2015 ANNUAL GROUNDWATER REPORT

Standard Oil Com #1
NMOCD Case#: 3RP-238-0
Meter Code: 70445
T29N, R9W, Sec36, Unit N

SITE DETAILS

Site Location: Latitude: 36.678617 N, Longitude: -107.736788
Land Type: State
Operator: Burlington Resources

SITE BACKGROUND

- **Site Assessment:** 5/94
- **Excavation:** 5/94 (60 cy)

Environmental Remediation activities at the Standard Oil Com #1 (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 (EPCGP's) program methods. Currently, the Site is operated by Burlington Resources Oil & Gas Company LP and is active.

The Site is located on State/Fee land. Various site investigations have occurred from 1994 through 2012. Monitoring wells were installed in 1994 (MW-1), 1995 (MW-2 through MW-4), 1997 (PZ-01 through PZ-07), 2006 (MW-5), 2013 (MW-6 through MW-11), and 2015 (MW-12 through MW-16, abandon MW-5). Free product was observed in MW-1 in 1996, but was not recovered. 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.

Five new wells (MW-12, MW-13, MW-14, MW-15, and MW-16) and one soil boring (SB-1) were drilled in November 2015, to delineate the extent of the dissolved-phase hydrocarbons at the Site. Additionally, MW-5 was plugged and abandoned. 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 40 feet bgs and bisects the observed water table located at depths ranging from 18-28 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

surface completion. Four protective bollards were installed around each new monitoring well. Borehole logs and well construction diagrams are provided in Appendix A. Monitoring wells MW-12 and MW-13 were installed west of well MW-11, and well MW-14 was installed to the south well MW-10. Monitoring well MW-15 was installed east and upgradient 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 November 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) using EPA Method 8015B-gasoline-range organics, diesel-range organics, and mineral-range organics, and chloride according to EPA Method 300. Sample jars were stored in an ice-filled cooler and shipped under standard chain-of-custody protocol 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 27, 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 31 and November 24, 2015, water levels were gauged at wells MW-1, MW-2, MW-3, MW-4, MW-5, MW-7, MW-8, MW-9, MW-10, and MW-11 and groundwater samples were collected from each well using HydraSleeve™ (HydraSleeve) no-purge passive groundwater sampling devices. New monitoring wells MW-12, MW-13, MW-14, MW-15, and MW-16 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 in laboratory-supplied sample containers, packed on ice, and shipped under standard chain-of-custody protocol 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 (ORP). Field parameters are not collected if free product is present. The unused sample water is combined in a waste container and taken to Basin Disposal, Inc. for disposal.

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SUMMARY TABLES

Historic 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 west-northwest (see Figures 2 and 4).

- Groundwater samples collected in 2015 from MW-1, MW-2, MW-3, MW-5, MW-6, MW-7, MW8, MW-9, MW-10, MW-11, MW-12, and MW-16 exceeded the New Mexico Water Quality Control Commission (NMWQCC) standard (10 micrograms per liter [µg/L]) for benzene in groundwater. Monitoring wells MW-4, MW-13, MW-14, and MW-15 were either below the NMWQCC standard or not detected.

- All site monitoring wells that were sampled in 2015 were either below the NMWQCC standard for toluene in groundwater or not detected.

- All site monitoring wells that were sampled in 2015 were either below the NMWQCC standard for ethylbenzene in groundwater or not detected.

- Groundwater samples collected in 2015 from MW-3, MW-7, MW-11, MW-12, and MW-16 exceeded the NMWQCC standard (620 µg/L) for total xylenes in groundwater. Monitoring wells MW-1, MW-2, MW-4, MW-5, MW-6, MW-8, MW-9, MW-10, MW-13, MW-14, and MW-15 were either below the NMWQCC standard or not detected.

- It appears that elevated BTEX concentrations observed in monitoring wells located west, southwest, and south of the former EPCGP pit are likely due to impacts from either a former Burlington pit located approximately 80 to 100 feet south of the EPCGP pit, or from other operations by Burlington. BTEX concentrations observed in wells MW-3, MW-11, and MW-10 are an order of magnitude higher than concentrations observed at the former EPCGP pit and immediately downgradient. Based on the distribution of BTEX compounds in groundwater

samples collected from these wells, documented groundwater flow direction, and an understanding of dissolved-phase hydrocarbon fate and transport, it is unlikely that the elevated dissolved BTEX concentrations in these wells are associated with the EPCGP pit release.

SOIL RESULTS

- Soil samples were collected from the borings for monitoring wells MW-12 through MW-16 and soil boring SB-1. Sample locations were based on elevated soil screening results. Constituents of BTEX concentrations were not detected or below the NMOCD 2013 Pit Rule Guidance action limits. TPH ranged from non-detect at MW-12 to 308 milligrams per kilogram (mg/kg) in MW-13.

- Concentrations of chloride ranged from 37 mg/kg in MW-13 to 160 mg/kg in MW-15 and are below the applicable NMOCD standard (600 mg/kg)

PLANNED FUTURE ACTIVITIES

Groundwater monitoring events will be conducted on a semi-annual basis, utilizing a selection of site monitoring wells, which provides an adequate representation of site conditions. The 2016 Annual Report will be submitted in early 2017.

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TABLES

TABLE 1 - GROUNDWATER ANALYTICAL RESULTS

Standard Oil Com #1					
Location	**Date**	**Benzene (µg/L)**	**Toluene (µg/L)**	**Ethylbenzene (µg/L)**	**Total Xylenes (µg/L)**
NMWQCC Standards:		10	750	750	620
MW-1	09/12/95	482	629	188	1980
MW-1	11/07/96	277	121	161	1590
MW-1	02/07/97	119	20.2	139	1490
MW-1	05/09/97	105	14.2	145	1480
MW-1	08/08/97	82.6	15.6	140	1400
MW-1	11/04/97	91.4	32.4	141	1320
MW-1	02/03/98	109	31	163	1680
MW-1	05/07/98	107	24.2	161	1640
MW-1	08/04/98	113	48.7	167	1580
MW-1	11/03/98	122	61.3	190	1930
MW-1	02/02/99	157	75.8	204	2100
MW-1	05/19/99	178	55.2	184	1730
MW-1	08/04/99	252	136	203	1890
MW-1	11/09/99	240	98	180	1500
MW-1	02/25/00	1300	1000	260	1700
MW-1	05/24/00	56	120	220	1500
MW-1	08/08/00	12	11	66	470
MW-1	11/06/00	390	110	180	1100
MW-1	02/15/01	280	88	160	1200
MW-1	06/04/01	340	170	170	430
MW-1	08/07/01	510	340	250	1500
MW-1	12/04/01	330	98	150	1200
MW-1	02/25/02	310	170	170	1200
MW-1	05/14/02	250	150	190	1400
MW-1	08/06/02	551	398	214	1041
MW-1	11/04/02	464	207	235	1085
MW-1	02/27/03	600	330	225	993
MW-1	05/19/03	230	206	172	977
MW-1	08/18/03	NS	NS	NS	NS
MW-1	11/15/03	NS	NS	NS	NS
MW-1	02/17/04	NS	NS	NS	NS
MW-1	06/02/04	416	534	287	1330
MW-1	06/24/05	234	310	305	1530
MW-1	06/07/06	66	71.9	165	804
MW-1	06/12/07	29.8	38.2	116	477
MW-1	06/16/08	45.4	37.7	164	598
MW-1	06/10/09	33.7	16.4	156	484
MW-1	06/02/10	23.1	5.4	152	421
MW-1	05/09/11	<50	<50	137	394
MW-1	05/15/12	16.4	2.4	150	510
MW-1	06/05/13	23	3.5	190	54
MW-1	09/11/13	13	0.68 J	220	13
MW-1	12/12/13	12	17	150	8.7
MW-1	04/04/14	21	17	180	<0.65
MW-1	10/24/14	11	<0.70	120	<1.6
MW-1	05/31/15	16	13	130	3.8 J
MW-1	11/24/15	51	29	160	52

TABLE 1 - GROUNDWATER ANALYTICAL RESULTS

Standard Oil Com #1					
Location	**Date**	**Benzene (µg/L)**	**Toluene (µg/L)**	**Ethylbenzene (µg/L)**	**Total Xylenes (µg/L)**
NMWQCC Standards:		10	750	750	620
MW-2	12/13/01	940	74	360	2900
MW-2	08/06/02	NS	NS	NS	NS
MW-2	11/04/02	NS	NS	NS	NS
MW-2	05/19/03	673	167	228	1010
MW-2	08/18/03	NS	NS	NS	NS
MW-2	11/15/03	NS	NS	NS	NS
MW-2	02/17/04	NS	NS	NS	NS
MW-2	06/02/04	943	120	309	1130
MW-2	06/24/05	1090	120	418	1510
MW-2	06/07/06	592	37.7	216	692
MW-2	06/12/07	781	<25	286	733
MW-2	06/16/08	480	5.6 J	299	614
MW-2	06/10/09	532	<1	356	836
MW-2	06/02/10	421	3	348	670
MW-2	05/09/11	354	1.5 J	275	461
MW-2	05/15/12	630	12.2	358	892
MW-2	06/05/13	440	94	520	1700
MW-2	09/11/13	390	11	680	2100
MW-2	12/12/13	150	8.6	300	640
MW-2	04/04/14	140	10	240	400
MW-2	10/24/14	59	<0.70	62	1.6 J
MW-2	05/31/15	3.4	2.0 J	8.9	<5.0
MW-2	11/24/15	31	<1.0	19	<3.0
MW-3	12/13/01	1800	1600	570	5600
MW-3	08/06/02	NS	NS	NS	NS
MW-3	11/04/02	NS	NS	NS	NS
MW-3	05/19/03	NS	NS	NS	NS
MW-3	08/18/03	NS	NS	NS	NS
MW-3	11/15/03	NS	NS	NS	NS
MW-3	02/17/04	NS	NS	NS	NS
MW-3	06/02/04	NS	NS	NS	NS
MW-3	06/24/05	NS	NS	NS	NS
MW-3	06/07/06	NS	NS	NS	NS
MW-3	06/12/07	NS	NS	NS	NS
MW-3	06/16/08	NS	NS	NS	NS
MW-3	06/10/09	NS	NS	NS	NS
MW-3	06/02/10	NS	NS	NS	NS
MW-3	05/09/11	2370	15.2	429	836
MW-3	05/15/12	2240	10.3	405	807
MW-3	06/05/13	2500	24	400	970
MW-3	09/11/13	2200	<0.6	550	1300
MW-3	12/12/13	1300	<3	390	700
MW-3	04/04/14	1600	<7.5	440	990
MW-3	10/24/14	1300	<3.5	340	490
MW-3	05/31/15	870	6.9 J	240	430
MW-3	11/24/15	2500	<1.0	510	760

TABLE 1 - GROUNDWATER ANALYTICAL RESULTS

Standard Oil Com #1					
Location	**Date**	**Benzene (µg/L)**	**Toluene (µg/L)**	**Ethylbenzene (µg/L)**	**Total Xylenes (µg/L)**
NMWQCC Standards:		10	750	750	620
MW-4	12/13/01	380	340	780	7300
MW-4	08/06/02	NS	NS	NS	NS
MW-4	11/04/02	NS	NS	NS	NS
MW-4	05/19/03	NS	NS	NS	NS
MW-4	08/18/03	NS	NS	NS	NS
MW-4	11/15/03	NS	NS	NS	NS
MW-4	02/17/04	NS	NS	NS	NS
MW-4	06/02/04	NS	NS	NS	NS
MW-4	06/24/05	NS	NS	NS	NS
MW-4	06/07/06	NS	NS	NS	NS
MW-4	06/12/07	NS	NS	NS	NS
MW-4	06/16/08	NS	NS	NS	NS
MW-4	06/10/09	NS	NS	NS	NS
MW-4	06/02/10	NS	NS	NS	NS
MW-4	05/09/11	1.6	5.2	227	700
MW-4	05/15/12	59	5	187	545
MW-4	06/05/13	0.16 J	0.56 J	82	71
MW-4	09/11/13	<0.14	0.73 J	140	75
MW-4	12/12/13	0.21 J	13	37	1.1 J
MW-4	04/04/14	<0.20	18	130	48
MW-4	10/24/14	<0.38	<0.70	100	12
MW-4	05/31/15	<1.0	16	84	8.4
MW-4	11/24/15	5.1	1.2	65	3.2
MW-5	11/09/06	NS	NS	NS	NS
MW-5	06/12/07	<1	<1	<1	15.6
MW-5	06/16/08	<1	<1	0.39 J	0.68 J
MW-5	06/10/09	<1	<1	1.7	4.2
MW-5	06/02/10	<2	<2	<2	<6
MW-5	05/09/11	NS	NS	NS	NS
MW-5	05/15/12	NS	NS	NS	NS
MW-5	06/05/13	<0.14	<0.30	<0.20	<0.23
MW-5	09/11/13	<0.14	<0.30	<0.20	<0.23
MW-5	12/12/13	<0.20	<0.38	<0.20	<0.65
MW-5	04/04/14	0.74 J H	<0.38 H	<0.20 H	2 H
MW-5	10/24/14	NS	NS	NS	NS
MW-5	05/31/15	<1.0	<5.0	<1.0	<5.0
MW-6	12/12/13	60	35	73	220
MW-6	04/04/14	29	9.4	25	38
MW-6	10/24/14	43	<0.70	20	2.5 J
MW-6	05/31/15	23	3.8 J	8.7	<5.0
MW-6	11/24/15	53	<1.0	21	4.6
MW-7	12/12/13	<1.0	110	200	2200
MW-7	04/04/14	<2.0	91	200	2200
MW-7	10/24/14	<3.8	53	380	3400
MW-7	05/31/15	<5.0	28	280	1900
MW-7	11/24/15	90	11	400	1300
MW-8	12/12/13	350	53	480	780
MW-8	04/04/14	150	<0.38	470	260
MW-8	10/24/14	180	<1.4	460	70
MW-8	05/31/15	44	3.6 J	180	<5.0
MW-8	11/24/15	32	<1.0	29	3.8

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Standard Oil Com #1					
Location	**Date**	**Benzene (µg/L)**	**Toluene (µg/L)**	**Ethylbenzene (µg/L)**	**Total Xylenes (µg/L)**
NMWQCC Standards:		10	750	750	620
MW-9	12/12/13	250	110	250	310
MW-9	04/04/14	130	57	110	100
MW-9	10/24/14	120	2.5	100	29
MW-9	05/31/15	72	<25	77	16 J
MW-9	11/24/15	130	<25	120	<25
MW-10	12/12/13	1600	460	130	1100
MW-10	04/04/14	340	5.6 J	62	42
MW-10	10/24/14	430	<1.4	63	12 J
MW-10	05/31/15	130	5.9	20	<5.0
MW-10	11/24/15	1300	<1.0	48	<15
MW-11	12/12/13	1800	270	410	3000
MW-11	04/04/14	970 H	580	590	3500
MW-11	10/24/14	1800	210	380	2400
MW-11	05/31/15	1300	23 J	270	1200
MW-11	11/24/15	3600	3.8	580	3500
MW-12	11/24/15	260 B	8.9 B	320 B	2000 B
MW-13	11/24/15	<1.0	<1.0	<1.0	0.64 JB
MW-14	11/24/15	2.4 B	0.41 JB	0.60 JB	<3.0
MW-15	11/24/15	<1.0	<1.0	0.68 JB	3.1 B
MW-16	11/24/15	120 B	57 B	190 B	1500 B
PZ-1	07/31/97	4,770	7080	925	8810
PZ-2	07/31/97	<10	2120	560	6130
PZ-3	07/31/97	<10	6060	681	7870
PZ-4	07/31/97	3.39	6.61	41.4	320
PZ-5	07/31/97	10400	<50	746	5500
PZ-6	07/31/97	1420	1740	579	4320
PZ-7	07/31/97	126	4590	1150	11600

Notes:

"µg/L" = micrograms per liter
"NMWQCC" - New Mexico Water Quality Control Commission
Results highlighted yellow exceed their respective NMWQCC standards.
B = Compound was found in the blank and sample.
J = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
H = Sample was prepped or analyzed beyond the specified holding time.
< = analyte was not detected at the indicated reporting limit (some historic data were reported at the detection limit).

TABLE 2 - GROUNDWATER ELEVATION RESULTS

Standard Oil Com #1						
Location	Date	TOC	Depth to Water (ft.)	Depth to LNAPL (ft.)	LNAPL Thickness (ft.)	GW Elevation (ft.)
MW-1	09/12/95	5681.65	21.03	NR		5660.62
MW-1	11/07/96	5681.65	21.30	21.24	0.06	5660.39
MW-1	02/07/97	5681.65	20.96	NR		5660.69
MW-1	05/09/97	5681.65	20.78	NR		5660.87
MW-1	08/08/97	5681.65	21.13	NR		5660.52
MW-1	11/04/97	5681.65	20.86	NR		5660.79
MW-1	02/03/98	5681.65	20.61	NR		5661.04
MW-1	05/07/98	5681.65	20.47	NR		5661.18
MW-1	08/04/98	5681.65	20.85	NR		5660.80
MW-1	11/03/98	5681.65	20.62	NR		5661.03
MW-1	02/02/99	5681.65	20.02	NR		5661.63
MW-1	05/19/99	5681.65	19.86	NR		5661.79
MW-1	08/04/99	5681.65	19.98	NR		5661.67
MW-1	11/09/99	5681.65	19.91	NR		5661.74
MW-1	02/25/00	5681.65	19.69	NR		5661.96
MW-1	05/24/00	5681.65	NR	NR		NA
MW-1	08/08/00	5681.65	NR	NR		NA
MW-1	11/06/00	5681.65	20.29	NR		5661.36
MW-1	02/15/01	5681.65	20.18	NR		5661.47
MW-1	06/04/01	5681.65	20.05	NR		5661.60
MW-1	08/07/01	5681.65	20.41	NR		5661.24
MW-1	12/04/01	5681.65	20.26	NR		5661.39
MW-1	02/25/02	5681.65	20.06	NR		5661.59
MW-1	05/14/02	5681.65	20.17	NR		5661.48
MW-1	08/06/02	5681.65	20.69	NR		5660.96
MW-1	11/04/02	5681.65	20.61	NR		5661.04
MW-1	02/27/03	5681.65	20.24	ND		5661.41
MW-1	05/19/03	5681.65	20.31	ND		5661.34
MW-1	08/18/03	5681.65	21.00	ND		5660.65
MW-1	11/15/03	5681.65	20.41	ND		5661.24
MW-1	02/17/04	5681.65	19.89	ND		5661.76
MW-1	06/02/04	5681.65	19.99	ND		5661.66
MW-1	06/24/05	5681.65	19.98	ND		5661.67
MW-1	06/07/06	5681.65	20.18	ND		5661.47
MW-1	06/12/07	5681.65	19.85	ND		5661.80
MW-1	06/16/08	5681.65	20.24	ND		5661.41
MW-1	06/10/09	5681.65	20.52	ND		5661.13
MW-1	06/02/10	5681.65	20.63	ND		5661.02
MW-1	05/09/11	5681.65	20.60	ND		5661.05
MW-1	05/15/12	5681.65	20.61	ND		5661.04
MW-1	06/05/13	5681.65	20.79	ND		5660.86
MW-1	09/11/13	5681.65	21.21	ND		5660.44
MW-1	12/12/13	5681.65	20.52	ND		5661.13
MW-1	04/04/14	5681.65	20.10	ND		5661.55
MW-1	10/24/14	5681.65	20.68	ND		5660.97
MW-1	05/31/15	5681.65	19.95	ND		5661.70
MW-1	11/24/15	5681.65	20.44	ND		5661.21

TABLE 2 - GROUNDWATER ELEVATION RESULTS

Standard Oil Com #1						
Location	Date	TOC	Depth to Water (ft.)	Depth to LNAPL (ft.)	LNAPL Thickness (ft.)	GW Elevation (ft.)
MW-2	12/13/01	5688.83	27.15	NR		5661.68
MW-2	08/06/02	5688.83	27.65	NR		5661.18
MW-2	11/04/02	5688.83	27.59	NR		5661.24
MW-2	05/19/03	5688.83	27.29	ND		5661.54
MW-2	08/18/03	5688.83	29.96	ND		5658.87
MW-2	11/15/03	5688.83	27.33	ND		5661.50
MW-2	02/17/04	5688.83	26.86	ND		5661.97
MW-2	06/02/04	5688.83	26.94	ND		5661.89
MW-2	06/24/05	5688.83	26.92	ND		5661.91
MW-2	06/07/06	5688.83	27.12	ND		5661.71
MW-2	06/12/07	5688.83	26.96	ND		5661.87
MW-2	06/16/08	5688.83	27.17	ND		5661.66
MW-2	06/10/09	5688.83	27.45	ND		5661.38
MW-2	06/02/10	5688.83	27.50	ND		5661.33
MW-2	05/09/11	5688.83	27.56	ND		5661.27
MW-2	05/15/12	5688.83	27.53	ND		5661.30
MW-2	06/05/13	5688.83	27.59	ND		5661.24
MW-2	09/11/13	5688.83	28.14	ND		5660.69
MW-2	12/12/13	5688.83	27.43	ND		5661.40
MW-2	04/04/14	5688.83	27.00	ND		5661.83
MW-2	10/24/14	5688.83	27.54	ND		5661.29
MW-2	05/31/15	5688.83	26.83	ND		5662.00
MW-2	11/24/15	5688.83	27.32	ND		5661.51
MW-3	12/13/01	5681.69	27.15	NR		5654.54
MW-3	08/06/02	5681.69	27.65	NR		5654.04
MW-3	11/04/02	5681.69	27.59	NR		5654.10
MW-3	05/19/03	5681.69	27.29	ND		5654.40
MW-3	08/18/03	5681.69	29.96	ND		5651.73
MW-3	11/15/03	5681.69	27.33	ND		5654.36
MW-3	02/17/04	5681.69	26.86	ND		5654.83
MW-3	06/02/04	5681.69	26.94	ND		5654.75
MW-3	06/24/05	5681.69	26.92	ND		5654.77
MW-3	06/07/06	5681.69	27.12	ND		5654.57
MW-3	06/12/07	5681.69	26.96	ND		5654.73
MW-3	06/16/08	5681.69	27.17	ND		5654.52
MW-3	06/10/09	5681.69	27.45	ND		5654.24
MW-3	06/02/10	5681.69	27.50	ND		5654.19
MW-3	05/09/11	5681.69	27.56	ND		5654.13
MW-3	05/15/12	5681.69	27.53	ND		5654.16
MW-3	06/05/13	5681.69	21.57	ND		5660.12
MW-3	09/11/13	5681.69	22.02	ND		5659.67
MW-3	12/12/13	5681.69	21.33	ND		5660.36
MW-3	04/04/14	5681.69	20.89	ND		5660.80
MW-3	10/24/14	5681.69	21.49	ND		5660.20
MW-3	05/31/15	5681.69	20.73	ND		5660.96
MW-3	11/24/15	5681.69	21.24	ND		5660.45

TABLE 2 - GROUNDWATER ELEVATION RESULTS

Standard Oil Com #1						
Location	Date	TOC	Depth to Water (ft.)	Depth to LNAPL (ft.)	LNAPL Thickness (ft.)	GW Elevation (ft.)
MW-4	12/13/01	5677.86	21.10	NR		5656.76
MW-4	08/06/02	5677.86	21.53	NR		5656.32
MW-4	11/04/02	5677.86	21.40	NR		5656.46
MW-4	05/19/03	5677.86	21.07	ND		5656.79
MW-4	08/18/03	5677.86	21.78	ND		5656.08
MW-4	11/15/03	5677.86	21.22	ND		5656.64
MW-4	02/17/04	5677.86	20.74	ND		5657.12
MW-4	06/02/04	5677.86	20.74	ND		5657.12
MW-4	06/24/05	5677.86	20.75	ND		5657.11
MW-4	06/07/06	5677.86	20.96	ND		5656.90
MW-4	06/12/07	5677.86	20.58	ND		5657.28
MW-4	06/16/08	5677.86	20.95	ND		5656.91
MW-4	06/10/09	5677.86	21.23	ND		5656.63
MW-4	06/02/10	5677.86	21.25	ND		5656.61
MW-4	05/09/11	5677.86	21.33	ND		5656.53
MW-4	05/15/12	5677.86	17.60	ND		5660.26
MW-4	06/05/13	5677.86	17.79	ND		5660.07
MW-4	09/11/13	5677.86	18.21	ND		5659.65
MW-4	12/12/13	5677.86	17.56	ND		5660.30
MW-4	04/04/14	5677.86	17.11	ND		5660.75
MW-4	10/24/14	5677.86	17.70	ND		5660.16
MW-4	05/31/15	5677.86	16.95	ND		5660.91
MW-4	11/24/15	5677.86	17.46	ND		5660.40
MW-5	11/09/06	5679.49	17.63	ND		5661.86
MW-5	06/12/07	5679.49	17.85	ND		5661.64
MW-5	06/16/08	5679.49	18.20	ND		5661.29
MW-5	06/10/09	5679.49	18.58	ND		5660.91
MW-5	06/02/10	5679.49	18.65	ND		5660.84
MW-5	05/09/11	5679.49	18.74	ND		5660.75
MW-5	05/15/12	5679.49	18.67	ND		5660.82
MW-5	06/05/13	5679.49	18.88	ND		5660.61
MW-5	09/11/13	5679.49	19.41	ND		5660.08
MW-5	12/12/13	5679.49	18.69	ND		5660.80
MW-5	04/04/14	5679.49	18.18	ND		5661.31
MW-5	10/24/14	5679.49	DRY	ND		DRY
MW-5	10/24/14	5679.49	DRY	ND		DRY
MW-5	05/31/15	5679.49	17.99	ND		5661.50
MW-5	05/31/15	5679.49	17.99	ND		5661.50

TABLE 2 - GROUNDWATER ELEVATION RESULTS

Standard Oil Com #1						
Location	Date	TOC	Depth to Water (ft.)	Depth to LNAPL (ft.)	LNAPL Thickness (ft.)	GW Elevation (ft.)
MW-6	12/12/13	5689.93	27.63	ND		5662.30
MW-6	04/04/14	5689.93	27.20	ND		5662.73
MW-6	10/24/14	5689.93	27.69	ND		5662.24
MW-6	05/31/15	5689.93	27.01	ND		5662.92
MW-6	11/24/15	5689.93	27.49	ND		5662.44
MW-7	12/12/13	5682.68	21.40	ND		5661.28
MW-7	04/04/14	5682.68	21.00	ND		5661.68
MW-7	10/24/14	5682.68	21.52	ND		5661.16
MW-7	05/31/15	5682.68	20.82	ND		5661.86
MW-7	11/24/15	5682.68	21.30	ND		5661.38
MW-8	12/12/13	5688.59	27.95	ND		5660.64
MW-8	04/04/14	5688.59	27.49	ND		5661.10
MW-8	10/24/14	5688.59	28.09	ND		5660.50
MW-8	05/31/15	5688.59	27.33	ND		5661.26
MW-8	11/24/15	5688.59	27.85	ND		5660.74
MW-9	12/12/13	5682.09	21.61	ND		5660.48
MW-9	04/04/14	5682.09	21.11	ND		5660.98
MW-9	10/24/14	5682.09	21.66	ND		5660.43
MW-9	05/31/15	5682.09	20.94	ND		5661.15
MW-9	11/24/15	5682.09	21.41	ND		5660.68
MW-10	12/12/13	5688.16	27.74	ND		5660.42
MW-10	04/04/14	5688.16	27.30	ND		5660.86
MW-10	10/24/14	5688.16	27.91	ND		5660.25
MW-10	05/31/15	5688.16	27.14	ND		5661.02
MW-10	11/24/15	5688.16	27.67	ND		5660.49
MW-11	12/12/13	5680.33	20.16	ND		5660.17
MW-11	04/04/14	5680.33	19.72	ND		5660.61
MW-11	10/24/14	5680.33	20.32	ND		5660.01
MW-11	05/31/15	5680.33	19.56	ND		5660.77
MW-11	11/24/15	5680.33	20.07	ND		5660.26
MW-12	11/24/15	5676.34	16.35	ND		5659.99
MW-13	11/24/15	5681.64	21.58	ND		5660.06
MW-14	11/24/15	5685.68	36.33	ND		5649.35
MW-15	11/24/15	5683.73	22.10	ND		5661.63
MW-16	11/24/15	5679.67	18.81	ND		5660.86
PZ-1	07/31/97	NS	19	NR		NS
PZ-2	07/31/97	NS	19	NR		NS

TABLE 2 - GROUNDWATER ELEVATION RESULTS

Standard Oil Com #1						
Location	**Date**	**TOC**	**Depth to Water (ft.)**	**Depth to LNAPL (ft.)**	**LNAPL Thickness (ft.)**	**GW Elevation (ft.)**
PZ-3	07/31/97	NS	18.9	NR		NS
PZ-4	07/31/97	NS	16.4	NR		NS
PZ-5	07/31/97	NS	28.4	NR		NS
PZ-6	07/31/97	NS	19.5	NR		NS
PZ-7	07/31/97	NS	16.0	NR		NS

Notes:
"ft" = feet
"TOC" = Top of casing
"LNAPL" - Light non-aqueous phase liquid
"ND" = LNAPL not detected
"NR" = LNAPL not recorded
"NS" = No Survev Data

TABLE 3 - SOIL ANALYTICAL RESULTS

Standard Oil Com #1																
Location	Date	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-6(27.5-30)	11/19/13	BDL		0.89	J	6.2	48	**55.09**				**240**		130	
MW-7(22.5-25)	11/19/13	BDL		BDL		0.14	2.7	2.84				13	J	75	
MW-8(27.5-30)	11/18/13	0.079	J	0.082	J	0.12	0.59	0.87				BDL		36	J
MW-9(22.5-25)	11/19/13	0.24	J	0.63		1.9	9.3	12.07				BDL		54	J
MW-10(27.5-30)	11/18/13	0.55	J	0.46	J	3.2	27	31.21				BDL		210	
MW-11(22.5-25)	11/19/13	1.2		0.21	J	5.8	53	**60.21**				86		46	J
MW-12 (10-12)	11/12/15	BRL		BRL		BRL	BRL	BRL	BRL	BRL	BRL	BRL		58	
MW-13 (15-17.25)	11/12/15	BRL		BRL		0.36	0.89	1.25	160	130	18	**308**		37	
MW-14 (30-32.25)	11/12/15	BRL		BRL		BRL	BRL	BRL	BRL	BRL	BRL	BRL		BRL	
MW-15 (15-17)	11/13/15	BRL		BRL		BRL	BRL	BRL	BRL	BRL	BRL	BRL		160	
MW-16 (15-17)	11/13/15	BRL		BRL		BRL	BRL	BRL	BRL	BRL	BRL	BRL		BRL	
SB-1 (12-13)	11/14/15	BRL		BRL		BRL	BRL	BRL	BRL	49	11	60		53	
SB-1 (15-16.5)	11/14/15	BRL		BRL		BRL	BRL	BRL	BRL	67	14	81		BRL	

Notes:

J	Result is less than the Reporting Limit but greater than or equal to the Method Detection Limit and the concentration is an approximate value.
mg/kg	Milligrams per kilogram
BDL	Below Detection Limit
BRL	Below Reporting Limit
NE	New Mexico Oil Conservation Division (NMOCD) Standard Not Established
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 as reported by the analytical laboratory or calculated by adding GRO, DRO, and MRO and rounded to the nearest mg/kg.
NMOCD Criteria	New Mexico Oil Conservation Division closure criteria for groundwater ≤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

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\STANDARD OIL COM #1\2015 MAPS\Std_Oil_Com#1_GARM_1SA_2015.mxd

MW-4
B: <1.0
T: 16
E: 84
X: 8.4

MW-5
B: <1.0
T: <5.0
E: <1.0
X: <5.0

MW-11
B: **1300**
T: 23 J
E: 270
X: **1200**

MW-3
B: **870**
T: 6.9 J
E: 240
X: 430

MW-1
B: **16**
T: 13
E: 130
X: 3.8 J

MW-9
B: **72**
T: <25
E: 77
X: 16 J

MW-7
B: <5.0
T: 28
E: 280
X: **1900**

MW-10
B: **130**
T: 5.9
E: 20
X: <5.0

MW-2
B: 3.4
T: 2.0 J
E: 8.9
X: <5.0

MW-8
B: **44**
T: 3.6 J
E: 180
X: <5.0

MW-6
B: **23**
T: 3.8 J
E: 8.7
X: <5.0

PZ-1 PZ-2 PZ-3 PZ-4 PZ-5 PZ-6 PZ-7

MW-4 MW-5 MW-11 MW-3 MW-1 MW-9 MW-7 MW-10 MW-2 MW-8 MW-6

FORMER EPC PIT EXCAVATED APPROXIMATELY 12 FEET DEEP

SOIL PILE

BLOWDOWN VALVE

SMA BENCHMARK
ELEV. 5687.12
NAD 83 NAVD 88
STATE PLANE COORDINATE SYSTEM
NEW MEXICO WEST

WILLIAMS GAS

ENTERPRISE LINE

T-POST

CONCRETE PAD

METER HOUSE

BURLINGTON RESOURCES
EXCAVATED PIT AREA (30' DEEP)

MW-BR

TANK 1
OIL STORAGE TANK

WELLHEAD

COMPRESSOR

SEPARATOR

TANK 2
COVERED STEEL TANK

5670 5675 5676 5677 5678 5679 5680 5681 5682 5683 5684 5685 5686 5687 5688 5689

AERIAL IMAGERY FROM GOOGLE EARTH, DATED MAY 2, 2013.

LEGEND:

- 5795 — APPROX. GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- FENCE
- FORMER PIT
- GAS — NATURAL GAS PIPELINE
- UE — UNDERGROUND ELECTRIC LINE
- BENCHMARK
- GAS VALVE
- FORMER PIEZOMETER
- MONITORING WELL
- OTHER MONITORING WELL
- RIG ANCHOR

EXPLANATION OF ANALYTES AND APPLICABLE STANDARDS:

RESULTS IN **BOLDFACE** TYPE INDICATE CONCENTRATION IN EXCESS OF THE STANDARD FOR THAT ANALYTE.
NS = NOT SAMPLED
µg/L = MICROGRAMS PER LITER
<1.0 = 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

N

SCALE IN FEET
0 30 60

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
A	2/1/2016	CCL	CCL	SRV

TITLE:

GROUNDWATER ANALYTICAL RESULTS
MAY 31, 2015

PROJECT:

STANDARD OIL COM #1
SAN JUAN RIVER BASIN
SAN JUAN COUNTY, NEW MEXICO

MWH

Figure No.: 1

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\STANDARD OIL COM #1\2015 MAPS\Std_Oil_Com#1_GECM_2SA_2015r.mxd

LEGEND:

- 5795 — APPROX. GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- FENCE
- FORMER PIT
- GAS — NATURAL GAS PIPELINE
- UE — UNDERGROUND ELECTRIC LINE
- BENCHMARK
- GAS VALVE
- FORMER PIEZOMETER
- MONITORING WELL
- OTHER MONITORING WELL
- RIG ANCHOR

NOTES:

5662.44 GROUNDWATER ELEVATION FEET ABOVE MEAN SEA LEVEL

5661.5 GROUNDWATER LEVEL ELEVATION (DASHED WHERE INFERRED FEET ABOVE MEAN SEA LEVEL, 0.25 FOOT CONTOUR INTERVAL)

DIRECTION OF APPARENT GROUNDWATER FLOW

NO MEASUREABLE FREE PRODUCT WAS DETECTED.

GROUNDWATER ELEVATION DATA FROM MW-14 WAS ANOMALOUS AND NOT USED IN DEVELOPING THE GROUNDWATER LEVEL CONTOURS.

N

SCALE IN FEET

0 30 60

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
	2/12/2016	CCL	CCL	SRV

TITLE:

GROUNDWATER ELEVATION MAP
NOVEMBER 24, 2015

PROJECT:

STANDARD OIL COM #1
SAN JUAN RIVER BASIN
SAN JUAN COUNTY, NEW MEXICO

MWH

Figure No.: 4

AERIAL IMAGERY FROM GOOGLE EARTH, DATED MAY 2, 2013.

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\STANDARD OIL COM #1\2015 MAPS\Std_Oil_Com#1_GARM_2SA_2015r.mxd

MW-4
B: 5.1
T: 1.2
E: 65
X: 3.2

MW-12
B: **260**
T: 8.9
E: 320
X: **2000**

MW-3
B: **2500**
T: <1.0
E: 510
X: **760**

MW-16
B: **120**
T: 57
E: 190
X: **1500**

MW-11
B: **3600**
T: 3.8
E: 580
X: **3500**

MW-9
B: **130**
T: <25
E: 120
X: <25

MW-1
B: **51**
T: 29
E: 160
X: 52

MW-7
B: **90**
T: 11
E: 400
X: **1300**

MW-15
B: <1.0
T: <1.0
E: <1.0
X: 3.1

MW-13
B: <1.0
T: <1.0
E: <1.0
X: <3.0

MW-10
B: **1300**
T: <1.0
E: 48
X: <15

MW-8
B: **32**
T: <1.0
E: 29
X: 3.8

MW-2
B: **31**
T: <1.0
E: 19
X: <3.0

MW-14
B: 2.4
T: <1.0
E: <1.0
X: <3.0

MW-6
B: **53**
T: <1.0
E: 21
X: 4.6

SB-1
NS

PZ-1
PZ-2
PZ-3
PZ-4
PZ-5
PZ-6
PZ-7

MW-1
MW-2
MW-3
MW-4
MW-5
MW-6
MW-7
MW-8
MW-9
MW-10
MW-11
MW-12
MW-13
MW-14
MW-15
MW-16

MW-BR

FORMER EPC PIT EXCAVATED APPROXIMATELY 12 FEET DEEP

BLOWDOWN VALVE

SOIL PILE

SOIL PILE

SMA BENCHMARK
ELEV. 5687.12
NAD 83 NAVD 88
STATE PLANE COORDINATE SYSTEM
NEW MEXICO WEST

BURLINGTON RESOURCES
EXCAVATED PIT AREA (30' DEEP)

TANK 1
OIL STORAGE TANK

TANK 2
COVERED STEEL TANK

WELLHEAD

COMPRESSOR

SEPARATOR

METER HOUSE

CONCRETE PAD

T-POST

WILLIAMS GAS

ENTERPRISE LINE

5670
5675
5677
5678
5679
5680
5681
5682
5683
5684
5685
5686
5687
5688
5689

AERIAL IMAGERY FROM GOOGLE EARTH, DATED MAY 2, 2013.

LEGEND:

- APPROX. GROUND SURFACE CONTOUR AND ELEVATION, FEET (5795)
- ACCESS ROAD
- FENCE
- FORMER PIT
- NATURAL GAS PIPELINE
- UNDERGROUND ELECTRIC LINE
- BENCHMARK
- GAS VALVE
- FORMER PIEZOMETER
- MONITORING WELL
- OTHER MONITORING WELL
- RIG ANCHOR
- SOIL BORING

EXPLANATION OF ANALYTES AND APPLICABLE STANDARDS:

RESULTS IN **BOLDFACE** TYPE INDICATE CONCENTRATION IN EXCESS OF THE STANDARD FOR THAT ANALYTE.
NS = NOT SAMPLED
µg/L = MICROGRAMS PER LITER
<1.0 = 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

N

SCALE IN FEET
0 30 60

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
	2/1/2016	CCL	CCL	SRV

TITLE:

GROUNDWATER ANALYTICAL RESULTS
NOVEMBER 24, 2015

PROJECT:

STANDARD OIL COM #1
SAN JUAN RIVER BASIN
SAN JUAN COUNTY, NEW MEXICO

MWH

Figure No.: 3

L:\San Juan River Basin\SJRB GENERAL\GIS-NEW_MXDs\STANDARD OIL COM #1\2015 MAPS\Std_Oil_Com#1_GECM_1SA_2015.mxd

LEGEND:

- 5795 — APPROX. GROUND SURFACE CONTOUR AND ELEVATION, FEET
- ACCESS ROAD
- FENCE
- FORMER PIT
- GAS — NATURAL GAS PIPELINE
- UE — UNDERGROUND ELECTRIC LINE
- BENCHMARK
- GAS VALVE
- FORMER PIEZOMETER
- MONITORING WELL
- OTHER MONITORING WELL
- RIG ANCHOR

NOTES:

5661.15 GROUNDWATER ELEVATION FEET ABOVE MEAN SEA LEVEL

5662.0 GROUNDWATER LEVEL ELEVATION (DASHED WHERE INFERRED FEET ABOVE MEAN SEA LEVEL, 0.2 FOOT CONTOUR INTERVAL)

DIRECTION OF APPARENT GROUNDWATER FLOW

NO MEASUREABLE FREE PRODUCT WAS DETECTED

N

SCALE IN FEET

0 30 60

REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
A	2/12/2016	CCL	CCL	SRV

TITLE:

GROUNDWATER ELEVATION MAP
MAY 31, 2015

PROJECT:

STANDARD OIL COM #1
SAN JUAN RIVER BASIN
SAN JUAN COUNTY, NEW MEXICO

MWH

Figure No.: **2**

AERIAL IMAGERY FROM GOOGLE EARTH, DATED MAY 2, 2013.

APPENDICES

APPENDIX A – BOREHOLE AND WELL CONSTRUCTION LOGS

APPENDIX B – SOIL SAMPLING ANALYTICAL REPORTS

APPENDIX C – SOIL DISPOSAL DOCUMENTATION

APPENDIX D – MAY 31, 2015 GROUNDWATER SAMPLING ANALYTICAL REPORT
NOVEMBER 24, 2015 GROUNDWATER SAMPLING ANALYTICAL REPORT

APPENDIX A

Drilling Log

MWH

Monitoring Well **MW-12**

Project *Standard Oil Com #1* Owner *El Paso Remediation Company*

Location *San Juan County, New Mexico* Project Number *10507618.0105*

Surface Elev. *5673.56 ft* North *NA* East *NA*

Top of Casing *5676.34 ft* Water Level Initial ▽ *5660.04* 11/12/15 00:00 Static ▼ *5659.93* 11/12/15 00:00

Hole Depth *30.5ft* Screen: Diameter *2 in* Length *20.0 ft* Type/Size *PVC/0.01 in*

Hole Diameter *8.0 in* Casing: Diameter *2 in* Length *10.5 ft* Type *PVC*

Drill Co. *National EWP* Drilling Method *Hollow Stem Auger* Sand Pack *12/20 Silica*

Driller *Victor Zermeno* Driller Reg. # *WD 1210* Log By *Rob Malcomson*

Start Date *11/12/2015* Completion Date *11/12/2015* Checked By *S. Varsa*

COMMENTS

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)
						Silt/Dirt/Sand		5673.56
0					SM	0-8 Hand Auger & Hydro-Vac (0 - 2.5) Silty Sand, yellowish light brown, fine grained, dry, loose.		
2	0.0							5672
					CH ML	(2.5 - 8.0) Clayey Silt to Sandy Silt, light brown, dry, trace caliche, soft to loose.		
4	0.0							5670
6								5668
	0.0	100%						5666
8					SM	(8 - 9.75) Silty Sand, dry, loose, light brown, fine, lower grades to tan fine sand.		
	0.0							5664
10		88% MW-12 (10-12ft) sample				(9.75 - 10) No Recovery		
					SW	(10 - 12) Sand, tan to light brown, medium fine, semi-moist, loose, soft, quartz.		
	0.0							5662
12						(12 - 55) No Recovery		
								5660 ▽▼
14		40%						
					SW	(15 - 17) Sand, gray to medium light gray, medium grained quartz, trace gravel 1 inch at 16.25 feet, clayey seams in sand matrix at 16 to 16.25 feet, odor, wet at 17 feet.		5658
16	1550							
						(17 - 20) No Recovery		5656
18								
		40%						5654
20								

Continued Next Page

Drilling Log

MWH

Monitoring Well **MW-12**

Project *Standard Oil Com #1* Owner *El Paso Remediation Company*

Location *San Juan County, New Mexico* Project Number *10507618.0105*

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)
						Continued		
20	140				SW	(20 - 23) Sand, gray, coarse, moist to wet, quartz, soft.		5652
22								
24		60%				(23 - 25) No Recovery		5650
26	26				SW	(25 - 26) Sand, gray, coarse, wet, loose, quartz.		5648
28	4.4				CL ML	(26 - 28.75) Clay to Silt, Sandy, dark olive to dark gray olive, hard, dry, Fe lining in healed fractures (scattered), trace Fe and white nodules 2-4 mm diameter.		5646
30		75%				(28.75 - 30) No Recovery		5644
		0%				(30 - 30.5) No Recovery		
32						Bottom of Boring 30.5 feet Monitoring Well TD = 30.3 feet		5642
34								5640
36								5638
38								5636
40								5634
42								5632
44								5630
46								5628

MWH

Drilling Log

Monitoring Well **MW-13**

Project *Standard Oil Com #1* Owner *El Paso Remediation Company*

Location *San Juan County, New Mexico* Project Number *10507618.0105*

Surface Elev. *5678.63 ft* North *NA* East *NA*

Top of Casing *5681.64 ft* Water Level Initial ▽ *5660.14* 11/12/15 00:00 Static ▼ *5659.99* 11/12/15 00:00

Hole Depth *31.0ft* Screen: Diameter *2 in* Length *20.0 ft* Type/Size *PVC/0.01 in*

Hole Diameter *8.0 in* Casing: Diameter *2 in* Length *10.0 ft* Type *PVC*

Drill Co. *National EWP* Drilling Method *Hollow Stem Auger* Sand Pack *12/20 Silica*

Driller *Victor Zermeno* Driller Reg. # *WD 1210* Log By *Rob Malcomson*

Start Date *11/12/2015* Completion Date *11/12/2015* Checked By *S. Varsa*

COMMENTS

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)
						Silt/Dirt/Sand		5678.63
0						0-8 Hand Auger & Hydro-Vac		
						(0 - 8) Silty Sand, light yellowish brown, dry, fine sand, loose.		5678
2	0.0							
								5676
4	0.0				SM	(4 - 4.5) Pebble to Cobble Layer		
								5674
6								
	0.0							5672
8		100%						
	0.0				SM	(8 - 9.5) Silty Sand, yellowish light brown, dry, loose, fine to medium fine sand.		5670
10		75%				(9.5 - 10) No Recovery		
					SP	(10 - 11.5) Sand, brown, fine to medium fine, dry, 10-10.25 with small gravel.		5668
	0.0							
12						(11.5 - 15) No Recovery		
						★Lowered core barrel to improve recovery.		5666
14								
								5664
		30% MW-13 (15-17.25ft) sample				(15 - 17.25) Sand, tan to yellowish brown lower, medium to fine grained, dry, slight odor.		
16	400				SP			5662
					SP	(17.25 - 18) Sand, gray, medium fine, moist, petroleum-like odor.		
18						(18 - 20) No Recovery		
▽▼								5660
20		60%						
						Continued Next Page		

Drilling Log STANDARD OIL COM #1 LOGS.GPJ MWH IA.GDT 12/30/15

Drilling Log

MWH

Monitoring Well **MW-13**

Project *Standard Oil Com #1* Owner *El Paso Remediation Company*

Location *San Juan County, New Mexico* Project Number *10507618.0105*

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)
						Continued		
20	1.4				SW	(18 - 21) Sand, medium fine, gray, wet, odor.		5658
22	0.6				ML SM	(21 - 22.5) Silty Clayey Sand to Clayey Silt, fine sand, wet, grayish-brown to brownish gray, medium dense, somewhat laminar partings/bedding, odor.		5656
						(22.5 - 23) Sand, gray and greenish gray layers, wet to moist, slight odor, medium fine sand.		
24		60%				(23 - 25) No Recovery		5654
					SW	(25 - 25.75) Sand, gray, medium grained, moist to wet, soft, loose.		
26	3.5				CL	(25.75 - 28) Clay and Silt, gray to red brown, dense, medium stiff, somewhat broken texture, trace mineralization/crystals white.		5652
28	0.9				ML	(28 - 29) Silt, olive-gray, semi-lithified, hard, dry.		5650
						(29 - 30) No Recovery		
30		80%				(30 - 31) No Recovery		5648
		0%						
32								5646
						Bottom of Boring 31 feet Monitoring Well TD = 30.4 feet		
34								5644
36								5642
38								5640
40								5638
42								5636
44								5634
46								5632

Drilling Log

MWH

Monitoring Well **MW-14**

Project *Standard Oil Com #1* Owner *El Paso Remediation Company*

Location *San Juan County, New Mexico* Project Number *10507618.0105*

Surface Elev. *5685.69 ft* North *NA* East *NA*

Top of Casing *5685.69 ft* Water Level Initial ▽ *5645.69* 11/12/15 00:00 Static ▼ *5645.69* 11/12/15 00:00

Hole Depth *40.0ft* Screen: Diameter *2 in* Length *20.0 ft* Type/Size *PVC/0.01 in*

Hole Diameter *8.0 in* Casing: Diameter *2 in* Length *19.0 ft* Type *PVC*

Drill Co. *National EWP* Drilling Method *Hollow Stem Auger* Sand Pack *12/20 Silica*

Driller *Victor Zermeno* Driller Reg. # *WD 1210* Log By *Rob Malcomson*

Start Date *11/11/2015* Completion Date *11/12/2015* Checked By *S. Varsa*

COMMENTS

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)
						Soft/Dirt/Weeds, Dirt road 8 feet south		5685.69
0						0-8 Hand Auger & Hydro-Vac (0 - 8) Silty Sand, light yellowish brown, dry, medium fine.		
2	0.0					Same as Above		5684
4	0.0							5682
6					SM	Same as Above Pebbly zone @ 5-5.5 feet 1to 2 inch diameter. Silty Sand, light yellowish brown, dry, medium fine, loose.		5680
	0.0							
8		100%				(8 - 10) Silty Sand, light brown to light yellowish brown, dry, trace caliche 9.5-10 feet.		5678
	0.0							
10		90%				(10 - 11.5) Same as Above		5676
	0.0							
12						(11.5 - 13) Increasing areas of caliche, light brown to light tan, medium fine sand, dry, medium dense, some colored banding with trace Fe lining areas and trace gravel zone 11.5 - 11.8 feet.		5674
	0.0							
						(13 - 15) No Recovery		
14		60%						5672
	0.0				SM	(15 - 16.5) Fine Sand, light tan, dry with lenticular sandstone clasts in loose sand matrix, semi-lithified, some Fe coating on clasts.		
16								5670
					SM	(16.5 - 18) Silty Sand, brown, dry, medium dense, weak cementation, mineralized vein white calcite @ 17-17.5 feet.		
18	0.0							5668
					SP	(18 - 18.25) Light brown-gray, dry		
						(18.25 - 20) No Recovery		
20		65%						5666
						Continued Next Page		

Drilling Log

MWH

Monitoring Well **MW-14**

Project *Standard Oil Com #1* Owner *El Paso Remediation Company*

Location *San Juan County, New Mexico* Project Number *10507618.0105*

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)
						Continued		
20	0.0				SM	(20 - 22) Silty Sand, tannish-gray to light brown, fine to medium fine, weak to medium cementation, dry to slightly semi-moist.		5664
22						(22 -25) No Recovery		5662
24		40%			CL	(25 - 26) Silty Clay, dark olive, scattered seams with fine sand, semi-moist to dry, overall hard.		5660
26	0.0				ML	(26-27) semi lithified silt hard, gray, dry.		
28						(27 - 30) No Recovery		5658
30		40% MW-14 (30-32.25ft) sample			ML	(30 - 30.25) Silt, semi-lithified siltstone, dry, gray.		5656
32	0.8				ML	(30.25 - 32.5) Silt, gray, weaker lithified than above, somewhat shaly/fissile, dry to semi-moist.		5654
34						(32.5 - 35) No Recovery		5652
36	0.0	50%			ML	(35 - 38) Silt, semi-lithified siltstone, gray to slight greenish-gray, lower dry to semi-moist, cobble layer of sandstone at 36.5 to 37 feet, 1 - 2 inch diameter.		5650
38						(38 - 40) No Recovery		5648
40 ▽		60%						5646 ▽
42						Bottom of Boring 40 feet Monitoring Well TD = 39 feet		5644
44								5642
46								5640

Drilling Log

MWH

Monitoring Well **MW-15**

Project *Standard Oil Com #1* Owner *El Paso Remediation Company*

Location *San Juan County, New Mexico* Project Number *10507618.0105*

Surface Elev. *5680.72 ft* North *NA* East *NA*

Top of Casing *5680.72 ft* Water Level Initial ▽ *5659.22* 11/13/15 00:00 Static ▼ *5658.59* 11/13/15 00:00

Hole Depth *35.0ft* Screen: Diameter *2 in* Length *20.0 ft* Type/Size *PVC/0.01 in*

Hole Diameter *8.0 in* Casing: Diameter *2 in* Length *13.3 ft* Type *PVC*

Drill Co. *National EWP* Drilling Method *Hollow Stem Auger* Sand Pack *12/20 Silica*

Driller *Victor Zermeno* Driller Reg. # *WD 1210* Log By *Rob Malcomson*

Start Date *11/12/2015* Completion Date *11/13/2015* Checked By *S. Varsa*

COMMENTS

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)
						0-8 Hand Auger & Hydro-Vac		5680.72
0	0.0					(0 - 8) Silty Sand, yellowish light brown, dry, loose.		5680
5	0.0				SM			5675
	0.0	100%				(8 - 10) Silty Sand, yellowish - brown, fine grained, loose, dry.		
	0.2							
10		90%						
	0.4				SM	(10 - 12.75) Sand, light Brown, medium to fine grained, dry, 10-12 feet loose, 12-12.75 feet weakly cemented.		5670
						(12.75 - 15) No Recovery		
15		55% MW-15 (15-17ft) sample						
	0.4				SC	(15 - 17) Sand and Clayey Sand, yellowish light Brown, clayey areas/layers, dry to semi-moist, loose to medium dense, fine grained sand.		5665
	0.4				SC	(17 - 18) Sandy Clay, yellowish brown, moist at 17 ft, no odor.		
						(18 - 20) No Recovery		
20		60%						
	0.6				SW SM	(20 - 23) Sand with Silt and Clayey Silt layers, yellowish brown to brown-grey, fine to very fine sand, saturated/wet, medium dense.		5660
						(23 - 25) No Recovery		
25		60%						

Continued Next Page

Drilling Log

MWH

Monitoring Well **MW-15**

Project *Standard Oil Com #1* Owner *El Paso Remediation Company*

Location *San Juan County, New Mexico* Project Number *10507618.0105*

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)
						Continued		
25	0.7				SP	(25 - 27.5) Sand, grayish light brown, fine to medium grained, loose/soft, wet.		5655
	0.7				SW	(27.75 - 28.5) Sand, fine, orange-brown, wet, medium dense.		
						(28.5 - 30) No Recovery		
30	0.7	70%			SW	(30 - 30.5) Sand, medium fine, Gray, soft, wet.		5650
						(30.5 - 35) No Recovery		
35		10%				Bottom of Boring 35 feet Monitoring Well TD = 33.3 feet		5645
40								5640
45								5635
50								5630
55								5625

Drilling Log

MWH

Monitoring Well **MW-16**

Project *Standard Oil Com #1* Owner *El Paso Remediation Company*

Location *San Juan County, New Mexico* Project Number *10507618.0105*

Surface Elev. *5676.82 ft* North *NA* East *NA*

Top of Casing *5679.67 ft* Water Level Initial ▽ *5661.17* 11/13/15 00:00 Static ▼ *5660.83* 11/13/15 00:00

Hole Depth *30.0ft* Screen: Diameter *2 in* Length *20.0 ft* Type/Size *PVC/0.01 in*

Hole Diameter *NA* Casing: Diameter *2 in* Length *12.2 ft* Type *PVC*

Drill Co. *National EWP* Drilling Method *Hollow Stem Auger* Sand Pack *12/20 Silica*

Driller *Victor Zermeno* Driller Reg. # *WD 1210* Log By *Rob Malcomson*

Start Date *11/13/2015* Completion Date *11/13/2015* Checked By *S. Varsa*

COMMENTS

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)
						Silt/Dirt/Sand		5676.82
0						0-8 Hand Auger & Hydro-Vac		
						(0 - 5) Silty Sand, yellowish brown, dry, loose.		5676
2	0.0				SM			
								5674
4	0.0							
								5672
						(5.0 - 8.0) Clayey Silt, brown, dry, medium stiff.		
6					ML			
								5670
	0.0							
8		100%			SM	(8.0 - 9.0) Sand, yellowish tan, very fine grained, dry.		
	0.6							5668
					CL ML	(9.0 - 10) Clayey Silt, light brown, low plastic, dry, medium dense, trace caliche.		
10		100%				(10 - 11) Clayey Silt, light brown, laminar bedding, dry.		
	0.7							5666
					SC	(11 - 12.3) Clayey Sand, yellow-brown, dry, medium dense, trace caliche.		
12	0.5				SP SW	(12.3 - 13.5) Sand, tan and brown, some banded coloration, dry, weak cemented, medium to medium fine grained.		5664
14						(13.5 - 15) No Recovery		
		70% MW-16 (15-17ft) sample						5662
▽▼ 16	1.9				SW	(15 - 16.5) Sand, yellow-brown upper to olive -gray, medium fine graded, dry to moist.		▽▼
					ML	(16.5 - 17) Clayey, brown and gray zones, moist, laminar bedded, medium stiff.		5660
	3.5				SW	(17 - 17.75) Sand, gray to dark gray, silty, medium dense, wet, fine grained.		
18						(17.75 - 20) No Recovery		
								5658
20		55%						

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Drilling Log

MWH

Monitoring Well **MW-16**

Project *Standard Oil Com #1* Owner *El Paso Remediation Company*

Location *San Juan County, New Mexico* Project Number *10507618.0105*

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)
						Continued		
20	485				SM	(20 - 22.75) Silty Sand, gray, fine grained, wet, odor, loose.		5656
22	1400				SW	(22.75 - 24) Sand, gray, medium grained, wet, loose, soft, odor.		5654
24		80%				(24 - 25) No Recovery		5652
26	12.5				SW	(25 - 27) Sand, gray, medium grained, wet, loose.		5650
28						(27 - 30) No Recovery		5648
30		40%						5646
32						Bottom of Boring 30 feet Monitoring Well TD = 30 feet		5644
34								5642
36								5640
38								5638
40								5636
42								5634
44								5632
46								

Drilling Log

MWH

Soil Boring **SB-1**

Project *Standard Oil Com #1* Owner *El Paso Remediation Company*

Location *San Juan County, New Mexico* Project Number *10507618.0105*

Surface Elev. *5679.16 ft* North *NA* East *NA*

Top of Casing *NA* Water Level Initial ▽ *20.4ft* 11/24/15 00:00 Static ▼

Hole Depth *35.0ft* Screen: Diameter *NA* Length *NA* Type/Size *NA*

Hole Diameter *8.0 in* Casing: Diameter *NA* Length *NA* Type *NA*

Drill Co. *National EWP* Drilling Method *Hollow Stem Auger* Sand Pack *NA*

Driller *Victor Zermeno* Driller Reg. # *WD 1210* Log By *Rob Malcomson*

Start Date *11/14/2015* Completion Date *11/14/2015* Checked By *S. Varsa*

COMMENTS
SB-1 installed approximately 8 feet north northwest from 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)
						Silt/Dirt/Sand	5679.16
0						0-8 Hand Auger & Hydro-Vac (0 - 8) Silty Sand, light brown, loose, fill, dry.	
2	0.0						5678
4	0.0				SM		5676
6	0.0						5674
8	0.4	100%			SM	(8 - 9.75) Silty Sand, light brown, loose, fill, dry.	5672
10	0.4	88% SB-1 (12-13ft) sample			SM	(9.75 - 10) No Recovery (10 - 11.5) Silty Sand, light brown, loose, fill, dry.	5670
12	80				SM	(11.5 - 13) Silty Sand, tan, brown, gray-brown, weak cemented, dry, fine grained sand, clay, gray-brown, medium hard, dry, 12.2-12.5 feet, odor below 12 feet.	5668
14						(13 - 15) No Recovery	5666
16	8.5	60% SB-1 (15-16.5ft) sample			SW	(15 - 16.5) Sand, gray-tan with orange brown banded, dry to moist, medium dense.	5664
	680				SM	(16.5 - 17) Silty Sand, dark gray to dark brown-olive, fine grained, moist, odor.	5662
18					ML	(17 - 18.5) Clayey Silt, gray, medium stiff, moist to wet, odor, laminar bedded.	
						(18.5 - 20) No Recovery	5660
20		70%					

Continued Next Page

Drilling Log

MWH

Soil Boring **SB-1**

Project *Standard Oil Com #1* Owner *El Paso Remediation Company*

Location *San Juan County, New Mexico* Project Number *10507618.0105*

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)
						Continued	
20	467				SP SW	(20 - 22.5) Sand, medium, dark gray, fine to very fine grained lower, wet, medium dense, odor.	5658
22	91				SW	(22.5 - 22.75) Sand, gray, medium coarse, loose, wet.	
						(22.75 - 25) No Recovery	5656
24		55%					
	92.7				SP SM	(25 - 29) Sand to Silty Sand, dark gray, medium fine to medium grained, wet, odor, medium dense.	5654
26							5652
28	89.0						
						(29 - 30) No Recovery	5650
30		80%			SP SM	(30 - 34) Sand to Silty Sand, gray-brown, to olive, fine grained, medium dense, wet, clayey layers at 31.5 and 32.5 feet.	
	2.2						5648
32							5646
	0.9						
34						(34 - 35) No Recovery	
		80%					5644
36							
						Bottom of Boring 35 feet.	5642
38							5640
40							5638
42							5636
44							5634
46							

APPENDIX B

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

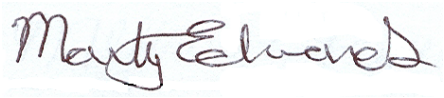
ANALYTICAL REPORT

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

TestAmerica Job ID: 400-113935-1
Client Project/Site: Standard Oil Com #1
Revision: 3

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

Attn: Ms. Sarah Gardner



Authorized for release by:
1/25/2016 5:06:34 PM

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

Table of Contents

Client: MWH Americas Inc
Project/Site: Standard Oil Com #1

TestAmerica Job ID: 400-113935-1

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: Standard Oil Com #1

TestAmerica Job ID: 400-113935-1

Job ID: 400-113935-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-113935-1

Comments
No additional comments.

Receipt
The samples were received on 11/17/2015 9:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.7º C.

Revised Report
Rev(1): The deliverable was revised to report to the RL only.
Rev(2): The report was revised to correct the Project Name to Standard Oil Com #1.
Rev(3): The report was revised to change the analyte descriptions for the 8015 DRO/ORO analysis.

HPLC/IC
Method 300.0: The method blank for preparation batch 400-284081 and analytical batch 400-284481 contained Chloride above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method 300.0: The method blank for preparation batch 400-284831 and analytical batch 400-285031 contained Chloride above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or 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: Standard Oil Com #1

TestAmerica Job ID: 400-113935-1

Client Sample ID: MW12 10-12FT. — Lab Sample ID: 400-113935-1

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Chloride	58		21		mg/Kg	1	☼	300.0	Soluble

Client Sample ID: MW13 15-17.25FT. — Lab Sample ID: 400-113935-2

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Gasoline Range Organics (GRO) C6--C10	160		4.5		mg/Kg	50	☼	8015B	Total/NA
Ethylbenzene	0.36		0.045		mg/Kg	50	☼	8021B	Total/NA
Xylenes, Total	0.89		0.22		mg/Kg	50	☼	8021B	Total/NA
Diesel Range Organics [C10-C28]	130		11		mg/Kg	1	☼	8015B	Total/NA
Oil Range Organics (C28-C35)	18		11		mg/Kg	1	☼	8015B	Total/NA
Chloride	37		22		mg/Kg	1	☼	300.0	Soluble

Client Sample ID: MW14 30-32.25 — Lab Sample ID: 400-113935-3

No Detections.

Client Sample ID: MW15 15-17FT — Lab Sample ID: 400-113935-4

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Chloride	160		21		mg/Kg	1	☼	300.0	Soluble

Client Sample ID: MW16 15-17FT — Lab Sample ID: 400-113935-5

No Detections.

Client Sample ID: SB1 12-13FT — Lab Sample ID: 400-113935-6

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	49		11		mg/Kg	1	☼	8015B	Total/NA
Oil Range Organics (C28-C35)	11		11		mg/Kg	1	☼	8015B	Total/NA
Chloride	53		22		mg/Kg	1	☼	300.0	Soluble

Client Sample ID: SB1 15-16.5 — Lab Sample ID: 400-113935-7

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	67		11		mg/Kg	1	☼	8015B	Total/NA
Oil Range Organics (C28-C35)	14		11		mg/Kg	1	☼	8015B	Total/NA

This Detection Summary does not include radiochemical test results.

Sample Summary

Client: MWH Americas Inc
Project/Site: Standard Oil Com #1

TestAmerica Job ID: 400-113935-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-113935-1	MW12 10-12FT.	Solid	11/12/15 16:10	11/17/15 09:15
400-113935-2	MW13 15-17.25FT.	Solid	11/12/15 14:15	11/17/15 09:15
400-113935-3	MW14 30-32.25	Solid	11/12/15 11:20	11/17/15 09:15
400-113935-4	MW15 15-17FT	Solid	11/13/15 10:45	11/17/15 09:15
400-113935-5	MW16 15-17FT	Solid	11/13/15 15:55	11/17/15 09:15
400-113935-6	SB1 12-13FT	Solid	11/14/15 14:50	11/17/15 09:15
400-113935-7	SB1 15-16.5	Solid	11/14/15 15:00	11/17/15 09:15

Client: MWH Americas Inc
Project/Site: Standard Oil Com #1

TestAmerica Job ID: 400-113935-1

Client Sample ID: MW12 10-12FT.
Date Collected: 11/12/15 16:10
Date Received: 11/17/15 09:15

Lab Sample ID: 400-113935-1
Matrix: Solid
Percent Solids: 96.7

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) C6--C10	<0.10		0.10		mg/Kg	☼	11/24/15 10:30	11/24/15 14:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid)	*105*		*65 - 125*	*11/24/15 10:30*	*11/24/15 14:00*	*1*

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0010		0.0010		mg/Kg	☼	11/24/15 10:30	11/24/15 14:00	1
Ethylbenzene	<0.0010		0.0010		mg/Kg	☼	11/24/15 10:30	11/24/15 14:00	1
Toluene	<0.0051		0.0051		mg/Kg	☼	11/24/15 10:30	11/24/15 14:00	1
Xylenes, Total	<0.0051		0.0051		mg/Kg	☼	11/24/15 10:30	11/24/15 14:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*99*		*40 - 150*	*11/24/15 10:30*	*11/24/15 14:00*	*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	☼	11/18/15 08:28	11/19/15 21:19	1
Oil Range Organics (C28-C35)	<10		10		mg/Kg	☼	11/18/15 08:28	11/19/15 21:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*94*		*27 - 151*	*11/18/15 08:28*	*11/19/15 21:19*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**58**		21		mg/Kg	☼		11/23/15 04:28	1

Client Sample ID: MW13 15-17.25FT.
Date Collected: 11/12/15 14:15
Date Received: 11/17/15 09:15

Lab Sample ID: 400-113935-2
Matrix: Solid
Percent Solids: 91.5

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) C6--C10	**160**		4.5		mg/Kg	☼	11/23/15 14:00	11/23/15 17:07	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid)	*95*		*65 - 125*	*11/23/15 14:00*	*11/23/15 17:07*	*50*

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.045		0.045		mg/Kg	☼	11/23/15 14:00	11/24/15 14:21	50
Ethylbenzene	**0.36**		0.045		mg/Kg	☼	11/23/15 14:00	11/24/15 14:21	50
Toluene	<0.22		0.22		mg/Kg	☼	11/23/15 14:00	11/24/15 14:21	50
Xylenes, Total	**0.89**		0.22		mg/Kg	☼	11/23/15 14:00	11/24/15 14:21	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*91*		*40 - 150*	*11/23/15 14:00*	*11/24/15 14:21*	*50*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**130**		11		mg/Kg	☼	11/18/15 08:28	11/19/15 21:50	1
Oil Range Organics (C28-C35)	**18**		11		mg/Kg	☼	11/18/15 08:28	11/19/15 21:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*86*		*27 - 151*	*11/18/15 08:28*	*11/19/15 21:50*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**37**		22		mg/Kg	☼		11/23/15 04:51	1

Client Sample Results

Client: MWH Americas Inc
Project/Site: Standard Oil Com #1

TestAmerica Job ID: 400-113935-1

Client Sample ID: MW14 30-32.25
Date Collected: 11/12/15 11:20
Date Received: 11/17/15 09:15

Lab Sample ID: 400-113935-3
Matrix: Solid
Percent Solids: 89.7

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	☼	11/24/15 10:30	11/24/15 20:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid)	*104*		*65 - 125*	*11/24/15 10:30*	*11/24/15 20:06*	*1*

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0012		0.0012		mg/Kg	☼	11/24/15 10:30	11/24/15 20:06	1
Ethylbenzene	<0.0012		0.0012		mg/Kg	☼	11/24/15 10:30	11/24/15 20:06	1
Toluene	<0.0059		0.0059		mg/Kg	☼	11/24/15 10:30	11/24/15 20:06	1
Xylenes, Total	<0.0059		0.0059		mg/Kg	☼	11/24/15 10:30	11/24/15 20:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*99*		*40 - 150*	*11/24/15 10:30*	*11/24/15 20:06*	*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	☼	11/18/15 08:28	11/19/15 22:01	1
Oil Range Organics (C28-C35)	<11		11		mg/Kg	☼	11/18/15 08:28	11/19/15 22:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*94*		*27 - 151*	*11/18/15 08:28*	*11/19/15 22:01*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<22		22		mg/Kg	☼		11/23/15 06:00	1

Client: MWH Americas Inc
Project/Site: Standard Oil Com #1

TestAmerica Job ID: 400-113935-1

Client Sample ID: MW15 15-17FT
Date Collected: 11/13/15 10:45
Date Received: 11/17/15 09:15

Lab Sample ID: 400-113935-4
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	<0.093		0.093		mg/Kg	☼	11/24/15 10:30	11/24/15 18:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid)	*101*		*65 - 125*	*11/24/15 10:30*	*11/24/15 18:16*	*1*

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.00093		0.00093		mg/Kg	☼	11/24/15 10:30	11/24/15 18:16	1
Ethylbenzene	<0.00093		0.00093		mg/Kg	☼	11/24/15 10:30	11/24/15 18:16	1
Toluene	<0.0047		0.0047		mg/Kg	☼	11/24/15 10:30	11/24/15 18:16	1
Xylenes, Total	<0.0047		0.0047		mg/Kg	☼	11/24/15 10:30	11/24/15 18:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*100*		*40 - 150*	*11/24/15 10:30*	*11/24/15 18:16*	*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	☼	11/18/15 08:28	11/19/15 22:11	1
Oil Range Organics (C28-C35)	<10		10		mg/Kg	☼	11/18/15 08:28	11/19/15 22:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*96*		*27 - 151*	*11/18/15 08:28*	*11/19/15 22:11*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**160**		21		mg/Kg	☼		11/23/15 06:22	1

Client: MWH Americas Inc
Project/Site: Standard Oil Com #1

TestAmerica Job ID: 400-113935-1

Client Sample ID: MW16 15-17FT
Date Collected: 11/13/15 15:55
Date Received: 11/17/15 09:15

Lab Sample ID: 400-113935-5
Matrix: Solid
Percent Solids: 83.9

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	☼	11/24/15 10:30	11/24/15 18:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid)	*103*		*65 - 125*	*11/24/15 10:30*	*11/24/15 18:44*	*1*

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0011		0.0011		mg/Kg	☼	11/24/15 10:30	11/24/15 18:44	1
Ethylbenzene	<0.0011		0.0011		mg/Kg	☼	11/24/15 10:30	11/24/15 18:44	1
Toluene	<0.0055		0.0055		mg/Kg	☼	11/24/15 10:30	11/24/15 18:44	1
Xylenes, Total	<0.0055		0.0055		mg/Kg	☼	11/24/15 10:30	11/24/15 18:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*99*		*40 - 150*	*11/24/15 10:30*	*11/24/15 18:44*	*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	☼	11/18/15 08:28	11/19/15 22:21	1
Oil Range Organics (C28-C35)	<12		12		mg/Kg	☼	11/18/15 08:28	11/19/15 22:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*92*		*27 - 151*	*11/18/15 08:28*	*11/19/15 22:21*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<25		25		mg/Kg	☼		11/23/15 06:45	1

Client: MWH Americas Inc
Project/Site: Standard Oil Com #1

TestAmerica Job ID: 400-113935-1

Client Sample ID: SB1 12-13FT — **Lab Sample ID: 400-113935-6**
Date Collected: 11/14/15 14:50 — **Matrix: Solid**
Date Received: 11/17/15 09:15 — **Percent Solids: 91.1**

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) C6--C10	<0.10		0.10		mg/Kg	☼	11/24/15 10:30	11/24/15 19:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid)	*104*		*65 - 125*	*11/24/15 10:30*	*11/24/15 19:11*	*1*

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0010		0.0010		mg/Kg	☼	11/24/15 10:30	11/24/15 19:11	1
Ethylbenzene	<0.0010		0.0010		mg/Kg	☼	11/24/15 10:30	11/24/15 19:11	1
Toluene	<0.0051		0.0051		mg/Kg	☼	11/24/15 10:30	11/24/15 19:11	1
Xylenes, Total	<0.0051		0.0051		mg/Kg	☼	11/24/15 10:30	11/24/15 19:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*104*		*40 - 150*	*11/24/15 10:30*	*11/24/15 19:11*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**49**		11		mg/Kg	☼	11/18/15 08:28	11/19/15 22:43	1
Oil Range Organics (C28-C35)	**11**		11		mg/Kg	☼	11/18/15 08:28	11/19/15 22:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*62*		*27 - 151*	*11/18/15 08:28*	*11/19/15 22:43*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**53**		22		mg/Kg	☼		11/23/15 07:08	1

Client: MWH Americas Inc
Project/Site: Standard Oil Com #1

TestAmerica Job ID: 400-113935-1

Client Sample ID: SB1 15-16.5
Date Collected: 11/14/15 15:00
Date Received: 11/17/15 09:15

Lab Sample ID: 400-113935-7
Matrix: Solid
Percent Solids: 90.2

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) C6--C10	<0.10		0.10		mg/Kg	☼	11/24/15 10:30	11/24/15 19:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid)	*103*		*65 - 125*	*11/24/15 10:30*	*11/24/15 19:38*	*1*

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0010		0.0010		mg/Kg	☼	11/24/15 10:30	11/24/15 19:38	1
Ethylbenzene	<0.0010		0.0010		mg/Kg	☼	11/24/15 10:30	11/24/15 19:38	1
Toluene	<0.0051		0.0051		mg/Kg	☼	11/24/15 10:30	11/24/15 19:38	1
Xylenes, Total	<0.0051		0.0051		mg/Kg	☼	11/24/15 10:30	11/24/15 19:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*100*		*40 - 150*	*11/24/15 10:30*	*11/24/15 19:38*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**67**		11		mg/Kg	☼	11/18/15 08:28	11/19/15 22:53	1
Oil Range Organics (C28-C35)	**14**		11		mg/Kg	☼	11/18/15 08:28	11/19/15 22:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*112*		*27 - 151*	*11/18/15 08:28*	*11/19/15 22:53*	*1*

Method: 300.0 - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<22		22		mg/Kg	☼		11/25/15 15:01	1

GC VOA

Prep Batch: 283911

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-113935-2	MW13 15-17.25FT.	Total/NA	Solid	5035	
400-114053-A-7-H MS	Matrix Spike	Total/NA	Solid	5035	
400-114053-A-7-I MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	
LCS 400-283911/1-A	Lab Control Sample	Total/NA	Solid	5035	
MB 400-283911/2-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 284027

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-113935-2	MW13 15-17.25FT.	Total/NA	Solid	8015B	283911
400-114053-A-7-H MS	Matrix Spike	Total/NA	Solid	8015B	283911
400-114053-A-7-I MSD	Matrix Spike Duplicate	Total/NA	Solid	8015B	283911
LCS 400-283911/1-A	Lab Control Sample	Total/NA	Solid	8015B	283911
MB 400-283911/2-A	Method Blank	Total/NA	Solid	8015B	283911

Analysis Batch: 284583

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-113831-A-18-B MS	Matrix Spike	Total/NA	Solid	8021B	284639
400-113831-A-18-D MSD	Matrix Spike Duplicate	Total/NA	Solid	8021B	284639
400-113935-2	MW13 15-17.25FT.	Total/NA	Solid	8021B	284639
LCS 400-284639/3-A	Lab Control Sample	Total/NA	Solid	8021B	284639
MB 400-284639/1-A	Method Blank	Total/NA	Solid	8021B	284639

Prep Batch: 284639

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-113831-A-18-B MS	Matrix Spike	Total/NA	Solid	5035	
400-113831-A-18-D MSD	Matrix Spike Duplicate	Total/NA	Solid	5035	
400-113935-2	MW13 15-17.25FT.	Total/NA	Solid	5035	
LCS 400-284639/3-A	Lab Control Sample	Total/NA	Solid	5035	
MB 400-284639/1-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 284765

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-113935-1	MW12 10-12FT.	Total/NA	Solid	8021B	284777
400-113935-1 MS	MW12 10-12FT.	Total/NA	Solid	8021B	284777
400-113935-1 MSD	MW12 10-12FT.	Total/NA	Solid	8021B	284777
400-113935-3	MW14 30-32.25	Total/NA	Solid	8021B	284777
400-113935-4	MW15 15-17FT	Total/NA	Solid	8021B	284777
400-113935-5	MW16 15-17FT	Total/NA	Solid	8021B	284777
400-113935-6	SB1 12-13FT	Total/NA	Solid	8021B	284777
400-113935-7	SB1 15-16.5	Total/NA	Solid	8021B	284777
LCS 400-284777/2-A	Lab Control Sample	Total/NA	Solid	8021B	284777
MB 400-284777/1-A	Method Blank	Total/NA	Solid	8021B	284777

Analysis Batch: 284766

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-113935-1	MW12 10-12FT.	Total/NA	Solid	8015B	284777
400-113935-3	MW14 30-32.25	Total/NA	Solid	8015B	284777
400-113935-4	MW15 15-17FT	Total/NA	Solid	8015B	284777
400-113935-5	MW16 15-17FT	Total/NA	Solid	8015B	284777
400-113935-6	SB1 12-13FT	Total/NA	Solid	8015B	284777
400-113935-7	SB1 15-16.5	Total/NA	Solid	8015B	284777

GC VOA (Continued)

Analysis Batch: 284766 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 400-284777/3-A	Lab Control Sample	Total/NA	Solid	8015B	284777
MB 400-284777/1-A	Method Blank	Total/NA	Solid	8015B	284777

Prep Batch: 284777

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-113935-1	MW12 10-12FT.	Total/NA	Solid	5035	
400-113935-1 MS	MW12 10-12FT.	Total/NA	Solid	5035	
400-113935-1 MSD	MW12 10-12FT.	Total/NA	Solid	5035	
400-113935-3	MW14 30-32.25	Total/NA	Solid	5035	
400-113935-4	MW15 15-17FT	Total/NA	Solid	5035	
400-113935-5	MW16 15-17FT	Total/NA	Solid	5035	
400-113935-6	SB1 12-13FT	Total/NA	Solid	5035	
400-113935-7	SB1 15-16.5	Total/NA	Solid	5035	
LCS 400-284777/2-A	Lab Control Sample	Total/NA	Solid	5035	
LCS 400-284777/3-A	Lab Control Sample	Total/NA	Solid	5035	
MB 400-284777/1-A	Method Blank	Total/NA	Solid	5035	

GC Semi VOA

Prep Batch: 283867

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-113935-1	MW12 10-12FT.	Total/NA	Solid	3546	
400-113935-1 MS	MW12 10-12FT.	Total/NA	Solid	3546	
400-113935-1 MSD	MW12 10-12FT.	Total/NA	Solid	3546	
400-113935-2	MW13 15-17.25FT.	Total/NA	Solid	3546	
400-113935-3	MW14 30-32.25	Total/NA	Solid	3546	
400-113935-4	MW15 15-17FT	Total/NA	Solid	3546	
400-113935-5	MW16 15-17FT	Total/NA	Solid	3546	
400-113935-6	SB1 12-13FT	Total/NA	Solid	3546	
400-113935-7	SB1 15-16.5	Total/NA	Solid	3546	
LCS 400-283867/23-A	Lab Control Sample	Total/NA	Solid	3546	
MB 400-283867/24-A	Method Blank	Total/NA	Solid	3546	

Analysis Batch: 284208

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-113935-1	MW12 10-12FT.	Total/NA	Solid	8015B	283867
400-113935-1 MS	MW12 10-12FT.	Total/NA	Solid	8015B	283867
400-113935-1 MSD	MW12 10-12FT.	Total/NA	Solid	8015B	283867
400-113935-2	MW13 15-17.25FT.	Total/NA	Solid	8015B	283867
400-113935-3	MW14 30-32.25	Total/NA	Solid	8015B	283867
400-113935-4	MW15 15-17FT	Total/NA	Solid	8015B	283867
400-113935-5	MW16 15-17FT	Total/NA	Solid	8015B	283867
400-113935-6	SB1 12-13FT	Total/NA	Solid	8015B	283867
400-113935-7	SB1 15-16.5	Total/NA	Solid	8015B	283867
LCS 400-283867/23-A	Lab Control Sample	Total/NA	Solid	8015B	283867
MB 400-283867/24-A	Method Blank	Total/NA	Solid	8015B	283867

HPLC/IC

Leach Batch: 284081

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-113935-1	MW12 10-12FT.	Soluble	Solid	DI Leach	
400-113935-2	MW13 15-17.25FT.	Soluble	Solid	DI Leach	
400-113935-3	MW14 30-32.25	Soluble	Solid	DI Leach	
400-113935-4	MW15 15-17FT	Soluble	Solid	DI Leach	
400-113935-5	MW16 15-17FT	Soluble	Solid	DI Leach	
400-113935-6	SB1 12-13FT	Soluble	Solid	DI Leach	
LCS 400-284081/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 400-284081/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
MB 400-284081/1-A	Method Blank	Soluble	Solid	DI Leach	

Analysis Batch: 284481

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-113935-1	MW12 10-12FT.	Soluble	Solid	300.0	284081
400-113935-2	MW13 15-17.25FT.	Soluble	Solid	300.0	284081
400-113935-3	MW14 30-32.25	Soluble	Solid	300.0	284081
400-113935-4	MW15 15-17FT	Soluble	Solid	300.0	284081
400-113935-5	MW16 15-17FT	Soluble	Solid	300.0	284081
400-113935-6	SB1 12-13FT	Soluble	Solid	300.0	284081
LCS 400-284081/2-A	Lab Control Sample	Soluble	Solid	300.0	284081
LCSD 400-284081/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	284081
MB 400-284081/1-A	Method Blank	Soluble	Solid	300.0	284081

Leach Batch: 284831

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-113935-7	SB1 15-16.5	Soluble	Solid	DI Leach	
400-113935-7 MS	SB1 15-16.5	Soluble	Solid	DI Leach	
400-113935-7 MSD	SB1 15-16.5	Soluble	Solid	DI Leach	
LCS 400-284831/2-A	Lab Control Sample	Soluble	Solid	DI Leach	
LCSD 400-284831/3-A	Lab Control Sample Dup	Soluble	Solid	DI Leach	
MB 400-284831/1-A	Method Blank	Soluble	Solid	DI Leach	

Analysis Batch: 285031

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-113935-7	SB1 15-16.5	Soluble	Solid	300.0	284831
400-113935-7 MS	SB1 15-16.5	Soluble	Solid	300.0	284831
400-113935-7 MSD	SB1 15-16.5	Soluble	Solid	300.0	284831
LCS 400-284831/2-A	Lab Control Sample	Soluble	Solid	300.0	284831
LCSD 400-284831/3-A	Lab Control Sample Dup	Soluble	Solid	300.0	284831
MB 400-284831/1-A	Method Blank	Soluble	Solid	300.0	284831

General Chemistry

Analysis Batch: 284002

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-113853-A-4 DU	Duplicate	Total/NA	Solid	Moisture	
400-113935-1	MW12 10-12FT.	Total/NA	Solid	Moisture	
400-113935-2	MW13 15-17.25FT.	Total/NA	Solid	Moisture	
400-113935-3	MW14 30-32.25	Total/NA	Solid	Moisture	
400-113935-4	MW15 15-17FT	Total/NA	Solid	Moisture	
400-113935-5	MW16 15-17FT	Total/NA	Solid	Moisture	

General Chemistry (Continued)

Analysis Batch: 284002 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-113935-6	SB1 12-13FT	Total/NA	Solid	Moisture	
400-113935-7	SB1 15-16.5	Total/NA	Solid	Moisture	

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

Lab Sample ID: MB 400-283911/2-A
Matrix: Solid
Analysis Batch: 284027

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 283911

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) C6--C10	<5.0		5.0		mg/Kg		11/17/15 08:20	11/18/15 17:57	50

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (fid)	*104*		*65 - 125*	*11/17/15 08:20*	*11/18/15 17:57*	*50*

Lab Sample ID: LCS 400-283911/1-A
Matrix: Solid
Analysis Batch: 284027

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 283911

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO) C6--C10			50.0	60.5		mg/Kg		121	62 - 141		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
a,a,a-Trifluorotoluene (fid)	*102*		*65 - 125*

Lab Sample ID: 400-114053-A-7-H MS
Matrix: Solid
Analysis Batch: 284027

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 283911

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO) C6--C10	93		45.5	146		mg/Kg	☼	115	10 - 150		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
a,a,a-Trifluorotoluene (fid)	*86*		*65 - 125*

Lab Sample ID: 400-114053-A-7-I MSD
Matrix: Solid
Analysis Batch: 284027

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 283911

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) C6--C10	93		45.5	126		mg/Kg	☼	71	10 - 150	15	32

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
a,a,a-Trifluorotoluene (fid)	*88*		*65 - 125*

Lab Sample ID: MB 400-284777/1-A
Matrix: Solid
Analysis Batch: 284766

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 284777

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (GRO) C6--C10	<0.10		0.10		mg/Kg		11/24/15 10:30	11/24/15 12:23	1

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

Lab Sample ID: MB 400-284777/1-A
Matrix: Solid
Analysis Batch: 284766

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 284777

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (fid)	106		65 - 125	11/24/15 10:30	11/24/15 12:23	1

Lab Sample ID: LCS 400-284777/3-A
Matrix: Solid
Analysis Batch: 284766

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 284777

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO) C6--C10	1.00	0.966		mg/Kg		97	62 - 141

Surrogate	LCS %Recovery	LCS Qualifier	Limits
a,a,a-Trifluorotoluene (fid)	103		65 - 125

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 400-284639/1-A
Matrix: Solid
Analysis Batch: 284583

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 284639

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.050		0.050	mg/Kg		11/23/15 14:00	11/23/15 16:31	50
Ethylbenzene	<0.050		0.050	mg/Kg		11/23/15 14:00	11/23/15 16:31	50
Toluene	<0.25		0.25	mg/Kg		11/23/15 14:00	11/23/15 16:31	50
Xylenes, Total	<0.25		0.25	mg/Kg		11/23/15 14:00	11/23/15 16:31	50

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
a,a,a-Trifluorotoluene (pid)	96		40 - 150	11/23/15 14:00	11/23/15 16:31	50

Lab Sample ID: LCS 400-284639/3-A
Matrix: Solid
Analysis Batch: 284583

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 284639

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	2.50	2.51		mg/Kg		100	74 - 127
Ethylbenzene	2.50	2.59		mg/Kg		104	79 - 131
Toluene	2.50	2.54		mg/Kg		102	76 - 127
Xylenes, Total	7.50	7.76		mg/Kg		103	80 - 129

Surrogate	LCS %Recovery	LCS Qualifier	Limits
a,a,a-Trifluorotoluene (pid)	100		40 - 150

Lab Sample ID: 400-113831-A-18-B MS
Matrix: Solid
Analysis Batch: 284583

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 284639

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	12		51.4	61.5		mg/Kg	☼	96	10 - 150

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

Lab Sample ID: 400-113831-A-18-B MS
Matrix: Solid
Analysis Batch: 284583

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 284639

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylbenzene	22		51.4	76.1		mg/Kg	☼	105	10 - 150
Toluene	<5.1		51.4	52.9		mg/Kg	☼	96	10 - 150
Xylenes, Total	47		154	196		mg/Kg	☼	97	50 - 150

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
a,a,a-Trifluorotoluene (pid)	*95*		*40 - 150*

Lab Sample ID: 400-113831-A-18-D MSD
Matrix: Solid
Analysis Batch: 284583

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 284639

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	12		51.4	66.0		mg/Kg	☼	105	10 - 150	7	34
Ethylbenzene	22		51.4	81.3		mg/Kg	☼	116	10 - 150	7	66
Toluene	<5.1		51.4	51.8		mg/Kg	☼	94	10 - 150	2	44
Xylenes, Total	47		154	214		mg/Kg	☼	108	50 - 150	9	46

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
a,a,a-Trifluorotoluene (pid)	*93*		*40 - 150*

Lab Sample ID: MB 400-284777/1-A
Matrix: Solid
Analysis Batch: 284765

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 284777

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.0010		0.0010		mg/Kg		11/24/15 10:30	11/24/15 12:23	1
Ethylbenzene	<0.0010		0.0010		mg/Kg		11/24/15 10:30	11/24/15 12:23	1
Toluene	<0.0050		0.0050		mg/Kg		11/24/15 10:30	11/24/15 12:23	1
Xylenes, Total	<0.0050		0.0050		mg/Kg		11/24/15 10:30	11/24/15 12:23	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*101*		*40 - 150*	*11/24/15 10:30*	*11/24/15 12:23*	*1*

Lab Sample ID: LCS 400-284777/2-A
Matrix: Solid
Analysis Batch: 284765

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 284777

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene			0.0500	0.0456		mg/Kg		91	74 - 127
Ethylbenzene			0.0500	0.0436		mg/Kg		87	79 - 131
Toluene			0.0500	0.0450		mg/Kg		90	76 - 127
Xylenes, Total			0.150	0.129		mg/Kg		86	80 - 129

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
a,a,a-Trifluorotoluene (pid)	*100*		*40 - 150*

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

Lab Sample ID: 400-113935-1 MS
Matrix: Solid
Analysis Batch: 284765

Client Sample ID: MW12 10-12FT.
Prep Type: Total/NA
Prep Batch: 284777

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.0010		0.0512	0.0465		mg/Kg	☼	91	10 - 150
Ethylbenzene	<0.0010		0.0512	0.0472		mg/Kg	☼	92	10 - 150
Toluene	<0.0051		0.0512	0.0473		mg/Kg	☼	92	10 - 150
Xylenes, Total	<0.0051		0.154	0.141		mg/Kg	☼	92	50 - 150

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
a,a,a-Trifluorotoluene (pid)	*99*		*40 - 150*

Lab Sample ID: 400-113935-1 MSD
Matrix: Solid
Analysis Batch: 284765

Client Sample ID: MW12 10-12FT.
Prep Type: Total/NA
Prep Batch: 284777

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.0010		0.0505	0.0428		mg/Kg	☼	85	10 - 150	8	34
Ethylbenzene	<0.0010		0.0505	0.0419		mg/Kg	☼	83	10 - 150	12	66
Toluene	<0.0051		0.0505	0.0428		mg/Kg	☼	85	10 - 150	10	44
Xylenes, Total	<0.0051		0.151	0.126		mg/Kg	☼	83	50 - 150	12	46

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
a,a,a-Trifluorotoluene (pid)	*101*		*40 - 150*

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

Lab Sample ID: MB 400-283867/24-A
Matrix: Solid
Analysis Batch: 284208

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 283867

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	<10		10	mg/Kg		11/18/15 08:28	11/19/15 20:58	1
Oil Range Organics (C28-C35)	<10		10	mg/Kg		11/18/15 08:28	11/19/15 20:58	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*106*		*27 - 151*	*11/18/15 08:28*	*11/19/15 20:58*	*1*

Lab Sample ID: LCS 400-283867/23-A
Matrix: Solid
Analysis Batch: 284208

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 283867

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics [C10-C28]			335	297		mg/Kg		89	63 - 153

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*116*		*27 - 151*

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

Lab Sample ID: 400-113935-1 MS
Matrix: Solid
Analysis Batch: 284208

Client Sample ID: MW12 10-12FT.
Prep Type: Total/NA
Prep Batch: 283867

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics [C10-C28]	<10		343	286		mg/Kg	☼	82	62 - 204

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
o-Terphenyl	*98*		*27 - 151*

Lab Sample ID: 400-113935-1 MSD
Matrix: Solid
Analysis Batch: 284208

Client Sample ID: MW12 10-12FT.
Prep Type: Total/NA
Prep Batch: 283867

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]	<10		339	251		mg/Kg	☼	72	62 - 204	13	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
o-Terphenyl	*94*		*27 - 151*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 400-284081/1-A
Matrix: Solid
Analysis Batch: 284481

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			11/22/15 19:44	1

Lab Sample ID: LCS 400-284081/2-A
Matrix: Solid
Analysis Batch: 284481

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride			100	102		mg/Kg		102	80 - 120

Lab Sample ID: LCSD 400-284081/3-A
Matrix: Solid
Analysis Batch: 284481

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	103		mg/Kg		103	80 - 120	1	15

Lab Sample ID: MB 400-284831/1-A
Matrix: Solid
Analysis Batch: 285031

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			11/25/15 13:52	1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 400-284831/2-A
Matrix: Solid
Analysis Batch: 285031

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			100	96.4		mg/Kg		96	80 - 120		

Lab Sample ID: LCSD 400-284831/3-A
Matrix: Solid
Analysis Batch: 285031

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	95.0		mg/Kg		95	80 - 120	2	15

Lab Sample ID: 400-113935-7 MS
Matrix: Solid
Analysis Batch: 285031

Client Sample ID: SB1 15-16.5
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	<22		110	112		mg/Kg	☼	94	80 - 120		

Lab Sample ID: 400-113935-7 MSD
Matrix: Solid
Analysis Batch: 285031

Client Sample ID: SB1 15-16.5
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	<22		113	110		mg/Kg	☼	89	80 - 120	2	15

Lab Chronicle

Client: MWH Americas Inc
Project/Site: Standard Oil Com #1

TestAmerica Job ID: 400-113935-1

Client Sample ID: MW12 10-12FT.
Date Collected: 11/12/15 16:10
Date Received: 11/17/15 09:15

Lab Sample ID: 400-113935-1
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			284002	11/18/15 16:29	LEC	TAL PEN
	Instrument ID: NOEQUIP									

Client Sample ID: MW12 10-12FT.
Date Collected: 11/12/15 16:10
Date Received: 11/17/15 09:15

Lab Sample ID: 400-113935-1
Matrix: Solid
Percent Solids: 96.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.04 g	5.0 g	284777	11/24/15 10:30	GRK	TAL PEN
Total/NA	Analysis	8015B		1	5.04 g	5.0 g	284766	11/24/15 14:00	GRK	TAL PEN
	Instrument ID: CH_RITA									
Total/NA	Prep	5035			5.04 g	5.0 g	284777	11/24/15 10:30	GRK	TAL PEN
Total/NA	Analysis	8021B		1	5.04 g	5.0 g	284765	11/24/15 14:00	GRK	TAL PEN
	Instrument ID: CH_RITA									
Total/NA	Prep	3546			15.42 g	2.0 mL	283867	11/18/15 08:28	RDT	TAL PEN
Total/NA	Analysis	8015B		1	15.42 g	2.0 mL	284208	11/19/15 21:19	C1M	TAL PEN
	Instrument ID: Eva									
Soluble	Leach	DI Leach			2.44 g	50 mL	284081	11/19/15 08:35	TAJ	TAL PEN
Soluble	Analysis	300.0		1	1 mL		284481	11/23/15 04:28	TAJ	TAL PEN
	Instrument ID: IC2									

Client Sample ID: MW13 15-17.25FT.
Date Collected: 11/12/15 14:15
Date Received: 11/17/15 09:15

Lab Sample ID: 400-113935-2
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			284002	11/18/15 16:29	LEC	TAL PEN
	Instrument ID: NOEQUIP									

Client Sample ID: MW13 15-17.25FT.
Date Collected: 11/12/15 14:15
Date Received: 11/17/15 09:15

Lab Sample ID: 400-113935-2
Matrix: Solid
Percent Solids: 91.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.13 g	5.0 g	283911	11/23/15 14:00	GRK	TAL PEN
Total/NA	Analysis	8015B		50	6.13 g	5.0 g	284027	11/23/15 17:07	GRK	TAL PEN
	Instrument ID: CH_RITA									
Total/NA	Prep	5035			6.13 g	5.0 g	284639	11/23/15 14:00	GRK	TAL PEN
Total/NA	Analysis	8021B		50	6.13 g	5.0 g	284583	11/24/15 14:21	GRK	TAL PEN
	Instrument ID: CH_JOAN									
Total/NA	Prep	3546			15.05 g	2.0 mL	283867	11/18/15 08:28	RDT	TAL PEN
Total/NA	Analysis	8015B		1	15.05 g	2.0 mL	284208	11/19/15 21:50	C1M	TAL PEN
	Instrument ID: Eva									

Lab Chronicle

Client: MWH Americas Inc
Project/Site: Standard Oil Com #1

TestAmerica Job ID: 400-113935-1

Client Sample ID: MW13 15-17.25FT.

Lab Sample ID: 400-113935-2
Date Collected: 11/12/15 14:15
Matrix: Solid
Date Received: 11/17/15 09:15
Percent Solids: 91.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			2.52 g	50 mL	284081	11/19/15 08:35	TAJ	TAL PEN
Soluble	Analysis	300.0		1	1 mL		284481	11/23/15 04:51	TAJ	TAL PEN
	Instrument ID: IC2									

Client Sample ID: MW14 30-32.25

Lab Sample ID: 400-113935-3
Date Collected: 11/12/15 11:20
Matrix: Solid
Date Received: 11/17/15 09:15

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			284002	11/18/15 16:29	LEC	TAL PEN
	Instrument ID: NOEQUIP									

Client Sample ID: MW14 30-32.25

Lab Sample ID: 400-113935-3
Date Collected: 11/12/15 11:20
Matrix: Solid
Date Received: 11/17/15 09:15
Percent Solids: 89.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.72 g	5.0 g	284777	11/24/15 10:30	GRK	TAL PEN
Total/NA	Analysis	8015B		1	4.72 g	5.0 g	284766	11/24/15 20:06	GRK	TAL PEN
	Instrument ID: CH_RITA									
Total/NA	Prep	5035			4.72 g	5.0 g	284777	11/24/15 10:30	GRK	TAL PEN
Total/NA	Analysis	8021B		1	4.72 g	5.0 g	284765	11/24/15 20:06	GRK	TAL PEN
	Instrument ID: CH_RITA									
Total/NA	Prep	3546			15.24 g	2.0 mL	283867	11/18/15 08:28	RDT	TAL PEN
Total/NA	Analysis	8015B		1	15.24 g	2.0 mL	284208	11/19/15 22:01	C1M	TAL PEN
	Instrument ID: Eva									
Soluble	Leach	DI Leach			2.51 g	50 mL	284081	11/19/15 08:35	TAJ	TAL PEN
Soluble	Analysis	300.0		1	1 mL		284481	11/23/15 06:00	TAJ	TAL PEN
	Instrument ID: IC2									

Client Sample ID: MW15 15-17FT

Lab Sample ID: 400-113935-4
Date Collected: 11/13/15 10:45
Matrix: Solid
Date Received: 11/17/15 09:15

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			284002	11/18/15 16:29	LEC	TAL PEN
	Instrument ID: NOEQUIP									

Lab Chronicle

Client: MWH Americas Inc
Project/Site: Standard Oil Com #1

TestAmerica Job ID: 400-113935-1

Client Sample ID: MW15 15-17FT

Lab Sample ID: 400-113935-4

Date Collected: 11/13/15 10:45
Date Received: 11/17/15 09:15

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			5.54 g	5.0 g	284777	11/24/15 10:30	GRK	TAL PEN
Total/NA	Analysis	8015B		1	5.54 g	5.0 g	284766	11/24/15 18:16	GRK	TAL PEN
	Instrument ID: CH_RITA									
Total/NA	Prep	5035			5.54 g	5.0 g	284777	11/24/15 10:30	GRK	TAL PEN
Total/NA	Analysis	8021B		1	5.54 g	5.0 g	284765	11/24/15 18:16	GRK	TAL PEN
	Instrument ID: CH_RITA									
Total/NA	Prep	3546			15.16 g	2.0 mL	283867	11/18/15 08:28	RDT	TAL PEN
Total/NA	Analysis	8015B		1	15.16 g	2.0 mL	284208	11/19/15 22:11	C1M	TAL PEN
	Instrument ID: Eva									
Soluble	Leach	DI Leach			2.50 g	50 mL	284081	11/19/15 08:35	TAJ	TAL PEN
Soluble	Analysis	300.0		1	1 mL		284481	11/23/15 06:22	TAJ	TAL PEN
	Instrument ID: IC2									

Client Sample ID: MW16 15-17FT

Lab Sample ID: 400-113935-5

Date Collected: 11/13/15 15:55
Date Received: 11/17/15 09:15

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			284002	11/18/15 16:29	LEC	TAL PEN
	Instrument ID: NOEQUIP									

Client Sample ID: MW16 15-17FT

Lab Sample ID: 400-113935-5

Date Collected: 11/13/15 15:55
Date Received: 11/17/15 09:15

Matrix: Solid
Percent Solids: 83.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.39 g	5.0 g	284777	11/24/15 10:30	GRK	TAL PEN
Total/NA	Analysis	8015B		1	5.39 g	5.0 g	284766	11/24/15 18:44	GRK	TAL PEN
	Instrument ID: CH_RITA									
Total/NA	Prep	5035			5.39 g	5.0 g	284777	11/24/15 10:30	GRK	TAL PEN
Total/NA	Analysis	8021B		1	5.39 g	5.0 g	284765	11/24/15 18:44	GRK	TAL PEN
	Instrument ID: CH_RITA									
Total/NA	Prep	3546			15.48 g	2.0 mL	283867	11/18/15 08:28	RDT	TAL PEN
Total/NA	Analysis	8015B		1	15.48 g	2.0 mL	284208	11/19/15 22:21	C1M	TAL PEN
	Instrument ID: Eva									
Soluble	Leach	DI Leach			2.41 g	50 mL	284081	11/19/15 08:35	TAJ	TAL PEN
Soluble	Analysis	300.0		1	1 mL		284481	11/23/15 06:45	TAJ	TAL PEN
	Instrument ID: IC2									

Client Sample ID: SB1 12-13FT
Date Collected: 11/14/15 14:50
Date Received: 11/17/15 09:15

Lab Sample ID: 400-113935-6
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			284002	11/18/15 16:29	LEC	TAL PEN
	Instrument ID: NOEQUIP									

Client Sample ID: SB1 12-13FT
Date Collected: 11/14/15 14:50
Date Received: 11/17/15 09:15

Lab Sample ID: 400-113935-6
Matrix: Solid
Percent Solids: 91.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.34 g	5.0 g	284777	11/24/15 10:30	GRK	TAL PEN
Total/NA	Analysis	8015B		1	5.34 g	5.0 g	284766	11/24/15 19:11	GRK	TAL PEN
	Instrument ID: CH_RITA									
Total/NA	Prep	5035			5.34 g	5.0 g	284777	11/24/15 10:30	GRK	TAL PEN
Total/NA	Analysis	8021B		1	5.34 g	5.0 g	284765	11/24/15 19:11	GRK	TAL PEN
	Instrument ID: CH_RITA									
Total/NA	Prep	3546			14.99 g	2.0 mL	283867	11/18/15 08:28	RDT	TAL PEN
Total/NA	Analysis	8015B		1	14.99 g	2.0 mL	284208	11/19/15 22:43	C1M	TAL PEN
	Instrument ID: Eva									
Soluble	Leach	DI Leach			2.49 g	50 mL	284081	11/19/15 08:35	TAJ	TAL PEN
Soluble	Analysis	300.0		1	1 mL		284481	11/23/15 07:08	TAJ	TAL PEN
	Instrument ID: IC2									

Client Sample ID: SB1 15-16.5
Date Collected: 11/14/15 15:00
Date Received: 11/17/15 09:15

Lab Sample ID: 400-113935-7
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			284002	11/18/15 16:29	LEC	TAL PEN
	Instrument ID: NOEQUIP									

Client Sample ID: SB1 15-16.5
Date Collected: 11/14/15 15:00
Date Received: 11/17/15 09:15

Lab Sample ID: 400-113935-7
Matrix: Solid
Percent Solids: 90.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.47 g	5.0 g	284777	11/24/15 10:30	GRK	TAL PEN
Total/NA	Analysis	8015B		1	5.47 g	5.0 g	284766	11/24/15 19:38	GRK	TAL PEN
	Instrument ID: CH_RITA									
Total/NA	Prep	5035			5.47 g	5.0 g	284777	11/24/15 10:30	GRK	TAL PEN
Total/NA	Analysis	8021B		1	5.47 g	5.0 g	284765	11/24/15 19:38	GRK	TAL PEN
	Instrument ID: CH_RITA									
Total/NA	Prep	3546			15.36 g	2.0 mL	283867	11/18/15 08:28	RDT	TAL PEN
Total/NA	Analysis	8015B		1	15.36 g	2.0 mL	284208	11/19/15 22:53	C1M	TAL PEN
	Instrument ID: Eva									
Soluble	Leach	DI Leach			2.47 g	50 mL	284831	11/24/15 16:21	TAJ	TAL PEN

Lab Chronicle

Client: MWH Americas Inc
Project/Site: Standard Oil Com #1

TestAmerica Job ID: 400-113935-1

Client Sample ID: SB1 15-16.5
Date Collected: 11/14/15 15:00
Date Received: 11/17/15 09:15

Lab Sample ID: 400-113935-7
Matrix: Solid
Percent Solids: 90.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Analysis	300.0		1	1 mL		285031	11/25/15 15:01	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: Standard Oil Com #1

TestAmerica Job ID: 400-113935-1

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.

Method Summary

Client: MWH Americas Inc
Project/Site: Standard Oil Com #1

TestAmerica Job ID: 400-113935-1

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
ANALYTICAL TESTING CORPORATION

~~Cedar Falls Division~~ Pensacola, FL
~~704 Enterprise Drive~~
~~Cedar Falls, IA 50613~~
Phone 319-277-2401 or 800-750-2401
Fax 319-277-2425

100-113935-1

To assist us in using the proper analytical methods, is this work being conducted for regulatory purposes?
Compliance Monitoring _____

Client Name: El Paso CGP Company, LLC Client #: _____
Address: Houston, TX
City/State/Zip Code: _____
Project Manager: Steve Varsa MWH
Telephone Number: 515 253 0830 Fax: _____
Sampler Name: (Print Name) Rob Malcomson
Sampler Signature: _____
Email Address: _____

Project Name: Standard Oil Com N #1
Project #: ARF # ERG-MWH-10-9-15-CWO-01
Site/Location ID: San Juan County State: NM
Report To: Steve Varsa MWH
Invoice To: _____
Quote #: _____ PO#: _____

400-113935 COC

TAT: X Standard; ___ Rush (surcharges may apply)
Date Needed: _____
Fax Results: Y N
Email Results: Y N

SAMPLE ID	Date Sampled	Time Sampled	G = Grab, C = Composite	Field Filtered	Matrix (SL - Sludge, DW - Drinking Water, GW - Groundwater, S - Soil/Solid, WW - Wastewater, Specify Other)	Preservation & # of Containers: HNO_3	HCl	NaOH	H_2SO_4	Methanol	None 4-oz	Other (Specify)	Analyze For: BTEX 8021B	TPH (DRO, GRO, MRO) 8015M	Chlorides Method 300	QC Deliverables: None / Level 2 (Batch QC) / Level 3 / Level 4 / Other	REMARKS
MW12 10-12 ft.	11/12/15	1610	G		S						2		X	X	X		
MW13 15-17.25 ft	11/12/15	1415	G		S						3		X	X	X		
MW14 30-32.25	11/12/15	1120	G		S						3		X	X	X		
MW15 15-17 ft	11/13/15	1045	G		S						3		X	X	X		
MW16 15-17 ft.	11/13/15	1535	G		S						3		X	X	X		
SB1 12-13ft.	11/14/15	1450	G		S						3		X	X	X		
SB1 15-16.5	11/14/15	1500	G		S						3		X	X	X		
Temp Blank																	

Special Instructions:

LABORATORY COMMENTS: 0.7°C IR-6

	Date:	Time:		Date:	Time:
Relinquished By:	11/16/15	0800	Received By: FedEx	11/16/15	0800
Relinquished By:	Date:	Time:	Received By: NCAhern/TA	11-17-15	0915
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Page 1 of 1

Login Sample Receipt Checklist

Client: MWH Americas Inc

Job Number: 400-113935-1

Login Number: 113935
List Number: 1
Creator: Crawford, Lauren E

List Source: TestAmerica Pensacola

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

APPENDIX C

envirotech

Bill of Lading

MANIFEST # 53631
GENERATOR El Paso. C. GP
POINT OF ORIGIN Standard mi Com #1
TRANSPORTER Sierra
DATE 11-30-15 JOB # 14073-0013

PHONE: (505) 632-0615 • 5796 U.S. HIGHWAY 64 • FARMINGTON, NEW MEXICO 87401

LOAD NO.	COMPLETE DESCRIPTION OF SHIPMENT					TRANSPORTING COMPANY			
	DESTINATION	MATERIAL	GRID	YDS	BBLS	TKT#	TRK#	TIME	DRIVER SIGNATURE
1	LFII	Cont soil	K1		12	-	22	933	Jeremy Valley
					12				

RESULTS			LANDFARM EMPLOYEE	NOTES
4305	CHLORIDE TEST	1	Gary Robinson	
	PAINT FILTER TEST	1	Certification of above receival & placement	

By signing as the driver/transporter, I certify the material hauled from the above location has not been added to or tampered with. I certify the material is from the above mentioned Generator/Point of Origin and that no additional material has been added or mixed into the load.

Generator Onsite Contact _____ Phone _____

Signatures required prior to distribution of the legal document. DISTRIBUTION: **White** - Company Records, **Yellow** - Billing, **Pink** - Customer, **Goldenrod** - LF Copy

envirotech

BOL# 53631

CHLORIDE TESTING / PAINT FILTER TESTING

DATE 11-30-15 TIME 933

Attach test strip here

CUSTOMER El Paso CGP

SITE Standard Oil Comp #1

DRIVER Jeremy Kelly

SAMPLE Soil Straight ✓ With Dirt _____

CHLORIDE TEST ~305 mg/Kg

ACCEPTED YES – NO _____

PAINT FILTER TEST Time started 933 Time completed 945

PASS YES – NO _____

SAMPLER/ANALYST Gary Allison

5796 US Hwy 64, Farmington, NM 87401 || Ph (505) 632-0615 Fr (800) 362-1879 Fx (505) 632-1865 || info@envirotech-inc.com envirotech-inc.com

APPENDIX D

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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

TestAmerica Job ID: 400-106457-1
Client Project/Site: NM-GW Pits, Standard Oil Com #1

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

Attn: Ms. Sarah Gardner

Authorized for release by:
6/16/2015 4:46:18 PM

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

Table of Contents

Definitions/Glossary

Client: MWH Americas Inc
Project/Site: NM-GW Pits, Standard Oil Com #1

TestAmerica Job ID: 400-106457-1

Qualifiers

GC VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery is outside acceptance limits.

Glossary

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

Case Narrative

Client: MWH Americas Inc
Project/Site: NM-GW Pits, Standard Oil Com #1

TestAmerica Job ID: 400-106457-1

Job ID: 400-106457-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-106457-1

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 2.0º C.

GC VOA
Method 8021B: The following samples were analyzed outside of holding time due to the pH being out of range: STANDARD OIL COM #1 MW-3 (400-106457-3), STANDARD OIL COM #1 MW-10 (400-106457-10), and STANDARD OIL COM #1 MW-11 (400-106457-11). The holding time expired on 06/7/15 and the samples were analyzed on 06/12/15.

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

Detection Summary

Client: MWH Americas Inc
Project/Site: NM-GW Pits, Standard Oil Com #1

TestAmerica Job ID: 400-106457-1

Client Sample ID: STANDARD OIL COM #1 MW-1 — Lab Sample ID: 400-106457-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	16		1.0	0.56	ug/L	1		8021B	Total/NA
Ethylbenzene	130		1.0	0.64	ug/L	1		8021B	Total/NA
Toluene	13		5.0	0.98	ug/L	1		8021B	Total/NA
Xylenes, Total	3.8	J	5.0	1.7	ug/L	1		8021B	Total/NA

Client Sample ID: STANDARD OIL COM #1 MW-2 — Lab Sample ID: 400-106457-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	3.4		1.0	0.56	ug/L	1		8021B	Total/NA
Ethylbenzene	8.9		1.0	0.64	ug/L	1		8021B	Total/NA
Toluene	2.0	J	5.0	0.98	ug/L	1		8021B	Total/NA

Client Sample ID: STANDARD OIL COM #1 MW-3 — Lab Sample ID: 400-106457-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	870		5.0	2.8	ug/L	5		8021B	Total/NA
Ethylbenzene	240		5.0	3.2	ug/L	5		8021B	Total/NA
Toluene	6.9	J	25	4.9	ug/L	5		8021B	Total/NA
Xylenes, Total	430		25	8.5	ug/L	5		8021B	Total/NA

Client Sample ID: STANDARD OIL COM #1 MW-4 — Lab Sample ID: 400-106457-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Ethylbenzene	84	F1	1.0	0.64	ug/L	1		8021B	Total/NA
Toluene	16		5.0	0.98	ug/L	1		8021B	Total/NA
Xylenes, Total	8.4		5.0	1.7	ug/L	1		8021B	Total/NA

Client Sample ID: STANDARD OIL COM #1 MW-5 — Lab Sample ID: 400-106457-5

No Detections.

Client Sample ID: STANDARD OIL COM #1 MW-6 — Lab Sample ID: 400-106457-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	23		1.0	0.56	ug/L	1		8021B	Total/NA
Ethylbenzene	8.7		1.0	0.64	ug/L	1		8021B	Total/NA
Toluene	3.8	J	5.0	0.98	ug/L	1		8021B	Total/NA

Client Sample ID: STANDARD OIL COM #1 MW-7 — Lab Sample ID: 400-106457-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Ethylbenzene	280		5.0	3.2	ug/L	5		8021B	Total/NA
Toluene	28		25	4.9	ug/L	5		8021B	Total/NA
Xylenes, Total	1900		25	8.5	ug/L	5		8021B	Total/NA

Client Sample ID: STANDARD OIL COM #1 MW-8 — Lab Sample ID: 400-106457-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	44		1.0	0.56	ug/L	1		8021B	Total/NA
Ethylbenzene	180		1.0	0.64	ug/L	1		8021B	Total/NA
Toluene	3.6	J	5.0	0.98	ug/L	1		8021B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: MWH Americas Inc
Project/Site: NM-GW Pits, Standard Oil Com #1

TestAmerica Job ID: 400-106457-1

Client Sample ID: STANDARD OIL COM #1 MW-9 — Lab Sample ID: 400-106457-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	72		5.0	2.8	ug/L	5		8021B	Total/NA
Ethylbenzene	77		5.0	3.2	ug/L	5		8021B	Total/NA
Xylenes, Total	16	J	25	8.5	ug/L	5		8021B	Total/NA

Client Sample ID: STANDARD OIL COM #1 MW-10 — Lab Sample ID: 400-106457-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	130		1.0	0.56	ug/L	1		8021B	Total/NA
Ethylbenzene	20		1.0	0.64	ug/L	1		8021B	Total/NA
Toluene	5.9		5.0	0.98	ug/L	1		8021B	Total/NA

Client Sample ID: STANDARD OIL COM #1 MW-11 — Lab Sample ID: 400-106457-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1300		5.0	2.8	ug/L	5		8021B	Total/NA
Ethylbenzene	270		5.0	3.2	ug/L	5		8021B	Total/NA
Toluene	23	J	25	4.9	ug/L	5		8021B	Total/NA
Xylenes, Total	1200		25	8.5	ug/L	5		8021B	Total/NA

Client Sample ID: STANDARD OIL COM #1 TRIP BLANK — Lab Sample ID: 400-106457-12

No Detections.

This Detection Summary does not include radiochemical test results.

Sample Summary

Client: MWH Americas Inc
Project/Site: NM-GW Pits, Standard Oil Com #1

TestAmerica Job ID: 400-106457-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-106457-1	STANDARD OIL COM #1 MW-1	Water	05/31/15 11:25	06/02/15 09:37
400-106457-2	STANDARD OIL COM #1 MW-2	Water	05/31/15 11:45	06/02/15 09:37
400-106457-3	STANDARD OIL COM #1 MW-3	Water	05/31/15 12:25	06/02/15 09:37
400-106457-4	STANDARD OIL COM #1 MW-4	Water	05/31/15 10:55	06/02/15 09:37
400-106457-5	STANDARD OIL COM #1 MW-5	Water	05/31/15 11:05	06/02/15 09:37
400-106457-6	STANDARD OIL COM #1 MW-6	Water	05/31/15 11:35	06/02/15 09:37
400-106457-7	STANDARD OIL COM #1 MW-7	Water	05/31/15 11:15	06/02/15 09:37
400-106457-8	STANDARD OIL COM #1 MW-8	Water	05/31/15 12:05	06/02/15 09:37
400-106457-9	STANDARD OIL COM #1 MW-9	Water	05/31/15 11:55	06/02/15 09:37
400-106457-10	STANDARD OIL COM #1 MW-10	Water	05/31/15 12:15	06/02/15 09:37
400-106457-11	STANDARD OIL COM #1 MW-11	Water	05/31/15 12:35	06/02/15 09:37
400-106457-12	STANDARD OIL COM #1 TRIP BLANK	Water	05/31/15 10:50	06/02/15 09:37

Client Sample ID: STANDARD OIL COM #1 MW-1

Lab Sample ID: 400-106457-1

Date Collected: 05/31/15 11:25
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	16		1.0	0.56	ug/L			06/11/15 16:37	1
Ethylbenzene	130		1.0	0.64	ug/L			06/11/15 16:37	1
Toluene	13		5.0	0.98	ug/L			06/11/15 16:37	1
Xylenes, Total	3.8	J	5.0	1.7	ug/L			06/11/15 16:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*105*		*78 - 124*		*06/11/15 16:37*	*1*

Client: MWH Americas Inc
Project/Site: NM-GW Pits, Standard Oil Com #1

TestAmerica Job ID: 400-106457-1

Client Sample ID: STANDARD OIL COM #1 MW-2
Lab Sample ID: 400-106457-2
Date Collected: 05/31/15 11:45
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	**3.4**		1.0	0.56	ug/L			06/11/15 17:37	1
Ethylbenzene	**8.9**		1.0	0.64	ug/L			06/11/15 17:37	1
Toluene	**2.0**	**J**	5.0	0.98	ug/L			06/11/15 17:37	1
Xylenes, Total	<5.0		5.0	1.7	ug/L			06/11/15 17:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*101*		*78 - 124*		*06/11/15 17:37*	*1*

Client Sample Results

Client: MWH Americas Inc
Project/Site: NM-GW Pits, Standard Oil Com #1

TestAmerica Job ID: 400-106457-1

Client Sample ID: STANDARD OIL COM #1 MW-3
Date Collected: 05/31/15 12:25
Date Received: 06/02/15 09:37

Lab Sample ID: 400-106457-3
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	870		5.0	2.8	ug/L			06/12/15 14:03	5
Ethylbenzene	240		5.0	3.2	ug/L			06/12/15 14:03	5
Toluene	6.9	J	25	4.9	ug/L			06/12/15 14:03	5
Xylenes, Total	430		25	8.5	ug/L			06/12/15 14:03	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*98*		*78 - 124*		*06/12/15 14:03*	*5*

Client Sample ID: STANDARD OIL COM #1 MW-4

Lab Sample ID: 400-106457-4

Date Collected: 05/31/15 10:55
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			06/12/15 13:04	1
Ethylbenzene	**84**	**F1**	1.0	0.64	ug/L			06/12/15 13:04	1
Toluene	**16**		5.0	0.98	ug/L			06/12/15 13:04	1
Xylenes, Total	**8.4**		5.0	1.7	ug/L			06/12/15 13:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*112*		*78 - 124*		*06/12/15 13:04*	*1*

Client: MWH Americas Inc
Project/Site: NM-GW Pits, Standard Oil Com #1

TestAmerica Job ID: 400-106457-1

Client Sample ID: STANDARD OIL COM #1 MW-5
Lab Sample ID: 400-106457-5
Date Collected: 05/31/15 11:05
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			06/11/15 09:40	1
Ethylbenzene	<1.0		1.0	0.64	ug/L			06/11/15 09:40	1
Toluene	<5.0		5.0	0.98	ug/L			06/11/15 09:40	1
Xylenes, Total	<5.0		5.0	1.7	ug/L			06/11/15 09:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*97*		*78 - 124*		*06/11/15 09:40*	*1*

Client: MWH Americas Inc
Project/Site: NM-GW Pits, Standard Oil Com #1

TestAmerica Job ID: 400-106457-1

Client Sample ID: STANDARD OIL COM #1 MW-6
Lab Sample ID: 400-106457-6
Date Collected: 05/31/15 11:35
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	23		1.0	0.56	ug/L			06/11/15 20:34	1
Ethylbenzene	8.7		1.0	0.64	ug/L			06/11/15 20:34	1
Toluene	3.8	J	5.0	0.98	ug/L			06/11/15 20:34	1
Xylenes, Total	<5.0		5.0	1.7	ug/L			06/11/15 20:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*100*		*78 - 124*		*06/11/15 20:34*	*1*

Client Sample ID: STANDARD OIL COM #1 MW-7
Date Collected: 05/31/15 11:15
Date Received: 06/02/15 09:37

Lab Sample ID: 400-106457-7
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<5.0		5.0	2.8	ug/L			06/11/15 21:34	5
Ethylbenzene	**280**		5.0	3.2	ug/L			06/11/15 21:34	5
Toluene	**28**		25	4.9	ug/L			06/11/15 21:34	5
Xylenes, Total	**1900**		25	8.5	ug/L			06/11/15 21:34	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*99*		*78 - 124*		*06/11/15 21:34*	*5*

Client: MWH Americas Inc
Project/Site: NM-GW Pits, Standard Oil Com #1

TestAmerica Job ID: 400-106457-1

Client Sample ID: STANDARD OIL COM #1 MW-8
Lab Sample ID: 400-106457-8
Date Collected: 05/31/15 12:05
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	44		1.0	0.56	ug/L			06/12/15 04:28	1
Ethylbenzene	180		1.0	0.64	ug/L			06/12/15 04:28	1
Toluene	3.6	J	5.0	0.98	ug/L			06/12/15 04:28	1
Xylenes, Total	<5.0		5.0	1.7	ug/L			06/12/15 04:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*98*		*78 - 124*		*06/12/15 04:28*	*1*

Client: MWH Americas Inc
Project/Site: NM-GW Pits, Standard Oil Com #1

TestAmerica Job ID: 400-106457-1

Client Sample ID: STANDARD OIL COM #1 MW-9
Lab Sample ID: 400-106457-9
Date Collected: 05/31/15 11:55
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	**72**		5.0	2.8	ug/L			06/12/15 07:26	5
Ethylbenzene	**77**		5.0	3.2	ug/L			06/12/15 07:26	5
Toluene	<25		25	4.9	ug/L			06/12/15 07:26	5
Xylenes, Total	**16**	**J**	25	8.5	ug/L			06/12/15 07:26	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*98*		*78 - 124*		*06/12/15 07:26*	*5*

Client Sample ID: STANDARD OIL COM #1 MW-10

Lab Sample ID: 400-106457-10

Date Collected: 05/31/15 12:15

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	**130**		1.0	0.56	ug/L			06/12/15 05:27	1
Ethylbenzene	**20**		1.0	0.64	ug/L			06/12/15 05:27	1
Toluene	**5.9**		5.0	0.98	ug/L			06/12/15 05:27	1
Xylenes, Total	<5.0		5.0	1.7	ug/L			06/12/15 05:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*96*		*78 - 124*		*06/12/15 05:27*	*1*

Client: MWH Americas Inc
Project/Site: NM-GW Pits, Standard Oil Com #1

TestAmerica Job ID: 400-106457-1

Client Sample ID: STANDARD OIL COM #1 MW-11
Date Collected: 05/31/15 12:35
Date Received: 06/02/15 09:37

Lab Sample ID: 400-106457-11
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1300		5.0	2.8	ug/L			06/12/15 06:27	5
Ethylbenzene	270		5.0	3.2	ug/L			06/12/15 06:27	5
Toluene	23	J	25	4.9	ug/L			06/12/15 06:27	5
Xylenes, Total	1200		25	8.5	ug/L			06/12/15 06:27	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*99*		*78 - 124*		*06/12/15 06:27*	*5*

Client: MWH Americas Inc
Project/Site: NM-GW Pits, Standard Oil Com #1

TestAmerica Job ID: 400-106457-1

Client Sample ID: STANDARD OIL COM #1 TRIP BLANK
Lab Sample ID: 400-106457-12
Date Collected: 05/31/15 10:50
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			06/12/15 03:29	1
Ethylbenzene	<1.0		1.0	0.64	ug/L			06/12/15 03:29	1
Toluene	<5.0		5.0	0.98	ug/L			06/12/15 03:29	1
Xylenes, Total	<5.0		5.0	1.7	ug/L			06/12/15 03:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*98*		*78 - 124*		*06/12/15 03:29*	*1*

QC Association Summary

Client: MWH Americas Inc
Project/Site: NM-GW Pits, Standard Oil Com #1

TestAmerica Job ID: 400-106457-1

GC VOA

Analysis Batch: 260589

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-106455-A-3 MS	Matrix Spike	Total/NA	Water	8021B	
400-106455-A-3 MSD	Matrix Spike Duplicate	Total/NA	Water	8021B	
400-106457-5	STANDARD OIL COM #1 MW-5	Total/NA	Water	8021B	
LCS 400-260589/1003	Lab Control Sample	Total/NA	Water	8021B	
MB 400-260589/26	Method Blank	Total/NA	Water	8021B	

Analysis Batch: 260794

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-106457-1	STANDARD OIL COM #1 MW-1	Total/NA	Water	8021B	
400-106457-2	STANDARD OIL COM #1 MW-2	Total/NA	Water	8021B	
400-106457-2 MS	STANDARD OIL COM #1 MW-2	Total/NA	Water	8021B	
400-106457-2 MSD	STANDARD OIL COM #1 MW-2	Total/NA	Water	8021B	
400-106457-6	STANDARD OIL COM #1 MW-6	Total/NA	Water	8021B	
400-106457-7	STANDARD OIL COM #1 MW-7	Total/NA	Water	8021B	
400-106457-8	STANDARD OIL COM #1 MW-8	Total/NA	Water	8021B	
400-106457-9	STANDARD OIL COM #1 MW-9	Total/NA	Water	8021B	
400-106457-10	STANDARD OIL COM #1 MW-10	Total/NA	Water	8021B	
400-106457-11	STANDARD OIL COM #1 MW-11	Total/NA	Water	8021B	
400-106457-12	STANDARD OIL COM #1 TRIP BLANK	Total/NA	Water	8021B	
LCS 400-260794/1001	Lab Control Sample	Total/NA	Water	8021B	
MB 400-260794/2	Method Blank	Total/NA	Water	8021B	

Analysis Batch: 260872

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-106457-3	STANDARD OIL COM #1 MW-3	Total/NA	Water	8021B	
400-106457-4	STANDARD OIL COM #1 MW-4	Total/NA	Water	8021B	
400-106457-4 MS	STANDARD OIL COM #1 MW-4	Total/NA	Water	8021B	
400-106457-4 MSD	STANDARD OIL COM #1 MW-4	Total/NA	Water	8021B	
LCS 400-260872/1002	Lab Control Sample	Total/NA	Water	8021B	
MB 400-260872/3	Method Blank	Total/NA	Water	8021B	

Method: 8021B - Volatile Organic Compounds (GC)

Lab Sample ID: MB 400-260589/26
Matrix: Water
Analysis Batch: 260589

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			06/10/15 15:55	1
Ethylbenzene	<1.0		1.0	0.64	ug/L			06/10/15 15:55	1
Toluene	<5.0		5.0	0.98	ug/L			06/10/15 15:55	1
Xylenes, Total	<5.0		5.0	1.7	ug/L			06/10/15 15:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*97*		*78 - 124*		*06/10/15 15:55*	*1*

Lab Sample ID: LCS 400-260589/1003
Matrix: Water
Analysis Batch: 260589

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			50.0	51.4		ug/L		103	85 - 115		
Ethylbenzene			50.0	53.5		ug/L		107	85 - 115		
Toluene			50.0	52.1		ug/L		104	85 - 115		
Xylenes, Total			150	160		ug/L		107	85 - 115		

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

Lab Sample ID: 400-106455-A-3 MS
Matrix: Water
Analysis Batch: 260589

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	46.8		ug/L		94	44 - 150		
Ethylbenzene	<1.0		50.0	48.0		ug/L		96	70 - 142		
Toluene	<5.0		50.0	47.2		ug/L		94	69 - 136		
Xylenes, Total	<5.0		150	144		ug/L		96	68 - 142		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
a,a,a-Trifluorotoluene (pid)	*95*		*78 - 124*

Lab Sample ID: 400-106455-A-3 MSD
Matrix: Water
Analysis Batch: 260589

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	42.8		ug/L		86	44 - 150	9	16
Ethylbenzene	<1.0		50.0	43.8		ug/L		88	70 - 142	9	16
Toluene	<5.0		50.0	43.3		ug/L		87	69 - 136	9	16
Xylenes, Total	<5.0		150	134		ug/L		89	68 - 142	7	15

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

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

Lab Sample ID: MB 400-260794/2
Matrix: Water
Analysis Batch: 260794

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			06/11/15 13:37	1
Ethylbenzene	<1.0		1.0	0.64	ug/L			06/11/15 13:37	1
Toluene	<5.0		5.0	0.98	ug/L			06/11/15 13:37	1
Xylenes, Total	<5.0		5.0	1.7	ug/L			06/11/15 13:37	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*98*		*78 - 124*		*06/11/15 13:37*	*1*

Lab Sample ID: LCS 400-260794/1001
Matrix: Water
Analysis Batch: 260794

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	50.0	50.0		ug/L		100	85 - 115
Ethylbenzene	50.0	51.9		ug/L		104	85 - 115
Toluene	50.0	50.5		ug/L		101	85 - 115
Xylenes, Total	150	155		ug/L		103	85 - 115

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

Lab Sample ID: 400-106457-2 MS
Matrix: Water
Analysis Batch: 260794

Client Sample ID: STANDARD OIL COM #1 MW-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	3.4		50.0	47.5		ug/L		88	44 - 150
Ethylbenzene	8.9		50.0	53.0		ug/L		88	70 - 142
Toluene	2.0	J	50.0	46.6		ug/L		89	69 - 136
Xylenes, Total	<5.0		150	142		ug/L		95	68 - 142

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

Lab Sample ID: 400-106457-2 MSD
Matrix: Water
Analysis Batch: 260794

Client Sample ID: STANDARD OIL COM #1 MW-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	3.4		50.0	51.2		ug/L		96	44 - 150	7	16
Ethylbenzene	8.9		50.0	57.2		ug/L		97	70 - 142	8	16
Toluene	2.0	J	50.0	50.1		ug/L		96	69 - 136	7	16
Xylenes, Total	<5.0		150	152		ug/L		102	68 - 142	7	15

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

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

Lab Sample ID: MB 400-260872/3
Matrix: Water
Analysis Batch: 260872

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			06/12/15 12:05	1
Ethylbenzene	<1.0		1.0	0.64	ug/L			06/12/15 12:05	1
Toluene	<5.0		5.0	0.98	ug/L			06/12/15 12:05	1
Xylenes, Total	<5.0		5.0	1.7	ug/L			06/12/15 12:05	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*99*		*78 - 124*		*06/12/15 12:05*	*1*

Lab Sample ID: LCS 400-260872/1002
Matrix: Water
Analysis Batch: 260872

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	50.0	50.3		ug/L		101	85 - 115
Ethylbenzene	50.0	52.0		ug/L		104	85 - 115
Toluene	50.0	50.8		ug/L		102	85 - 115
Xylenes, Total	150	156		ug/L		104	85 - 115

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

Lab Sample ID: 400-106457-4 MS
Matrix: Water
Analysis Batch: 260872

Client Sample ID: STANDARD OIL COM #1 MW-4
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	41.9		ug/L		84	44 - 150
Ethylbenzene	84	F1	50.0	112	F1	ug/L		56	70 - 142
Toluene	16		50.0	52.3		ug/L		73	69 - 136
Xylenes, Total	8.4		150	139		ug/L		87	68 - 142

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
a,a,a-Trifluorotoluene (pid)	*105*		*78 - 124*

Lab Sample ID: 400-106457-4 MSD
Matrix: Water
Analysis Batch: 260872

Client Sample ID: STANDARD OIL COM #1 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	<1.0		50.0	43.2		ug/L		86	44 - 150	3	16
Ethylbenzene	84	F1	50.0	115	F1	ug/L		63	70 - 142	3	16
Toluene	16		50.0	53.9		ug/L		76	69 - 136	3	16
Xylenes, Total	8.4		150	143		ug/L		89	68 - 142	3	15

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
a,a,a-Trifluorotoluene (pid)	*105*		*78 - 124*

Lab Chronicle

Client: MWH Americas Inc
Project/Site: NM-GW Pits, Standard Oil Com #1

TestAmerica Job ID: 400-106457-1

Client Sample ID: STANDARD OIL COM #1 MW-1
Lab Sample ID: 400-106457-1
Date Collected: 05/31/15 11:25
Matrix: Water
Date Received: 06/02/15 09:37

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	260794	06/11/15 16:37	MKA	TAL PEN
	Instrument ID: ETHYL									

Client Sample ID: STANDARD OIL COM #1 MW-2
Lab Sample ID: 400-106457-2
Date Collected: 05/31/15 11:45
Matrix: Water
Date Received: 06/02/15 09:37

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	260794	06/11/15 17:37	MKA	TAL PEN
	Instrument ID: ETHYL									

Client Sample ID: STANDARD OIL COM #1 MW-3
Lab Sample ID: 400-106457-3
Date Collected: 05/31/15 12:25
Matrix: Water
Date Received: 06/02/15 09:37

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		5	5 mL	5 mL	260872	06/12/15 14:03	MKA	TAL PEN
	Instrument ID: ETHYL									

Client Sample ID: STANDARD OIL COM #1 MW-4
Lab Sample ID: 400-106457-4
Date Collected: 05/31/15 10:55
Matrix: Water
Date Received: 06/02/15 09:37

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	260872	06/12/15 13:04	MKA	TAL PEN
	Instrument ID: ETHYL									

Client Sample ID: STANDARD OIL COM #1 MW-5
Lab Sample ID: 400-106457-5
Date Collected: 05/31/15 11:05
Matrix: Water
Date Received: 06/02/15 09:37

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	260589	06/11/15 09:40	MKA	TAL PEN
	Instrument ID: ETHYL									

Client Sample ID: STANDARD OIL COM #1 MW-6
Lab Sample ID: 400-106457-6
Date Collected: 05/31/15 11:35
Matrix: Water
Date Received: 06/02/15 09:37

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	260794	06/11/15 20:34	MKA	TAL PEN
	Instrument ID: ETHYL									

Client Sample ID: STANDARD OIL COM #1 MW-7

Lab Sample ID: 400-106457-7
Date Collected: 05/31/15 11:15
Matrix: Water
Date Received: 06/02/15 09:37

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		5	5 mL	5 mL	260794	06/11/15 21:34	MKA	TAL PEN
	Instrument ID: ETHYL									

Client Sample ID: STANDARD OIL COM #1 MW-8

Lab Sample ID: 400-106457-8
Date Collected: 05/31/15 12:05
Matrix: Water
Date Received: 06/02/15 09:37

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	260794	06/12/15 04:28	MKA	TAL PEN
	Instrument ID: ETHYL									

Client Sample ID: STANDARD OIL COM #1 MW-9

Lab Sample ID: 400-106457-9
Date Collected: 05/31/15 11:55
Matrix: Water
Date Received: 06/02/15 09:37

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		5	5 mL	5 mL	260794	06/12/15 07:26	MKA	TAL PEN
	Instrument ID: ETHYL									

Client Sample ID: STANDARD OIL COM #1 MW-10

Lab Sample ID: 400-106457-10
Date Collected: 05/31/15 12:15
Matrix: Water
Date Received: 06/02/15 09:37

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	260794	06/12/15 05:27	MKA	TAL PEN
	Instrument ID: ETHYL									

Client Sample ID: STANDARD OIL COM #1 MW-11

Lab Sample ID: 400-106457-11
Date Collected: 05/31/15 12:35
Matrix: Water
Date Received: 06/02/15 09:37

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		5	5 mL	5 mL	260794	06/12/15 06:27	MKA	TAL PEN
	Instrument ID: ETHYL									

Client Sample ID: STANDARD OIL COM #1 TRIP BLANK

Lab Sample ID: 400-106457-12
Date Collected: 05/31/15 10:50
Matrix: Water
Date Received: 06/02/15 09:37

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	260794	06/12/15 03:29	MKA	TAL PEN
	Instrument ID: ETHYL									

Lab Chronicle

Client: MWH Americas Inc
Project/Site: NM-GW Pits, Standard Oil Com #1

TestAmerica Job ID: 400-106457-1

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, Standard Oil Com #1

TestAmerica Job ID: 400-106457-1

Laboratory: TestAmerica Pensacola

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

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

* Certification renewal pending - certification considered valid.

Method Summary

Client: MWH Americas Inc
Project/Site: NM-GW Pits, Standard Oil Com #1

TestAmerica Job ID: 400-106457-1

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

400-106457

SERIAL NUMBER: 80221

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Phone: 850-474-1001
Fax: 850-478-2671
Website: www.testamericainc.com

QUOTE NO.: | BOTTLE ORDER NO.: | ORDER - LOG-IN NO.: C

CLIENT: MWH
ADDRESS: 1560 Broadway Suite 800 Denver CO 80202
PAGE 1 OF 1

PROJECT NAME: NM-Pitsites Standard Oil Com #1
PROJECT NO.: .
CLIENT PROJECT MANAGER: Steve Varsa
PROJECT LOC. (STATE): NM

SAMPLED BY: Sarah Gardner / Chris Lee
CONTRACT / P.O. NO.: # 40005479
CLIENT PHONE: 303 291 2239
CLIENT E-MAIL OR FAX: sarah.gardner@mwhglobal.com

TAT REQUESTED: RUSH NEEDS LAB PREAPPROVAL ☒ NORMAL 10 BUSINESS DAYS
☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☐ 5 DAYS ☐ 20 DAYS (Package) ☐ OTHER:

SAMPLE DISPOSAL: ☐ RETURN TO CLIENT ☒ DISPOSAL BY LAB
☐ SEE CONTRACT ☐ OTHER:

REQUESTED ANALYSIS: BTEX - 8021B

400-106457 COC

POSSIBLE HAZARD IDENTIFICATION
☒ NON-HAZARD
△ FLAMMABLE
△ RADIOACTIVE
△ POISON B
△ UNKNOWN
△ OTHER:

NO. OF COOLERS PER SHIPMENT:

SPECIAL INSTRUCTIONS/ CONDITIONS OF RECEIPT

PRESERVATIVE: No Preservative; HCL - Hydrochloric Acid; HNO3 - Nitric Acid; H2SO4 - Sulfuric Acid or H3PO4; NAOH - Sodium Hydroxide; CH3OH - Methanol; NAHSO4 - Sodium Bisulfate; NA2S2O3 - Sodium Thiosulfate; Other:

MATRIX: Drinking Water; Aqeuous GW, SW, WW; Solid, Semisolid, Sediment; Air; NonAqueous (Oil, Solvent, etc.)

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION		Preservative: HCL	Matrix: Aqeuous GW, SW, WW	NUMBER OF CONTAINERS SUBMITTED: BTEX - 8021B	LAB USE ONLY - SAMPLE NUMBER
5/31/15	1125	Standard Oil Com #1	MW-1	X	X	2	
5/31/15	1145	Standard Oil Com #1	MW-2	X	X	2	
5/31/15	1225	Standard Oil Com #1	MW-3	X	X	2	
5/31/15	1055	Standard Oil Com #1	MW-4	X	X	2	
5/31/15	1105	Standard Oil Com #1	MW-5	X	X	2	
5/31/15	1135	Standard Oil Com #1	MW-6	X	X	2	
5/31/15	1115	Standard Oil Com #1	MW-7	X	X	2	
5/31/15	1205	Standard Oil Com #1	MW-8	X	X	2	
5/31/15	1155	Standard Oil Com #1	MW-9	X	X	2	
5/31/15	1215	Standard Oil Com #1	MW-10	X	X	2	
5/31/15	1235	Standard Oil Com #1	MW-11	X	X	2	
5/31/15	1050	Standard Oil Com #1	~~[illegible]~~ TRIPBLANK	X	X	2	
~~5/31/15~~							

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
EMPTY CONTAINERS			[signature]	6/1/15	1345			

RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME
EMPTY CONTAINERS								

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY:	DATE	TIME	CUSTODY INTACT?	CUSTODY SEAL NO.:	REMARKS:
[signature]	6/2/15	0937	△ YES △ NO		2.0°C IR6

TAL-8251 (1207)

Login Sample Receipt Checklist

Client: MWH Americas Inc

Job Number: 400-106457-1

Login Number: 106457
List Number: 1
Creator: Crawford, Lauren E

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.0°C IR-6
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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

TestAmerica Job ID: 400-114401-1
Client Project/Site: Standard Oil Com #1
Revision: 2

For:
MWH Americas Inc
11153 Aurora Avenue
Des Moines, Iowa 50322-7904

Attn: Steve Varsa

Authorized for release by:
12/22/2015 5:09:49 PM

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Glossary

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

Job ID: 400-114401-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-114401-1

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 0.0º C.

Revised Report
The deliverable was revised to report to the RL.

GC VOA
Method 8021B: The following samples were 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-10 (400-114401-8) and MW-3 (400-114401-14).

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; reanalysis of the sample was conducted on a vial with pH < 2 - that run confirmed the value for Benzene, but was bounded by QC that recovered high for Benzene. Therefore, this sample has been qualified and reported for Benzene from this run; the other analytes will be reported from the subsequent run: MW-8 (400-114401-10).

Method 8021B: The continuing calibration verification (CCV) associated with batch 490-304004 recovered above the upper control limit for Benzene. Insufficient samples were provided for reanalysis, therefore, these samples associated with the CCV have been reported: MW-11 (400-114401-7), MW-10 (400-114401-8) and MW-3 (400-114401-14)

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

Detection Summary

Client: MWH Americas Inc
Project/Site: Standard Oil Com #1

TestAmerica Job ID: 400-114401-1

Client Sample ID: TRIP BLANK — Lab Sample ID: 400-114401-1

No Detections.

Client Sample ID: MW-16 — Lab Sample ID: 400-114401-2

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene	120		1.0		ug/L	1		8021B	Total/NA
Ethylbenzene	190		1.0		ug/L	1		8021B	Total/NA
Toluene	57		1.0		ug/L	1		8021B	Total/NA
Xylenes, Total	1500		3.0		ug/L	1		8021B	Total/NA

Client Sample ID: MW-15 — Lab Sample ID: 400-114401-3

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Xylenes, Total	3.1		3.0		ug/L	1		8021B	Total/NA

Client Sample ID: MW-14 — Lab Sample ID: 400-114401-4

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene	2.4		1.0		ug/L	1		8021B	Total/NA

Client Sample ID: MW-13 — Lab Sample ID: 400-114401-5

No Detections.

Client Sample ID: MW-12 — Lab Sample ID: 400-114401-6

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene	260		1.0		ug/L	1		8021B	Total/NA
Ethylbenzene	320		1.0		ug/L	1		8021B	Total/NA
Toluene	8.9		1.0		ug/L	1		8021B	Total/NA
Xylenes, Total	2000		30		ug/L	10		8021B	Total/NA

Client Sample ID: MW-11 — Lab Sample ID: 400-114401-7

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene	3600		25		ug/L	25		8021B	Total/NA
Ethylbenzene	580		1.0		ug/L	1		8021B	Total/NA
Toluene	3.8		1.0		ug/L	1		8021B	Total/NA
Xylenes, Total	3500		75		ug/L	25		8021B	Total/NA

Client Sample ID: MW-10 — Lab Sample ID: 400-114401-8

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene	1300		5.0		ug/L	5		8021B	Total/NA
Ethylbenzene	48		1.0		ug/L	1		8021B	Total/NA

Client Sample ID: MW-9 — Lab Sample ID: 400-114401-9

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene	130		5.0		ug/L	5		8021B	Total/NA
Ethylbenzene	120		5.0		ug/L	5		8021B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: MWH Americas Inc
Project/Site: Standard Oil Com #1

TestAmerica Job ID: 400-114401-1

Client Sample ID: MW-8 — Lab Sample ID: 400-114401-10

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene	32		1.0		ug/L	1		8021B	Total/NA
Ethylbenzene	29		1.0		ug/L	1		8021B	Total/NA
Xylenes, Total	3.8		3.0		ug/L	1		8021B	Total/NA

Client Sample ID: MW-7 — Lab Sample ID: 400-114401-11

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene	90		1.0		ug/L	1		8021B	Total/NA
Ethylbenzene	400		1.0		ug/L	1		8021B	Total/NA
Toluene	11		1.0		ug/L	1		8021B	Total/NA
Xylenes, Total	1300		3.0		ug/L	1		8021B	Total/NA

Client Sample ID: MW-6 — Lab Sample ID: 400-114401-12

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene	53		1.0		ug/L	1		8021B	Total/NA
Ethylbenzene	21		1.0		ug/L	1		8021B	Total/NA
Xylenes, Total	4.6		3.0		ug/L	1		8021B	Total/NA

Client Sample ID: MW-4 — Lab Sample ID: 400-114401-13

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene	5.1		1.0		ug/L	1		8021B	Total/NA
Ethylbenzene	65		1.0		ug/L	1		8021B	Total/NA
Toluene	1.2		1.0		ug/L	1		8021B	Total/NA
Xylenes, Total	3.2		3.0		ug/L	1		8021B	Total/NA

Client Sample ID: MW-3 — Lab Sample ID: 400-114401-14

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene	2500		10		ug/L	10		8021B	Total/NA
Ethylbenzene	510		1.0		ug/L	1		8021B	Total/NA
Xylenes, Total	760		3.0		ug/L	1		8021B	Total/NA

Client Sample ID: MW-2 — Lab Sample ID: 400-114401-15

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene	31		1.0		ug/L	1		8021B	Total/NA
Ethylbenzene	19		1.0		ug/L	1		8021B	Total/NA

Client Sample ID: MW-1 — Lab Sample ID: 400-114401-16

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Benzene	51		1.0		ug/L	1		8021B	Total/NA
Ethylbenzene	160		1.0		ug/L	1		8021B	Total/NA
Toluene	29		1.0		ug/L	1		8021B	Total/NA
Xylenes, Total	52		3.0		ug/L	1		8021B	Total/NA

This Detection Summary does not include radiochemical test results.

Sample Summary

Client: MWH Americas Inc
Project/Site: Standard Oil Com #1

TestAmerica Job ID: 400-114401-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-114401-1	TRIP BLANK	Water	11/24/15 09:30	11/25/15 09:29
400-114401-2	MW-16	Water	11/24/15 07:55	11/25/15 09:29
400-114401-3	MW-15	Water	11/24/15 08:10	11/25/15 09:29
400-114401-4	MW-14	Water	11/24/15 08:35	11/25/15 09:29
400-114401-5	MW-13	Water	11/24/15 08:20	11/25/15 09:29
400-114401-6	MW-12	Water	11/24/15 07:50	11/25/15 09:29
400-114401-7	MW-11	Water	11/24/15 08:25	11/25/15 09:29
400-114401-8	MW-10	Water	11/24/15 08:30	11/25/15 09:29
400-114401-9	MW-9	Water	11/24/15 08:50	11/25/15 09:29
400-114401-10	MW-8	Water	11/24/15 09:00	11/25/15 09:29
400-114401-11	MW-7	Water	11/24/15 08:05	11/25/15 09:29
400-114401-12	MW-6	Water	11/24/15 09:05	11/25/15 09:29
400-114401-13	MW-4	Water	11/24/15 08:00	11/25/15 09:29
400-114401-14	MW-3	Water	11/24/15 08:15	11/25/15 09:29
400-114401-15	MW-2	Water	11/24/15 09:10	11/25/15 09:29
400-114401-16	MW-1	Water	11/24/15 09:20	11/25/15 09:29

Client: MWH Americas Inc
Project/Site: Standard Oil Com #1

TestAmerica Job ID: 400-114401-1

Client Sample ID: TRIP BLANK
Date Collected: 11/24/15 09:30
Date Received: 11/25/15 09:29

Lab Sample ID: 400-114401-1
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0		ug/L			12/03/15 22:10	1
Ethylbenzene	<1.0		1.0		ug/L			12/03/15 22:10	1
Toluene	<1.0		1.0		ug/L			12/03/15 22:10	1
Xylenes, Total	<3.0		3.0		ug/L			12/03/15 22:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*100*		*50 - 150*		*12/03/15 22:10*	*1*

Client Sample Results

Client: MWH Americas Inc
Project/Site: Standard Oil Com #1

TestAmerica Job ID: 400-114401-1

Client Sample ID: MW-16
Date Collected: 11/24/15 07:55
Date Received: 11/25/15 09:29

Lab Sample ID: 400-114401-2
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	120		1.0		ug/L			12/03/15 22:51	1
Ethylbenzene	190		1.0		ug/L			12/03/15 22:51	1
Toluene	57		1.0		ug/L			12/03/15 22:51	1
Xylenes, Total	1500		3.0		ug/L			12/03/15 22:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*97*		*50 - 150*		*12/03/15 22:51*	*1*

Client: MWH Americas Inc
Project/Site: Standard Oil Com #1

TestAmerica Job ID: 400-114401-1

Client Sample ID: MW-15
Date Collected: 11/24/15 08:10
Date Received: 11/25/15 09:29

Lab Sample ID: 400-114401-3
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0		ug/L			12/03/15 23:31	1
Ethylbenzene	<1.0		1.0		ug/L			12/03/15 23:31	1
Toluene	<1.0		1.0		ug/L			12/03/15 23:31	1
Xylenes, Total	**3.1**		3.0		ug/L			12/03/15 23:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*100*		*50 - 150*		*12/03/15 23:31*	*1*

Client: MWH Americas Inc
Project/Site: Standard Oil Com #1

TestAmerica Job ID: 400-114401-1

Client Sample ID: MW-14
Date Collected: 11/24/15 08:35
Date Received: 11/25/15 09:29

Lab Sample ID: 400-114401-4
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**2.4**		1.0		ug/L			12/04/15 00:12	1
Ethylbenzene	<1.0		1.0		ug/L			12/04/15 00:12	1
Toluene	<1.0		1.0		ug/L			12/04/15 00:12	1
Xylenes, Total	<3.0		3.0		ug/L			12/04/15 00:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*97*		*50 - 150*		*12/04/15 00:12*	*1*

Client: MWH Americas Inc
Project/Site: Standard Oil Com #1

TestAmerica Job ID: 400-114401-1

Client Sample ID: MW-13
Date Collected: 11/24/15 08:20
Date Received: 11/25/15 09:29

Lab Sample ID: 400-114401-5
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<1.0		1.0		ug/L			12/04/15 00:52	1
Ethylbenzene	<1.0		1.0		ug/L			12/04/15 00:52	1
Toluene	<1.0		1.0		ug/L			12/04/15 00:52	1
Xylenes, Total	<3.0		3.0		ug/L			12/04/15 00:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*105*		*50 - 150*		*12/04/15 00:52*	*1*

Client: MWH Americas Inc
Project/Site: Standard Oil Com #1

TestAmerica Job ID: 400-114401-1

Client Sample ID: MW-12
Date Collected: 11/24/15 07:50
Date Received: 11/25/15 09:29

Lab Sample ID: 400-114401-6
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	260		1.0		ug/L			12/04/15 03:34	1
Ethylbenzene	320		1.0		ug/L			12/04/15 03:34	1
Toluene	8.9		1.0		ug/L			12/04/15 03:34	1
Xylenes, Total	2000		30		ug/L			12/04/15 20:09	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*127*		*50 - 150*		*12/04/15 03:34*	*1*
a,a,a-Trifluorotoluene	*88*		*50 - 150*		*12/04/15 20:09*	*10*

Client: MWH Americas Inc
Project/Site: Standard Oil Com #1

TestAmerica Job ID: 400-114401-1

Client Sample ID: MW-11
Date Collected: 11/24/15 08:25
Date Received: 11/25/15 09:29

Lab Sample ID: 400-114401-7
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	3600		25		ug/L			12/05/15 00:14	25
Ethylbenzene	580		1.0		ug/L			12/04/15 04:15	1
Toluene	3.8		1.0		ug/L			12/04/15 04:15	1
Xylenes, Total	3500		75		ug/L			12/05/15 00:14	25

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*100*		*50 - 150*		*12/04/15 04:15*	*1*
a,a,a-Trifluorotoluene	*89*		*50 - 150*		*12/05/15 00:14*	*25*

Client: MWH Americas Inc
Project/Site: Standard Oil Com #1

TestAmerica Job ID: 400-114401-1

Client Sample ID: MW-10
Date Collected: 11/24/15 08:30
Date Received: 11/25/15 09:29

Lab Sample ID: 400-114401-8
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**1300**		5.0		ug/L			12/04/15 18:07	5
Ethylbenzene	**48**		1.0		ug/L			12/04/15 04:55	1
Toluene	<1.0		1.0		ug/L			12/04/15 04:55	1
Xylenes, Total	<15		15		ug/L			12/04/15 18:07	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*110*		*50 - 150*		*12/04/15 04:55*	*1*
a,a,a-Trifluorotoluene	*98*		*50 - 150*		*12/04/15 18:07*	*5*

Client: MWH Americas Inc
Project/Site: Standard Oil Com #1

TestAmerica Job ID: 400-114401-1

Client Sample ID: MW-9
Date Collected: 11/24/15 08:50
Date Received: 11/25/15 09:29

Lab Sample ID: 400-114401-9
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**130**		5.0		ug/L			12/03/15 19:28	5
Ethylbenzene	**120**		5.0		ug/L			12/03/15 19:28	5
Toluene	<25		25		ug/L			12/03/15 19:28	5
Xylenes, Total	<25		25		ug/L			12/03/15 19:28	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene (pid)	*97*		*78 - 124*		*12/03/15 19:28*	*5*

Client: MWH Americas Inc
Project/Site: Standard Oil Com #1

TestAmerica Job ID: 400-114401-1

Client Sample ID: MW-8
Date Collected: 11/24/15 09:00
Date Received: 11/25/15 09:29

Lab Sample ID: 400-114401-10
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**32**		1.0		ug/L			12/04/15 05:36	1
Ethylbenzene	**29**		1.0		ug/L			12/04/15 15:23	1
Toluene	<1.0		1.0		ug/L			12/04/15 15:23	1
Xylenes, Total	**3.8**		3.0		ug/L			12/04/15 15:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*111*		*50 - 150*		*12/04/15 05:36*	*1*
a,a,a-Trifluorotoluene	*89*		*50 - 150*		*12/04/15 15:23*	*1*

Client Sample ID: MW-7
Date Collected: 11/24/15 08:05
Date Received: 11/25/15 09:29

Lab Sample ID: 400-114401-11
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	90		1.0		ug/L			12/04/15 06:16	1
Ethylbenzene	400		1.0		ug/L			12/04/15 06:16	1
Toluene	11		1.0		ug/L			12/04/15 06:16	1
Xylenes, Total	1300		3.0		ug/L			12/04/15 06:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*108*		*50 - 150*		*12/04/15 06:16*	*1*

Client: MWH Americas Inc
Project/Site: Standard Oil Com #1

TestAmerica Job ID: 400-114401-1

Client Sample ID: MW-6
Date Collected: 11/24/15 09:05
Date Received: 11/25/15 09:29

Lab Sample ID: 400-114401-12
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**53**		1.0		ug/L			12/04/15 06:57	1
Ethylbenzene	**21**		1.0		ug/L			12/04/15 06:57	1
Toluene	<1.0		1.0		ug/L			12/04/15 06:57	1
Xylenes, Total	**4.6**		3.0		ug/L			12/04/15 06:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*104*		*50 - 150*		*12/04/15 06:57*	*1*

Client: MWH Americas Inc
Project/Site: Standard Oil Com #1

TestAmerica Job ID: 400-114401-1

Client Sample ID: MW-4
Date Collected: 11/24/15 08:00
Date Received: 11/25/15 09:29

Lab Sample ID: 400-114401-13
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	5.1		1.0		ug/L			12/04/15 07:37	1
Ethylbenzene	65		1.0		ug/L			12/04/15 07:37	1
Toluene	1.2		1.0		ug/L			12/04/15 07:37	1
Xylenes, Total	3.2		3.0		ug/L			12/04/15 07:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*109*		*50 - 150*		*12/04/15 07:37*	*1*

Client: MWH Americas Inc
Project/Site: Standard Oil Com #1

TestAmerica Job ID: 400-114401-1

Client Sample ID: MW-3
Date Collected: 11/24/15 08:15
Date Received: 11/25/15 09:29

Lab Sample ID: 400-114401-14
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**2500**		10		ug/L			12/04/15 23:33	10
Ethylbenzene	**510**		1.0		ug/L			12/04/15 08:18	1
Toluene	<1.0		1.0		ug/L			12/04/15 08:18	1
Xylenes, Total	**760**		3.0		ug/L			12/04/15 08:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*101*		*50 - 150*		*12/04/15 08:18*	*1*
a,a,a-Trifluorotoluene	*86*		*50 - 150*		*12/04/15 23:33*	*10*

Client: MWH Americas Inc
Project/Site: Standard Oil Com #1

TestAmerica Job ID: 400-114401-1

Client Sample ID: MW-2
Date Collected: 11/24/15 09:10
Date Received: 11/25/15 09:29

Lab Sample ID: 400-114401-15
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**31**		1.0		ug/L			12/04/15 08:58	1
Ethylbenzene	**19**		1.0		ug/L			12/04/15 08:58	1
Toluene	<1.0		1.0		ug/L			12/04/15 08:58	1
Xylenes, Total	<3.0		3.0		ug/L			12/04/15 08:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*105*		*50 - 150*		*12/04/15 08:58*	*1*

Client: MWH Americas Inc
Project/Site: Standard Oil Com #1

TestAmerica Job ID: 400-114401-1

Client Sample ID: MW-1
Date Collected: 11/24/15 09:20
Date Received: 11/25/15 09:29

Lab Sample ID: 400-114401-16
Matrix: Water

Method: 8021B - Volatile Organic Compounds (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Benzene	51		1.0		ug/L			12/03/15 18:47	1
Ethylbenzene	160		1.0		ug/L			12/03/15 18:47	1
Toluene	29		1.0		ug/L			12/03/15 18:47	1
Xylenes, Total	52		3.0		ug/L			12/03/15 18:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*98*		*50 - 150*		*12/03/15 18:47*	*1*

GC VOA

Analysis Batch: 285834

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-114400-A-3 MS	Matrix Spike	Total/NA	Water	8021B	
400-114400-A-3 MSD	Matrix Spike Duplicate	Total/NA	Water	8021B	
400-114401-9	MW-9	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	

Analysis Batch: 303770

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-114401-1	TRIP BLANK	Total/NA	Water	8021B	
400-114401-2	MW-16	Total/NA	Water	8021B	
400-114401-3	MW-15	Total/NA	Water	8021B	
400-114401-4	MW-14	Total/NA	Water	8021B	
400-114401-5	MW-13	Total/NA	Water	8021B	
400-114401-6	MW-12	Total/NA	Water	8021B	
400-114401-7	MW-11	Total/NA	Water	8021B	
400-114401-8	MW-10	Total/NA	Water	8021B	
400-114401-10	MW-8	Total/NA	Water	8021B	
400-114401-11	MW-7	Total/NA	Water	8021B	
400-114401-12	MW-6	Total/NA	Water	8021B	
400-114401-13	MW-4	Total/NA	Water	8021B	
400-114401-14	MW-3	Total/NA	Water	8021B	
400-114401-15	MW-2	Total/NA	Water	8021B	
400-114401-16	MW-1	Total/NA	Water	8021B	
LCS 490-303770/2	Lab Control Sample	Total/NA	Water	8021B	
LCSD 490-303770/14	Lab Control Sample Dup	Total/NA	Water	8021B	
MB 490-303770/3	Method Blank	Total/NA	Water	8021B	

Analysis Batch: 304004

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-114401-6	MW-12	Total/NA	Water	8021B	
400-114401-7	MW-11	Total/NA	Water	8021B	
400-114401-8	MW-10	Total/NA	Water	8021B	
400-114401-10	MW-8	Total/NA	Water	8021B	
400-114401-14	MW-3	Total/NA	Water	8021B	
LCS 490-304004/2	Lab Control Sample	Total/NA	Water	8021B	
LCSD 490-304004/15	Lab Control Sample Dup	Total/NA	Water	8021B	
MB 490-304004/4	Method Blank	Total/NA	Water	8021B	

Method: 8021B - Volatile Organic Compounds (GC)

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-A-3 MS
Matrix: Water
Analysis Batch: 285834

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	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-A-3 MSD
Matrix: Water
Analysis Batch: 285834

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	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*

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

Lab Sample ID: MB 490-303770/3
Matrix: Water
Analysis Batch: 303770

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

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

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

Lab Sample ID: LCS 490-303770/2
Matrix: Water
Analysis Batch: 303770

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

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

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

Lab Sample ID: LCSD 490-303770/14
Matrix: Water
Analysis Batch: 303770

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

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

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

Lab Sample ID: MB 490-304004/4
Matrix: Water
Analysis Batch: 304004

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			12/04/15 12:50	1
Ethylbenzene	<1.0		1.0		ug/L			12/04/15 12:50	1
Toluene	<1.0		1.0		ug/L			12/04/15 12:50	1
Xylenes, Total	<3.0		3.0		ug/L			12/04/15 12:50	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
a,a,a-Trifluorotoluene	*97*		*50 - 150*		*12/04/15 12:50*	*1*

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

Lab Sample ID: LCS 490-304004/2
Matrix: Water
Analysis Batch: 304004

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			100	115		ug/L		115	69 - 129		
Ethylbenzene			100	110		ug/L		110	70 - 130		
Toluene			100	111		ug/L		111	66 - 127		
Xylenes, Total			300	328		ug/L		109	69 - 123		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
a,a,a-Trifluorotoluene	*87*		*50 - 150*

Lab Sample ID: LCSD 490-304004/15
Matrix: Water
Analysis Batch: 304004

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			100	117		ug/L		117	69 - 129	1	33
Ethylbenzene			100	111		ug/L		111	70 - 130	1	35
Toluene			100	112		ug/L		112	66 - 127	1	34
Xylenes, Total			300	333		ug/L		111	69 - 123	1	37

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
a,a,a-Trifluorotoluene	*94*		*50 - 150*

Lab Chronicle

Client: MWH Americas Inc
Project/Site: Standard Oil Com #1

TestAmerica Job ID: 400-114401-1

Client Sample ID: TRIP BLANK
Date Collected: 11/24/15 09:30
Date Received: 11/25/15 09:29

Lab Sample ID: 400-114401-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	303770	12/03/15 22:10	AMC	TAL NSH
	Instrument ID: HP15									

Client Sample ID: MW-16
Date Collected: 11/24/15 07:55
Date Received: 11/25/15 09:29

Lab Sample ID: 400-114401-2
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	303770	12/03/15 22:51	AMC	TAL NSH
	Instrument ID: HP15									

Client Sample ID: MW-15
Date Collected: 11/24/15 08:10
Date Received: 11/25/15 09:29

Lab Sample ID: 400-114401-3
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	303770	12/03/15 23:31	AMC	TAL NSH
	Instrument ID: HP15									

Client Sample ID: MW-14
Date Collected: 11/24/15 08:35
Date Received: 11/25/15 09:29

Lab Sample ID: 400-114401-4
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		1	5 mL	5 mL	303770	12/04/15 00:12	AMC	TAL NSH
	Instrument ID: HP15									

Client Sample ID: MW-13
Date Collected: 11/24/15 08:20
Date Received: 11/25/15 09:29

Lab Sample ID: 400-114401-5
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		1	5 mL	5 mL	303770	12/04/15 00:52	AMC	TAL NSH
	Instrument ID: HP15									

Client Sample ID: MW-12
Date Collected: 11/24/15 07:50
Date Received: 11/25/15 09:29

Lab Sample ID: 400-114401-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	303770	12/04/15 03:34	AMC	TAL NSH
	Instrument ID: HP15									

Lab Chronicle

Client: MWH Americas Inc
Project/Site: Standard Oil Com #1

TestAmerica Job ID: 400-114401-1

Client Sample ID: MW-12
Date Collected: 11/24/15 07:50
Date Received: 11/25/15 09:29

Lab Sample ID: 400-114401-6
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		10	5 mL	5 mL	304004	12/04/15 20:09	AMC	TAL NSH
	Instrument ID: HP15									

Client Sample ID: MW-11
Date Collected: 11/24/15 08:25
Date Received: 11/25/15 09:29

Lab Sample ID: 400-114401-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	303770	12/04/15 04:15	AMC	TAL NSH
	Instrument ID: HP15									
Total/NA	Analysis	8021B		25	5 mL	5 mL	304004	12/05/15 00:14	AMC	TAL NSH
	Instrument ID: HP15									

Client Sample ID: MW-10
Date Collected: 11/24/15 08:30
Date Received: 11/25/15 09:29

Lab Sample ID: 400-114401-8
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	303770	12/04/15 04:55	AMC	TAL NSH
	Instrument ID: HP15									
Total/NA	Analysis	8021B		5	5 mL	5 mL	304004	12/04/15 18:07	AMC	TAL NSH
	Instrument ID: HP15									

Client Sample ID: MW-9
Date Collected: 11/24/15 08:50
Date Received: 11/25/15 09:29

Lab Sample ID: 400-114401-9
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		5	5 mL	5 mL	285834	12/03/15 19:28	GRK	TAL PEN
	Instrument ID: CH_JOAN									

Client Sample ID: MW-8
Date Collected: 11/24/15 09:00
Date Received: 11/25/15 09:29

Lab Sample ID: 400-114401-10
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	303770	12/04/15 05:36	AMC	TAL NSH
	Instrument ID: HP15									
Total/NA	Analysis	8021B		1	5 mL	5 mL	304004	12/04/15 15:23	AMC	TAL NSH
	Instrument ID: HP15									

Lab Chronicle

Client: MWH Americas Inc
Project/Site: Standard Oil Com #1

TestAmerica Job ID: 400-114401-1

Client Sample ID: MW-7
Date Collected: 11/24/15 08:05
Date Received: 11/25/15 09:29

Lab Sample ID: 400-114401-11
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	303770	12/04/15 06:16	AMC	TAL NSH
	Instrument ID: HP15									

Client Sample ID: MW-6
Date Collected: 11/24/15 09:05
Date Received: 11/25/15 09:29

Lab Sample ID: 400-114401-12
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	303770	12/04/15 06:57	AMC	TAL NSH
	Instrument ID: HP15									

Client Sample ID: MW-4
Date Collected: 11/24/15 08:00
Date Received: 11/25/15 09:29

Lab Sample ID: 400-114401-13
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	303770	12/04/15 07:37	AMC	TAL NSH
	Instrument ID: HP15									

Client Sample ID: MW-3
Date Collected: 11/24/15 08:15
Date Received: 11/25/15 09:29

Lab Sample ID: 400-114401-14
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	303770	12/04/15 08:18	AMC	TAL NSH
	Instrument ID: HP15									
Total/NA	Analysis	8021B		10	5 mL	5 mL	304004	12/04/15 23:33	AMC	TAL NSH
	Instrument ID: HP15									

Client Sample ID: MW-2
Date Collected: 11/24/15 09:10
Date Received: 11/25/15 09:29

Lab Sample ID: 400-114401-15
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	303770	12/04/15 08:58	AMC	TAL NSH
	Instrument ID: HP15									

Lab Chronicle

Client: MWH Americas Inc
Project/Site: Standard Oil Com #1

TestAmerica Job ID: 400-114401-1

Client Sample ID: MW-1

Date Collected: 11/24/15 09:20
Date Received: 11/25/15 09:29

Lab Sample ID: 400-114401-16

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8021B		1	5 mL	5 mL	303770	12/03/15 18:47	AMC	TAL NSH
	Instrument ID: HP15									

Laboratory References:

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

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

Certification Summary

Client: MWH Americas Inc
Project/Site: Standard Oil Com #1

TestAmerica Job ID: 400-114401-1

Laboratory: TestAmerica Pensacola

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

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

Laboratory: TestAmerica Nashville

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

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

* Certification renewal pending - certification considered valid.

Certification Summary

Client: MWH Americas Inc
Project/Site: Standard Oil Com #1

TestAmerica Job ID: 400-114401-1

Laboratory: TestAmerica Nashville (Continued)

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

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

* Certification renewal pending - certification considered valid.

Method Summary

Client: MWH Americas Inc
Project/Site: Standard Oil Com #1

TestAmerica Job ID: 400-114401-1

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

Protocol References:

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

Laboratory References:

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

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

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

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: SarahGardner & Chris be	Lab PM: Edwards, Marty P	Carrier Tracking No(s):
Client Contact: Ms. Sarah Gardner	Phone: 303 291 2239	E-Mail: marty.edwards@testamericainc.com	COC No: 400-50164-21713.1
Company: MWH Americas Inc		**Analysis Requested**	Page: Page 1 of 2
Address: 1560 Broadway Suite 1800	Due Date Requested:		Job #:
City: Denver	TAT Requested (days): Standard		
State, Zip: CO, 80202			
Phone: 303-291-2239(Tel)	PO #: Purchase Order Requested		
Email: sarah.gardner@mwhglobal.com	WO #:		
Project Name: Standard Oil Com #1	Project #: 40005479		
Site: Standard Oil Com #1	SSOW#:		

400-114401 COC

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

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8021B - BTEX 8021			Total Number of containers	Special Instructions/Note:
			Preservation Code:								
mw-1	Nov 24, 2015	920	G	Water	N	N	2	~~x x~~	SG	2	
mw-2	Nov. 24, 2015	910	G	Water	N	N	2			2	
mw-3	Nov. 24, 2015	815	G	Water	N	N	2			2	
mw-4	Nov. 24, 2015	800	G	Water	N	N	2			2	
mw-6	Nov. 24, 2015	905	G	Water	N	N	2			2	
mw-7	Nov. 24, 2015	805	G	Water	N	N	2			2	
mw-8	Nov. 24, 2015	900	G	Water	N	N	2			2	
mw-9	Nov. 24, 2015	850	G	Water	N	N	2			2	
mw-10	Nov. 24, 2015	830	G	Water	N	N	2			2	Unpreserved
mw-11	Nov. 24, 2015	825	G	Water	N	N	2			2	
mw-12	Nov. 24, 2015	750	G	Water	N	N	2			2	

Possible Hazard Identification
[X] 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 [X] Disposal By Lab [ ] Archive For ______ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:		Time:		Method of Shipment:	
Relinquished by: Sarah Gardner	Date/Time: 11/24/15 1120	Company: MWH	Received by: DC Allen	Date/Time: 11-25-15 0929	Company: TA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 0.1°C IR-1

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

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Sarah Gardner & Christee	Lab PM: Edwards, Marty P	Carrier Tracking No(s):	COC No: 400-50164-21713.2
Client Contact: Ms. Sarah Gardner	Phone: 303 291-2239	E-Mail: marty.edwards@testamericainc.com		Page: Page 2 of 2
Company: MWH Americas Inc		Analysis Requested		Job #:
Address: 1560 Broadway Suite 1800	Due Date Requested:			Preservation Codes: A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)
City: Denver	TAT Requested (days): Standard			
State, Zip: CO, 80202	PO #: Purchase Order Requested			Other:
Phone: 303-291-2239(Tel)	WO #:			
Email: sarah.gardner@mwhglobal.com	Project #: 40005479			
Project Name: Standard Oil Com #1	SSOW#:			
Site: Standard Oil Com #1				

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8021B - BTEX 8021	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-13	Nov. 24, 2015	820	G	Water	N	N	2 ~~X~~ SG	2	
MW-14	Nov. 24, 2015	835	G	Water	N	N	2	2	
MW-15	Nov. 24, 2015	810	G	Water	N	N	2	2	
MW-16	Nov. 24, 2015	~~930~~ SG 755	G	Water	N	N	2	2	
TRIP BLANK	Nov. 24, 2015	930	G	Water	N	N	2	2	
	~~Nov. 24, 20~~ SG								

Possible Hazard Identification: [X] 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 [X] Disposal By Lab [ ] Archive For ____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:		
Relinquished by: Sarah Gardner	Date/Time: 11/24/2015 1120	Company: MWH	Received by: DChues	Date/Time: 11-25-15 0929	Company: TA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: [ ] Yes [ ] No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

12/22/2015

Login Sample Receipt Checklist

Client: MWH Americas Inc

Job Number: 400-114401-1

Login Number: 114401
List Number: 1
Creator: Benforado, Jessica L

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.0°C IR-2
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: MWH Americas Inc

Job Number: 400-114401-1

Login Number: 114401
List Number: 2
Creator: Vest, Laura E

List Source: TestAmerica Nashville
List Creation: 11/28/15 02:42 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	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	2.6
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.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	