Sample Results

Client: MWH Americas Inc
Project/Site: Sandoval GC A#1

TestAmerica Job ID: 400-114400-1

Client Sample ID: MW-1

Date Collected: 11/20/15 11:50

Date Received: 11/25/15 09:29

Lab Sample ID: 400-114400-1

Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	8.3		1.0	ug/L			12/02/15 21:29	1
Ethylbenzene	5.2		1.0	ug/L			12/02/15 21:29	1
Toluene	<5.0		5.0	ug/L			12/02/15 21:29	1
Xylenes, Total	14		5.0	ug/L			12/02/15 21:29	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (pid)	99		78 - 124				12/02/15 21:29	1

Client Sample Results

Client: MWH Americas Inc
Project/Site: Sandoval GC A#1

TestAmerica Job ID: 400-114400-1

Client Sample ID: MW-2
Date Collected: 11/20/15 11:40
Date Received: 11/25/15 09:29

Lab Sample ID: 400-114400-2
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	2400		50	ug/L			12/03/15 16:36	50
Ethylbenzene	530		50	ug/L			12/03/15 16:36	50
Toluene	3700		250	ug/L			12/03/15 16:36	50
Xylenes, Total	7400		250	ug/L			12/03/15 16:36	50
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (pid)	87		78 - 124				12/03/15 16:36	50

Client Sample Results

Client: MWH Americas Inc
Project/Site: Sandoval GC A#1

TestAmerica Job ID: 400-114400-1

Client Sample ID: MW-3
Date Collected: 11/20/15 11:30
Date Received: 11/25/15 09:29

Lab Sample ID: 400-114400-3
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	55		1.0	ug/L			12/03/15 14:53	1
Ethylbenzene	16		1.0	ug/L			12/03/15 14:53	1
Toluene	62		5.0	ug/L			12/03/15 14:53	1
Xylenes, Total	140		5.0	ug/L			12/03/15 14:53	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (pid)	82		78 - 124				12/03/15 14:53	1

Client Sample Results

Client: MWH Americas Inc
Project/Site: Sandoval GC A#1

TestAmerica Job ID: 400-114400-1

Client Sample ID: MW-4
Date Collected: 11/20/15 10:50
Date Received: 11/25/15 09:29

Lab Sample ID: 400-114400-4
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	490		2.0	ug/L			12/02/15 20:20	2
Ethylbenzene	4.0		2.0	ug/L			12/02/15 20:20	2
Toluene	<10		10	ug/L			12/02/15 20:20	2
Xylenes, Total	140		10	ug/L			12/02/15 20:20	2
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (pid)	75	X	78 - 124				12/02/15 20:20	2

Client Sample Results

Client: MWH Americas Inc
Project/Site: Sandoval GC A#1

TestAmerica Job ID: 400-114400-1

Client Sample ID: MW-5
Date Collected: 11/20/15 11:00
Date Received: 11/25/15 09:29

Lab Sample ID: 400-114400-5
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	7500		50	ug/L			12/03/15 17:11	50
Ethylbenzene	590		50	ug/L			12/03/15 17:11	50
Xylenes, Total	7100		250	ug/L			12/03/15 17:11	50
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (pid)	86		78 - 124				12/03/15 17:11	50

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	17000		500	ug/L			12/03/15 20:02	100
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (pid)	87		78 - 124				12/03/15 20:02	100

Client Sample Results

Client: MWH Americas Inc
Project/Site: Sandoval GC A#1

TestAmerica Job ID: 400-114400-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 400-114400-6

Date Collected: 11/20/15 11:45

Matrix: Water

Date Received: 11/25/15 09:29

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0	ug/L			12/02/15 23:47	1
Ethylbenzene	<1.0		1.0	ug/L			12/02/15 23:47	1
Toluene	<5.0		5.0	ug/L			12/02/15 23:47	1
Xylenes, Total	<5.0		5.0	ug/L			12/02/15 23:47	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (pid)	84		78 - 124				12/02/15 23:47	1

TestAmerica Pensacola

QC Association Summary

Client: MWH Americas Inc
Project/Site: Sandoval GC A#1

TestAmerica Job ID: 400-114400-1

GC VOA

Analysis Batch: 285674

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-114400-1	MW-1	Total/NA	Water	8021B	
400-114400-4	MW-4	Total/NA	Water	8021B	
400-114400-4 MS	MW-4	Total/NA	Water	8021B	
400-114400-4 MSD	MW-4	Total/NA	Water	8021B	
400-114400-6	TRIP BLANK	Total/NA	Water	8021B	
LCS 400-285674/1002	Lab Control Sample	Total/NA	Water	8021B	
MB 400-285674/4	Method Blank	Total/NA	Water	8021B	

Analysis Batch: 285834

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-114400-2	MW-2	Total/NA	Water	8021B	
400-114400-3	MW-3	Total/NA	Water	8021B	
400-114400-3 MS	MW-3	Total/NA	Water	8021B	
400-114400-3 MSD	MW-3	Total/NA	Water	8021B	
400-114400-5	MW-5	Total/NA	Water	8021B	
400-114400-5 - DL	MW-5	Total/NA	Water	8021B	
LCS 400-285834/1002	Lab Control Sample	Total/NA	Water	8021B	
MB 400-285834/4	Method Blank	Total/NA	Water	8021B	

QC Sample Results

Client: MWH Americas Inc
Project/Site: Sandoval GC A#1

TestAmerica Job ID: 400-114400-1

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 400-285674/4

Matrix: Water

Analysis Batch: 285674

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0	ug/L			12/02/15 14:30	1
Ethylbenzene	<1.0		1.0	ug/L			12/02/15 14:30	1
Toluene	<5.0		5.0	ug/L			12/02/15 14:30	1
Xylenes, Total	<5.0		5.0	ug/L			12/02/15 14:30	1

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

Lab Sample ID: LCS 400-285674/1002

Matrix: Water

Analysis Batch: 285674

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	50.0	52.8		ug/L		106	85 - 115
Ethylbenzene	50.0	53.6		ug/L		107	85 - 115
Toluene	50.0	50.7		ug/L		101	85 - 115
Xylenes, Total	150	161		ug/L		107	85 - 115

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

Lab Sample ID: 400-114400-4 MS

Matrix: Water

Analysis Batch: 285674

Client Sample ID: MW-4

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	490		100	587	4	ug/L		97	44 - 150
Ethylbenzene	4.0		100	105		ug/L		101	70 - 142
Toluene	<10		100	101		ug/L		96	69 - 136
Xylenes, Total	140		300	430		ug/L		96	68 - 142

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

Lab Sample ID: 400-114400-4 MSD

Matrix: Water

Analysis Batch: 285674

Client Sample ID: MW-4

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	490		100	546	4	ug/L		56	44 - 150	7	16
Ethylbenzene	4.0		100	98.6		ug/L		95	70 - 142	6	16
Toluene	<10		100	95.9		ug/L		91	69 - 136	5	16
Xylenes, Total	140		300	407		ug/L		89	68 - 142	6	15

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

TestAmerica Pensacola

QC Sample Results

Client: MWH Americas Inc
Project/Site: Sandoval GC A#1

TestAmerica Job ID: 400-114400-1

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

Lab Sample ID: MB 400-285834/4

Matrix: Water

Analysis Batch: 285834

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0	ug/L			12/03/15 13:10	1
Ethylbenzene	<1.0		1.0	ug/L			12/03/15 13:10	1
Toluene	<5.0		5.0	ug/L			12/03/15 13:10	1
Xylenes, Total	<5.0		5.0	ug/L			12/03/15 13:10	1

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

Lab Sample ID: LCS 400-285834/1002

Matrix: Water

Analysis Batch: 285834

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	50.0	55.8		ug/L		112	85 - 115
Ethylbenzene	50.0	54.0		ug/L		108	85 - 115
Toluene	50.0	51.5		ug/L		103	85 - 115
Xylenes, Total	150	163		ug/L		109	85 - 115

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

Lab Sample ID: 400-114400-3 MS

Matrix: Water

Analysis Batch: 285834

Client Sample ID: MW-3

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	55		50.0	107		ug/L		104	44 - 150
Ethylbenzene	16		50.0	68.4		ug/L		105	70 - 142
Toluene	62		50.0	110		ug/L		96	69 - 136
Xylenes, Total	140		150	294		ug/L		101	68 - 142

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

Lab Sample ID: 400-114400-3 MSD

Matrix: Water

Analysis Batch: 285834

Client Sample ID: MW-3

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	55		50.0	101		ug/L		94	44 - 150	5	16
Ethylbenzene	16		50.0	68.9		ug/L		106	70 - 142	1	16
Toluene	62		50.0	110		ug/L		97	69 - 136	0	16
Xylenes, Total	140		150	295		ug/L		102	68 - 142	0	15

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

TestAmerica Pensacola

Lab Chronicle

Client: MWH Americas Inc
Project/Site: Sandoval GC A#1

TestAmerica Job ID: 400-114400-1

Client Sample ID: MW-1

Date Collected: 11/20/15 11:50

Date Received: 11/25/15 09:29

Lab Sample ID: 400-114400-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	285674	12/02/15 21:29	GRK	TAL PEN
Instrument ID: CH_JOAN										

Client Sample ID: MW-2

Date Collected: 11/20/15 11:40

Date Received: 11/25/15 09:29

Lab Sample ID: 400-114400-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		50	5 mL	5 mL	285834	12/03/15 16:36	GRK	TAL PEN
Instrument ID: CH_JOAN										

Client Sample ID: MW-3

Date Collected: 11/20/15 11:30

Date Received: 11/25/15 09:29

Lab Sample ID: 400-114400-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	285834	12/03/15 14:53	GRK	TAL PEN
Instrument ID: CH_JOAN										

Client Sample ID: MW-4

Date Collected: 11/20/15 10:50

Date Received: 11/25/15 09:29

Lab Sample ID: 400-114400-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		2	5 mL	5 mL	285674	12/02/15 20:20	GRK	TAL PEN
Instrument ID: CH_JOAN										

Client Sample ID: MW-5

Date Collected: 11/20/15 11:00

Date Received: 11/25/15 09:29

Lab Sample ID: 400-114400-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		50	5 mL	5 mL	285834	12/03/15 17:11	GRK	TAL PEN
Instrument ID: CH_JOAN										
Total/NA	Analysis	8021B	DL	100	5 mL	5 mL	285834	12/03/15 20:02	GRK	TAL PEN
Instrument ID: CH_JOAN										

TestAmerica Pensacola

Lab Chronicle

Client: MWH Americas Inc
Project/Site: Sandoval GC A#1

TestAmerica Job ID: 400-114400-1

Client Sample ID: TRIP BLANK

Lab Sample ID: 400-114400-6

Date Collected: 11/20/15 11:45

Matrix: Water

Date Received: 11/25/15 09:29

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	285674	12/02/15 23:47	GRK	TAL PEN
Instrument ID: CH_JOAN										

Laboratory References:

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

Certification Summary

Client: MWH Americas Inc
Project/Site: Sandoval GC A#1

TestAmerica Job ID: 400-114400-1

Laboratory: TestAmerica Pensacola

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

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

* Certification renewal pending - certification considered valid.

TestAmerica Pensacola

Method Summary

Client: MWH Americas Inc
Project/Site: Sandoval GC A#1

TestAmerica Job ID: 400-114400-1

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

Protocol References:

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

Laboratory References:

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

SERIAL NUMBER: 82729

TestAmerica THE LEADER IN ENVIRONMENTAL TESTING		ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD		TestAmerica Pensacola 3355 McLemore Drive Pensacola, FL 32514 Phone: 850-474-1001 Fax: 850-478-2671 Website: www.testamericainc.com		QUOTE NO. C BOTTLE ORDER NO. C	
CLIENT MWH		ADDRESS 1560 Broadway Suite 1800		PROJECT LOC. (STATE) NM		REQUESTED ANALYSIS	
PROJECT NAME Sardoval GC A#1		CLIENT PROJECT MANAGER Steve Varga		PROJECT LOC. (STATE) NM		REQUESTED ANALYSIS	
SAMPLED BY Sarah Gardner		CONTRACT / P.O. NO.		PROJECT LOC. (STATE) NM		REQUESTED ANALYSIS	
CLIENT PHONE 303 291-2239		CLIENT E-MAIL OR FAX sarah.gardner@mwh.com		PROJECT LOC. (STATE) NM		REQUESTED ANALYSIS	
TEST REQUESTED: RUSH NEEDS LAB PREAPPROVAL ☒ NORMAL 10 BUSINESS DAYS ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ 5 DAYS ☐ 20 DAYS (Package) ☐ OTHER:		SAMPLE DISPOSAL: ☒ RETURN TO CLIENT ☐ DISPOSAL BY LAB		PROJECT LOC. (STATE) NM		REQUESTED ANALYSIS	
☐ SEE CONTRACT ☐ OTHER:		SAMPLE IDENTIFICATION		PROJECT LOC. (STATE) NM		REQUESTED ANALYSIS	
DATE		TIME		PROJECT LOC. (STATE) NM		REQUESTED ANALYSIS	
11/20/15 1150		MW-1		PROJECT LOC. (STATE) NM		REQUESTED ANALYSIS	
11/20/15 1140		MW-2		PROJECT LOC. (STATE) NM		REQUESTED ANALYSIS	
11/20/15 1130		MW-3		PROJECT LOC. (STATE) NM		REQUESTED ANALYSIS	
11/23/15 1145		MW-4		PROJECT LOC. (STATE) NM		REQUESTED ANALYSIS	
11/23/15 1100		MW-5		PROJECT LOC. (STATE) NM		REQUESTED ANALYSIS	
11/20/15 1145		TRIP BLANK		PROJECT LOC. (STATE) NM		REQUESTED ANALYSIS	
RELINQUISHED BY: (SIGNATURE) EMPTY CONTAINERS		DATE		TIME		RELINQUISHED BY: (SIGNATURE)	
RECEIVED BY: (SIGNATURE) EMPTY CONTAINERS		DATE		TIME		RECEIVED BY: (SIGNATURE)	
RELINQUISHED BY: (SIGNATURE) EMPTY CONTAINERS		DATE		TIME		RELINQUISHED BY: (SIGNATURE)	
RECEIVED BY: (SIGNATURE) EMPTY CONTAINERS		DATE		TIME		RECEIVED BY: (SIGNATURE)	
RECEIVED FOR LABORATORY BY:		DATE		TIME		REMARKS	
Matthew Edwards 11/25/15 0929		11/24/15 1120		11/24/15 1120		0.7°C - 125	
for Jessica Benforado		RECEIVED BY: (SIGNATURE)		DATE		TIME	

TAL-9251 (12/07)

Login Sample Receipt Checklist

Client: MWH Americas Inc

Job Number: 400-114400-1

Login Number: 114400

List Source: TestAmerica Pensacola

List Number: 1

Creator: Benforado, Jessica L

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.7°C IR-5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	